

Balance of electric power

Year 2023

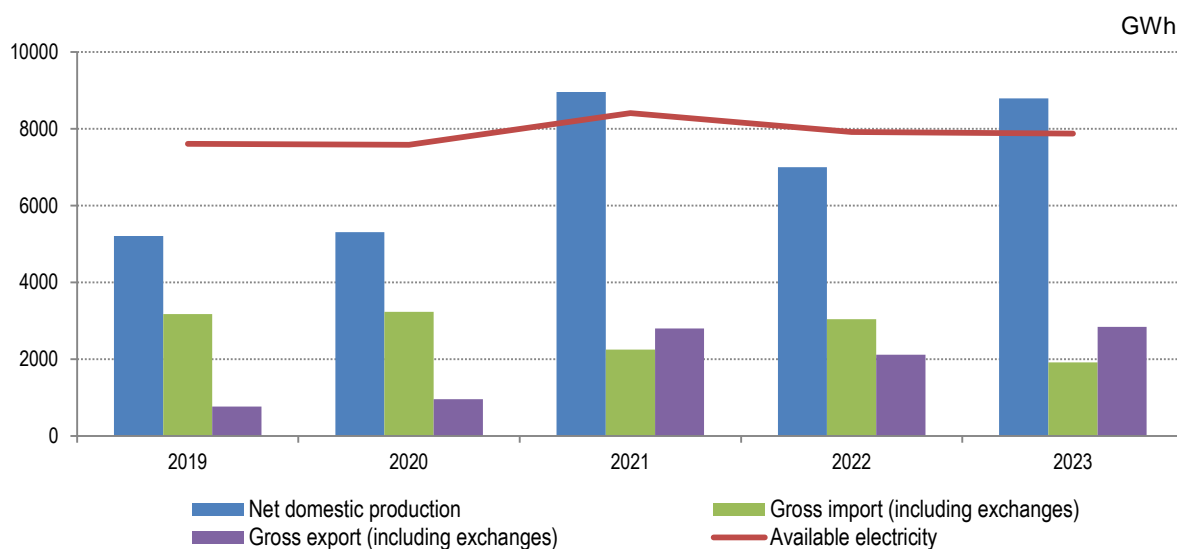
Tirana, March 1, 2024: During 2023, available electricity decreased by 0.6 %.

Net domestic production of electric power in this period reached the value 8,796 GWh from 7,003 GWh of electricity produced in 2022, with an increase in production by 25.6 %.

This production was realized by public hydro plants at 58.2 % of net domestic production, by independent power producers to the extent 40.8 % and other producers (Photovoltaics) that generated 1.0 % of net domestic electricity production.

Gross import of electric power (including exchanges), reached the value 1,922 GWh from 3,044 GWh in the previous year, marking a decrease with 36.9 %. Gross export (including exchanges) reached the value 2,842 GWh from 2,123 GWh marking an increase with 33.9 % (tab.1).

Fig. 1 Available electricity, net domestic production, gross import and export



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Tab. 1 Balance of electric power, 2022-2023

MWh

Indicators	2022	2023
A Available electricity (A=1+2-3)	7,923,653	7,875,822
1 Net domestic production (1=1.1+1.2+1.3)	7,002,647	8,795,634
1.1 Thermo	0	0
1.2 Hydro (1.2=a+b)	6,951,387	8,705,910
a Net public producers (a=a.1-a.2)	3,858,562	5,123,417
a.1 Gross public producers	3,895,093	5,166,787
a.2 Losses and own consumption	36,531	43,370
b Independent power producers	3,092,825	3,582,493
1.3 Other producers (other renewable)	51,260	89,724
2 Gross import (including exchanges)	3,043,533	1,921,743
3 Gross export (including exchanges)	2,122,527	2,841,555
B Consumption of electricity (B=1+2)	7,923,653	7,875,822
1 Electrical losses (1=1.1+1.2)	1,657,835	1,654,540
1.1 Losses in transmission	199,995	220,267
1.2 Losses in distribution (1.2=a+b) ¹	1,457,840	1,434,273
a Technical losses in distribution	980,012	990,500
b Non- technical losses in distribution ²	477,828	443,773
2 Consumption of electricity by domestic users (2=2.1+2.2)	6,265,818	6,221,282
2.1 Households	3,074,801	3,116,817
2.2 Non households	3,191,017	3,104,465

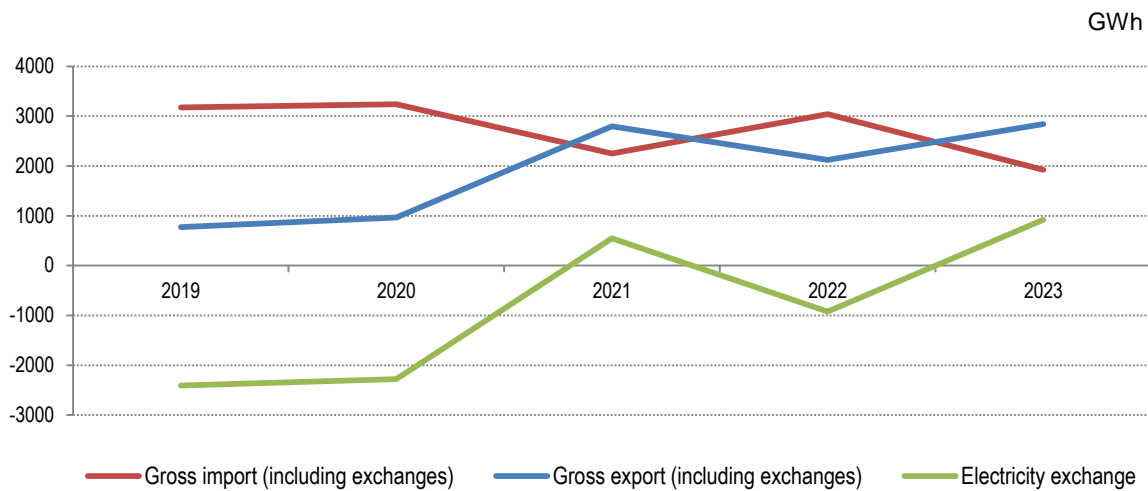
¹ Breakdown of technical and non-technical losses are estimations made by operators in the field of electricity.

² Non-technical losses refer to the difference between total losses in distribution and technical losses in distribution and are added also statistical differences which derive from the differences in the period of measurement in production, consumption and trade of electricity.

Public hydro plants, in 2023, produced 5,123 GWh from 3,859 GWh produced in 2022, thus marking an increase in production by 32.8 %. While, independent and concessionaire power producers produced 3,582 GWh from 3,093 GWh produced in the previous year, thus marking an increase in production by 15.8 %.

Electricity exchange (difference between gross exports and gross imports of electricity), in 2023, has reached a positive value of 920 GWh. In 2022, electricity exchange had a negative value of 921 GWh (fig.2).

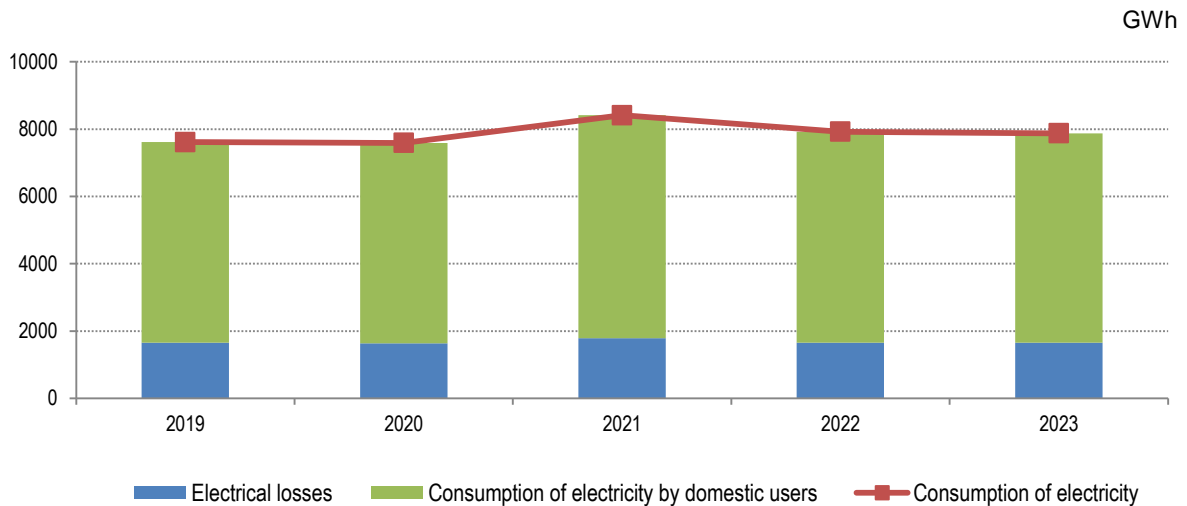
Fig. 2 Electricity exchange



Electrical losses have reached value 1,655 GWh in 2023, from 1,658 GWh marking a decrease by 0.2 %. Losses in transmission increased by 10.1 % and the weight that occupies in the total electrical losses is 13.3 %.

Losses in distribution occupy a greater weight, around 86.7 % of electrical losses, where technical losses in distribution, in 2023, decreased by 1.6 % compared to 2022 (fig.3).

Fig. 3 Consumption of electricity, electrical losses and consumption of electricity by domestic users



The consumption of electricity by domestic users, in 2023, reaching 6,221 GWh from 6,266 GWh realized in 2022.

The consumption of electricity by households increased by 1.4 %, reaching the value 3,117 GWh in 2023 from 3,075 GWh in 2022, while the consumption of electricity by non-households decreased by 2.7 % reaching the value 3,104 GWh from 3,191 GWh compared to the previous year (fig.4).

Fig. 4 Consumption of electricity by domestic users

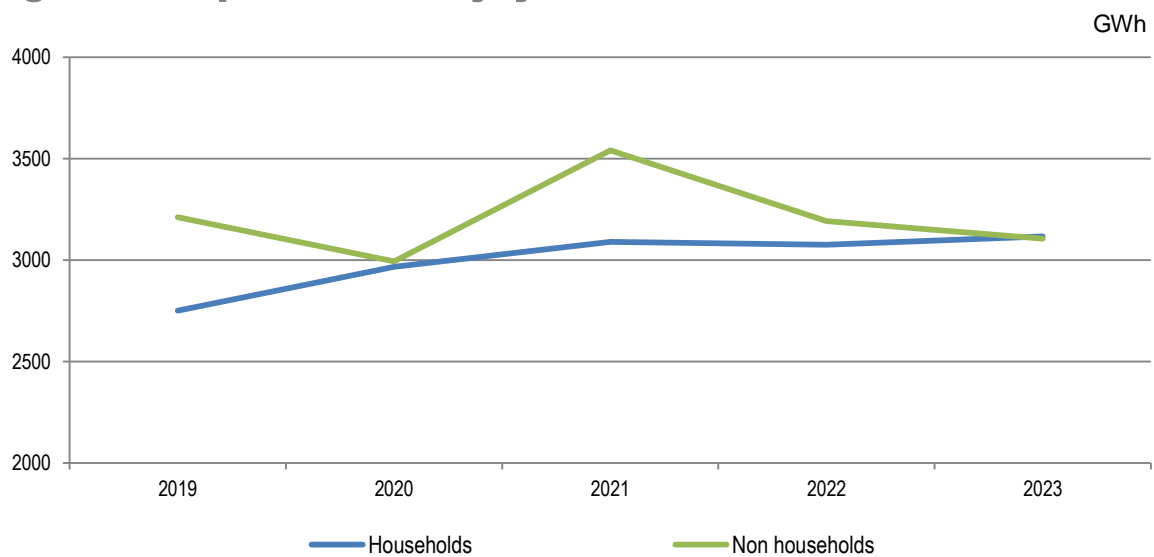
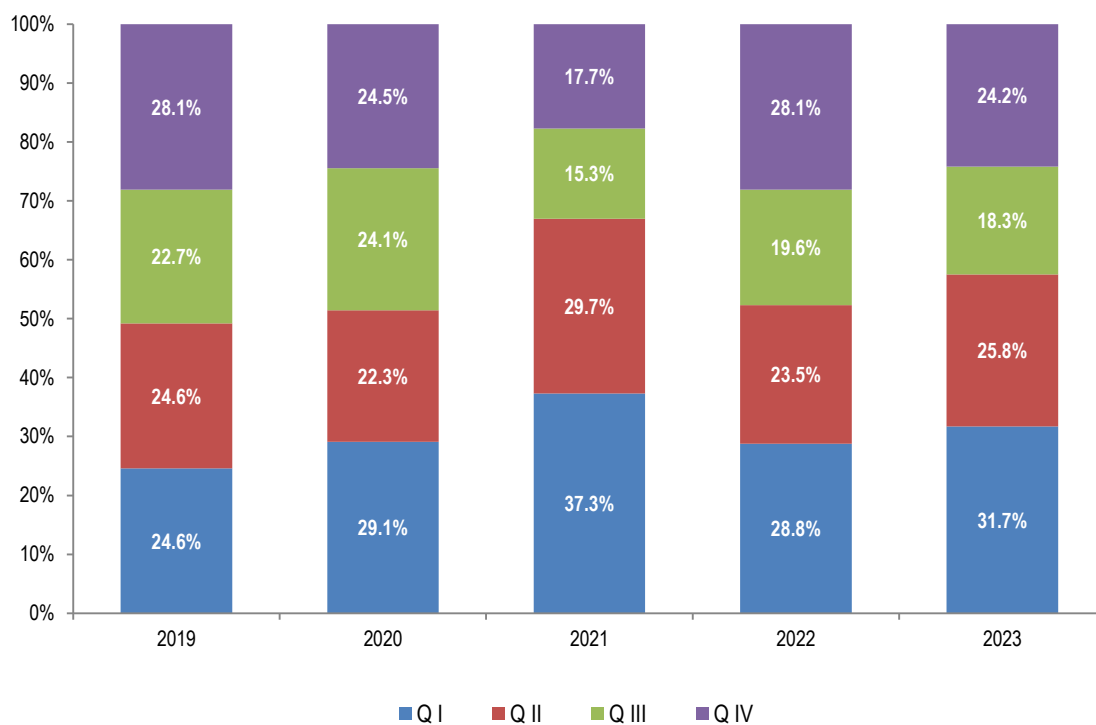


Fig. 5 shows the structure in percentage of net domestic production by quarters for the period 2019-2023. In 2023 noted an increase in net production in the first and second quarters and a decrease in net production in the third and fourth quarters, compared to 2022.

Fig. 5 Structure in percentage of net domestic production by quarters, 2019-2023 (%)



Quarter IV 2023

During the fourth quarter of 2023, available electricity increased by 9.2 %. Net domestic production of electric power in the fourth quarter of 2023 reached the value 2,129 GWh from 1,969 GWh of electricity produced in the fourth quarter of 2022, with an increase in production by 8.1 % (tab.2).

Tab. 2 Balance of electric power, IV quarter

MWh

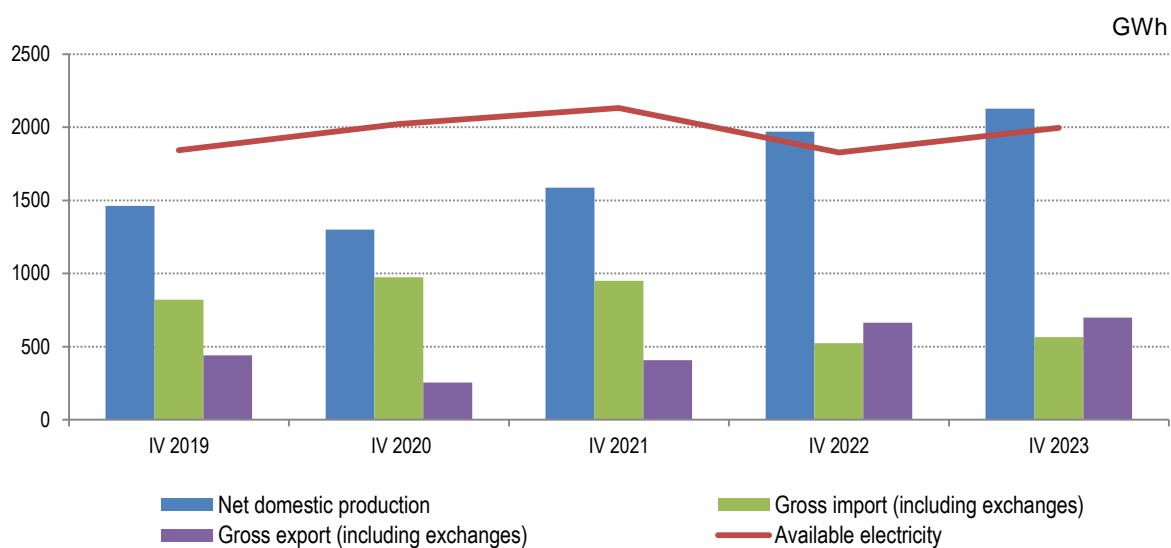
Indicators	Q. IV 2022	Q. IV 2023
A Available electricity (A=1+2-3)	1,827,840	1,995,514
1 Net domestic production (1=1.1+1.2+1.3)	1,969,222	2,128,517
1.1 Thermo	0	0
1.2 Hydro (1.2=a+b)	1,961,031	2,110,987
a Net public producers (a=a.1-a.2)	1,136,817	1,087,011
a.1 Gross public producers	1,147,274	1,097,158
a.2 Losses and own consumption	10,457	10,147
b Independent power producers	824,214	1,023,976
1.3 Other producers (other renewable)	8,191	17,530
2 Gross import (including exchanges)	522,701	565,508
3 Gross export (including exchanges)	664,084	698,511
B Consumption of electricity (B=1+2)	1,827,840	1,995,514
1 Electrical losses (1=1.1+1.2)	384,646	434,507
1.1 Losses in transmission	49,865	55,596
1.2 Losses in distribution (1.2=a+b) ¹	334,781	378,911
a Technical losses in distribution	217,538	258,539
b Non technical losses in distribution ²	117,242	120,372
2 Consumption of electricity by domestic users (2=2.1+2.2)	1,443,194	1,561,007
2.1 Households	728,867	796,658
2.2 Non households	714,328	764,349

¹ Breakdown of technical and non-technical losses is estimations made by operators in the field of electricity.

² Non-technical losses refer to the difference between total losses in distribution and technical losses in distribution and are added also statistical differences which derive from the differences in the period of measurement in production, consumption and trade of electricity.

During the fourth quarter of 2023, gross imports of electric power (including exchanges) increased by 8.2 % and gross exports of electric power (including exchanges) increased by 5.2 %, compared to the same period of the previous year (fig.6).

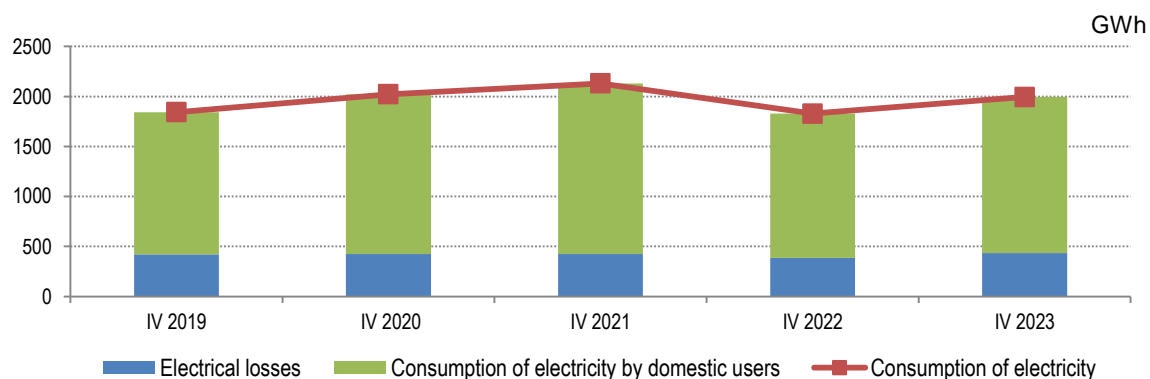
Fig. 6 Available electricity, net domestic production, gross import and export



During the fourth quarter of 2023, losses in transmission increased by 11.5 %, while losses in distribution increased by 13.2 % compared to the same period in 2022. (fig.7).

The consumption of electricity by consumers increased by 8.2 %. The consumption of electricity by households increased by 9.3 %, the contribution of electricity consumed by non-households increased by 7.0 %.

Fig. 7 Consumption of electricity, electrical losses and consumption of electricity by domestic users



Methodology

Balance of electric power provides statistical information on domestic net production of electricity, electricity exchange, losses in network also the usage of electricity for final consumption in our country. The publication of electric power balance is quarterly, based on monthly data collected from administrative sources as:

- KESH a.s, an independent state company that produces , transforms and carries out the sale and purchase of electricity;
- OSSH a.s, as a public company state shares that carries out the supply and sales of electricity , construction also the operation and management of the distribution network;
- OST a.s, an independent state company that operates in the electricity transmission system from the physical and distribution concepts. OST as. provides the necessary transmission capacities for:
 - the supply of uninterrupted electricity for Distribution System substations and electricity customers directly connected to the transmission network;
 - the transmission of electricity produced from domestic sources;
 - also transits and necessary exchanges with other countries in the region.

Definitions of basic indicators

Available electricity refers to the quantity of electricity generated by domestic production of electricity plus total amount of electricity exchange.

Net domestic production of electricity is equal to the gross electricity production from thermo plants, hydroelectric plants and other producers less the electrical energy absorbed by the generating auxiliaries and the losses in the main generator transformers.

Thermo electricity refers to electricity produced by thermo plants.

Hydroelectricity refers to energy of water converted into electricity in hydroelectric plants.

Losses and own consumption refers to the electricity used by the auxiliary activities of the power station directly related to production, such as water cooling, power station services, heating, lighting, etc.

Independent power producers refer to private electricity producers which consist of private plants and concession contracts with the Republic of Albania. These producers are directly related to the transmission system and are licensed by the Energy Regulatory Entity (ERE) and may sell capacity or energy to OST and OSSH, to cover losses in transmission and distribution system, as well as to other clients.

Other producers refer to electricity production from other energy sources, excluding hydro and thermo electricity.

Electricity exchange refers to the difference between imported and exported electricity, also including transits and necessary exchanges of electricity with other countries in the region.

Consumption of electricity refers to the use by household consumers and the amount of losses in the electricity power.

Electrical losses refer to losses in transmission network including own consumption in transmission and distribution losses. *Technical losses* in distribution are estimated by OSSH as *Non-technical losses* refer to the difference between total losses in distribution and technical losses in distribution and are added also statistical differences which derive from the differences in the period of measurement in production, consumption and trade of electricity.

Consumption of electricity by domestic users refers to the quantity of electricity consumed by final users and is calculated as the sum of the consumption of households and non-households.

Households refer to the quantity of household's electricity consumption.

In this indicator calculation is included the economic damage, in the certain percentage for households consumers.

Non households refer to the electricity consumption quantity that are not consumed by households but include the consumption of electricity by industry, transport, agriculture, public services, etc.

In this indicator calculation is included the economic damage, in the certain percentage for non-households consumers.