

# Balance of electric power

## Year 2022

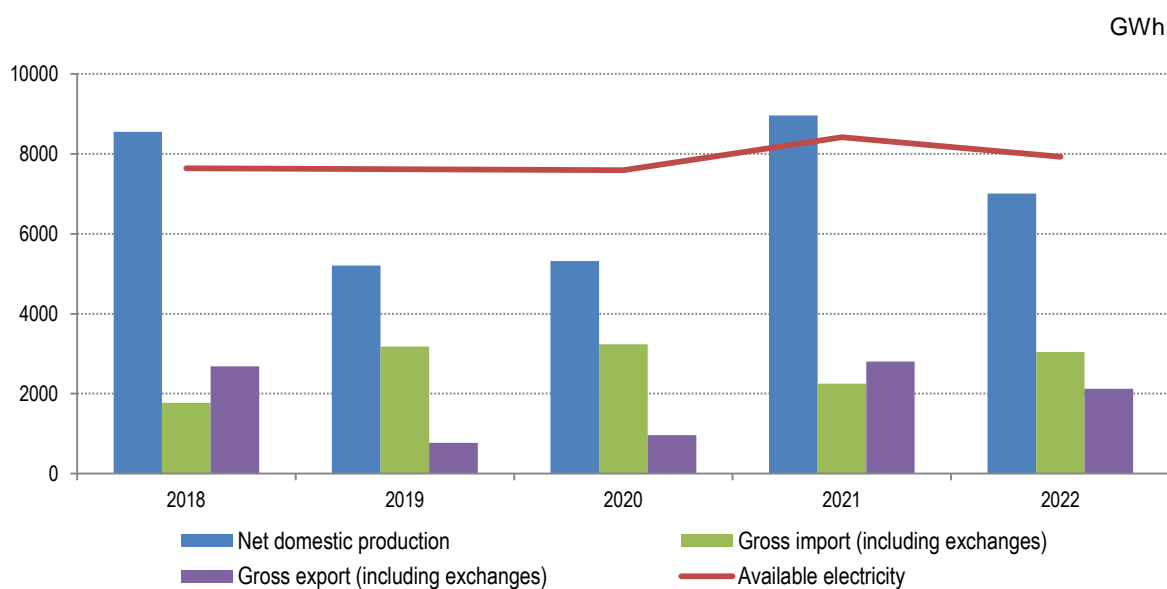
**Tirana, March 2, 2023:** During 2022, available electricity decreased by 5.8 %.

**Net domestic production** of electric power in this period reached the value 7,003 GWh from 8,963 GWh of electricity produced in 2021, with a decrease in production by 21.9 %.

This production was realized by public hydro plants at 55.1 % of net domestic production, by independent power producers to the extent 44.2 % and other producers (Photovoltaics) that generated 0.7 % of net domestic electricity production.

Gross import of electric power (including exchanges), reached the value 3,044 GWh from 2,253 GWh in the previous year, marking an increase with 35.1 %. Gross export (including exchanges) reached the value 2,123 GWh from 2,800 GWh marking a decrease with 24.2 times (tab.1).

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



For release 02/03/2023

Continues

**Tab. 1 Balance of electric power, yearly**

MWh

Indicators	2021	2022
<b>A Available electricity (A=1+2-3)</b>	<b>8,414,808</b>	<b>7,923,653</b>
1 Net domestic production (1=1.1+1.2+1.3)	8,962,703	7,002,647
1.1 Thermo	0	0
1.2 Hydro (1.2=a+b)	8,921,947	6,951,387
a Net public producers (a=a.1-a.2)	5,343,974	3,858,562
a.1 Gross public producers	5,392,709	3,895,093
a.2 Losses and own consumption	48,735	36,531
b Independent power producers	3,577,973	3,092,825
1.3 Other producers (other renewable)	40,756	51,260
2 Gross import (including exchanges)	2,252,548	3,043,533
3 Gross export (including exchanges)	2,800,443	2,122,527
<b>B Consumption of electricity (B=1+2)</b>	<b>8,414,808</b>	<b>7,923,653</b>
1 Electrical losses (1=1.1+1.2)	1,784,871	1,657,835
1.1 Losses in transmission	227,918	199,994
1.2 Losses in distribution (1.2=a+b) <sup>1</sup>	1,556,953	1,457,840
a Technical losses in distribution	1,028,670	980,012
b Non- technical losses in distribution <sup>2</sup>	528,283	477,828
2 Consumption of electricity by domestic users (2=2.1+2.2)	6,629,937	6,265,818
2.1 Households	3,089,500	3,074,801
2.2 Non households	3,540,437	3,191,018

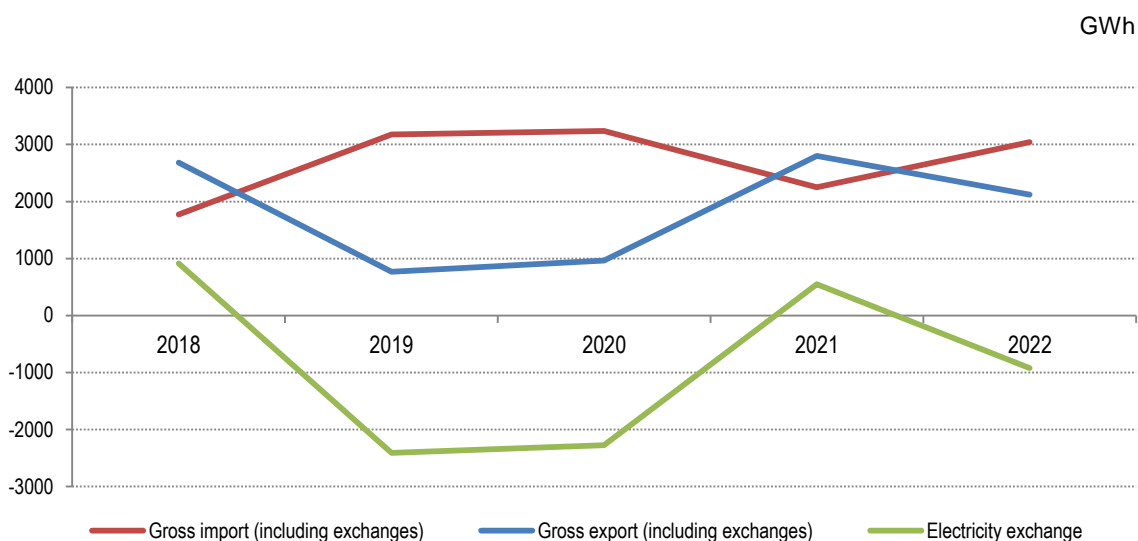
<sup>1</sup> Breakdown of technical and non-technical losses are estimations made by operators in the field of electricity.

<sup>2</sup> 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 2022, produced 3,859 GWh from 5,344 GWh produced in 2021, thus marking a decrease in production by 27.8 %. While, **independent and concessionaire power producers** produced 3,093 GWh from 3,578 GWh produced in the previous year, thus marking a decrease in production by 13.6 %.

**Electricity exchange (difference between gross exports and gross imports of electricity)**, in 2022, has reached a negative value of 921 GWh compared to 2021 where it had a positive value of 548 GWh (fig.2).

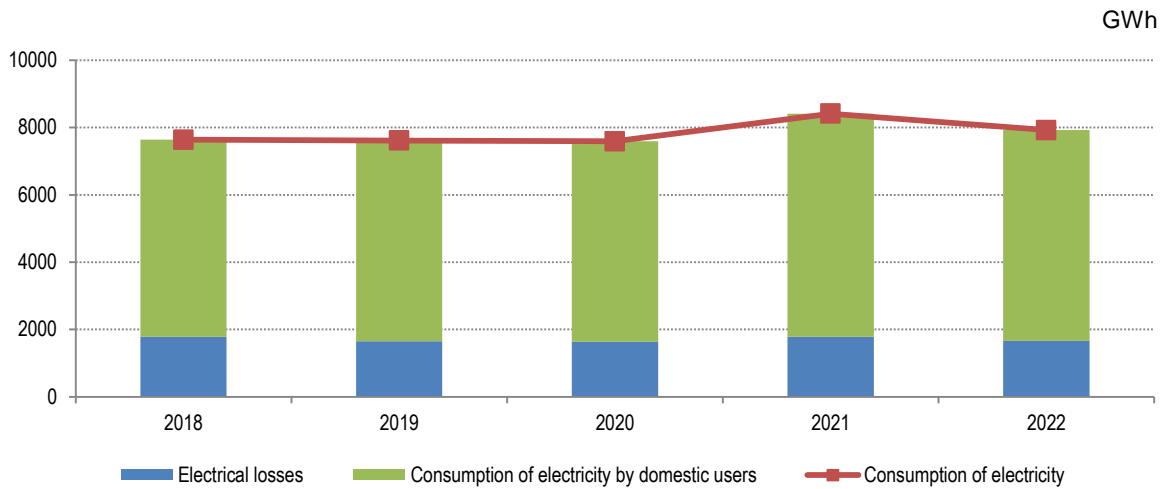
**Fig. 2 Electricity exchange**



**Electrical losses** have reached value 1,658 GWh from 1,785 GWh marking a decrease by 7.1 %. **Losses in transmission** decreased by 12.3 % and the weight that occupies in the total electrical losses is 12.1 %.

**Losses in distribution** occupy a greater weight, around 87.9 % of electrical losses, where **technical losses in distribution** decreased by 6.4 % compared to 2021 (fig.3).

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



**The consumption of electricity by domestic users**, in 2022, reaching 6,266 GWh from 6,630 GWh realized in 2021.

**The consumption of electricity by households** decreased by 0.5 %, reaching the value 3,075 GWh from 3,090 GWh in 2021, while **the consumption of electricity by non-households** decreased by 9.9 % reaching the value 3,191 GWh from 3,540 GWh compared to the previous year (fig.4).

**Fig. 4 Consumption of electricity by domestic users**

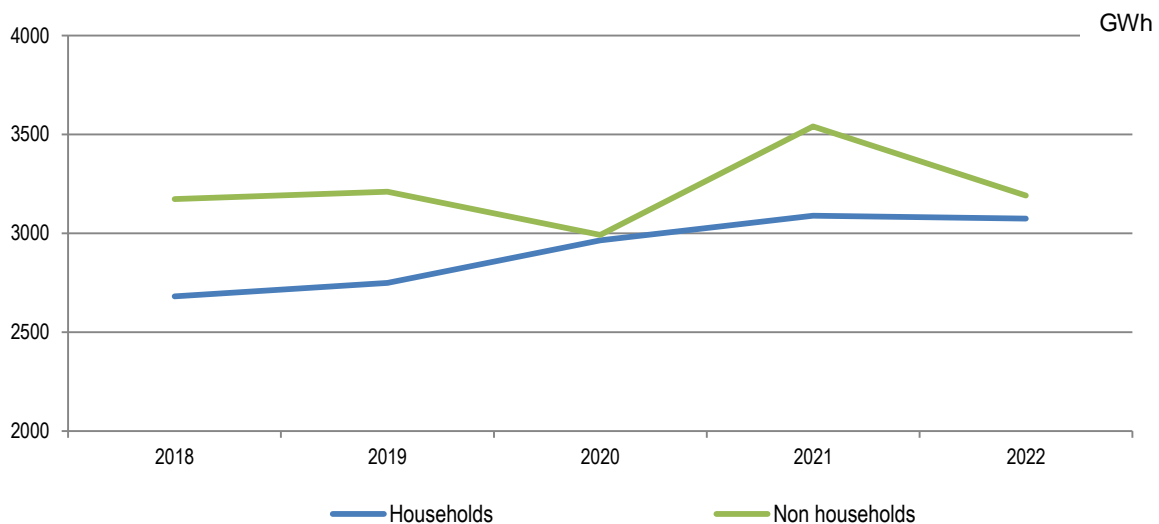
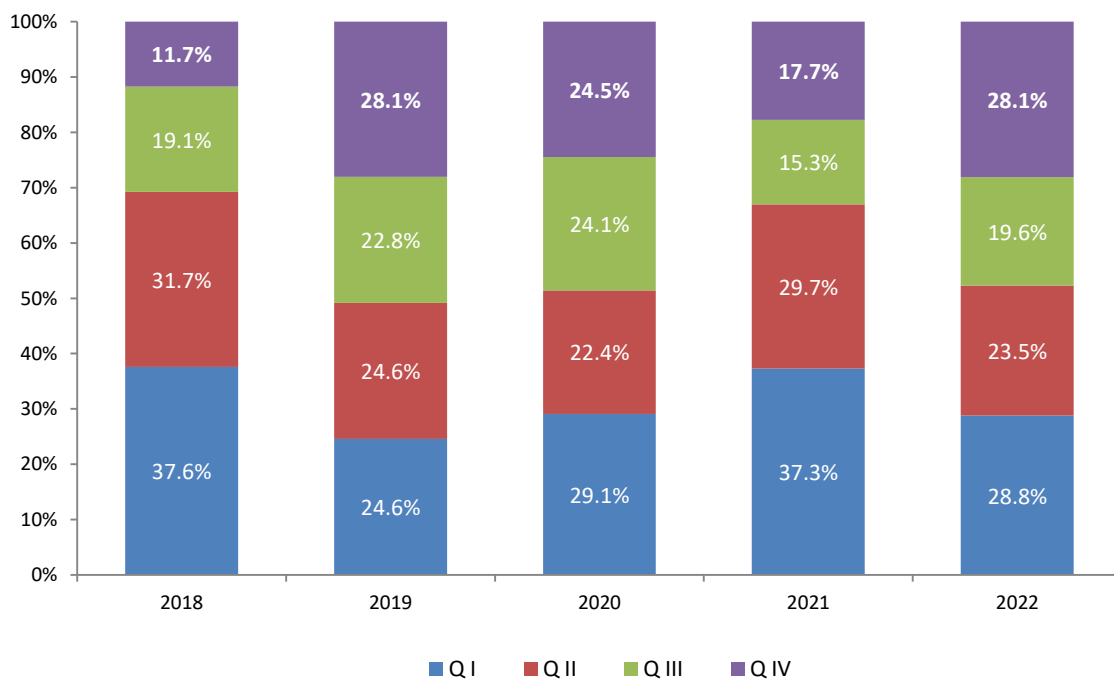


Fig. 5 shows **the structure in percentage of net domestic production by quarters** for the period 2018-2022. In 2022 noted an increase in net production in the third and fourth quarters and a decrease in net production in the first and second quarters, compared to 2021.

**Fig. 5 Structure in percentage of net domestic production by quarters, 2018-2022 (%)**



### Quarter IV 2021

During the fourth quarter of 2022, **available electricity** decreased by 14.2 %.

**Net domestic production** of electric power reached the value 1,969 GWh from 1,588 GWh of electricity produced in the fourth quarter of 2021, with an increase in production by 24.0 % (tab.2).

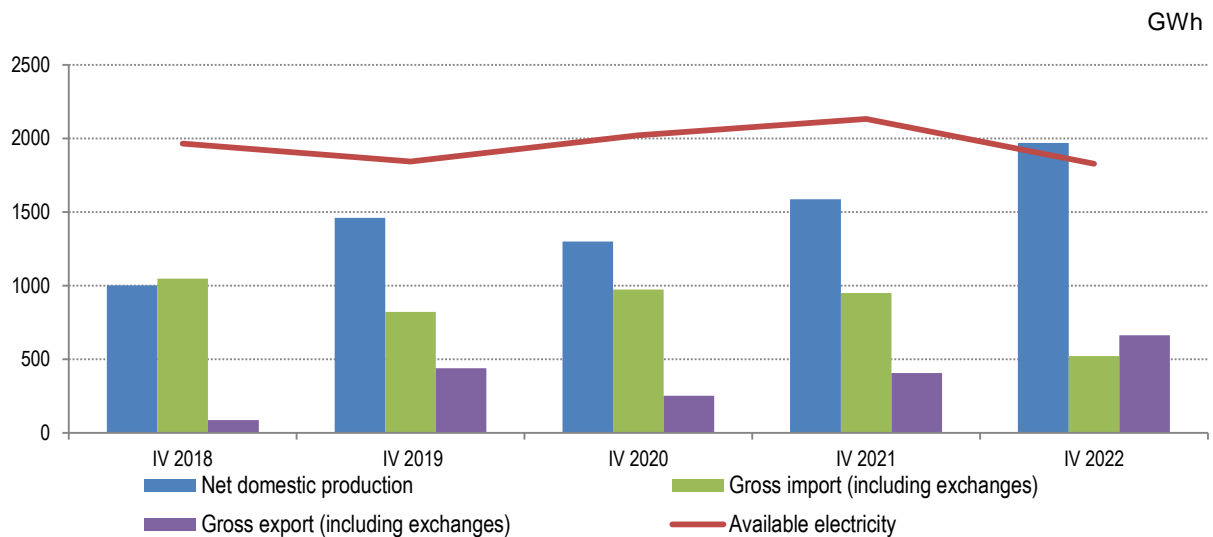
**Tab. 2 Balance of electric power, IV quarter**

		MWh	
Indicators		Q. IV 2021	Q. IV 2022
<b>A</b>	<b>Available electricity (A=1+2-3)</b>	<b>2,131,434</b>	<b>1,827,840</b>
1	Net domestic production (1=1.1+1.2+1.3)	1,587,703	1,969,222
1.1	Thermo	0	0
1.2	Hydro (1.2=a+b)	1,581,253	1,961,031
a	Net public producers (a=a.1-a.2)	850,283	1,136,817
a.1	Gross public producers	858,838	1,147,274
a.2	Losses and own consumption	8,555	10,457
b	Independent power producers	730,970	824,214
1.3	Other producers (other renewable)	6,450	8,191
2	Gross import (including exchanges)	950,218	522,701
3	Gross export (including exchanges)	406,487	664,084
<b>B</b>	<b>Consumption of electricity (B=1+2)</b>	<b>2,131,434</b>	<b>1,827,840</b>
1	Electrical losses (1=1.1+1.2)	424,235	384,646
1.1	Losses in transmission	48,299	49,865
1.2	Losses in distribution (1.2=a+b) <sup>1</sup>	375,936	334,781
a	Technical losses in distribution	253,106	217,538
b	Non technical losses in distribution <sup>2</sup>	122,830	117,242
2	Consumption of electricity by domestic users (2=2.1+2.2)	1,707,199	1,443,194
2.1	Households	803,153	728,867
2.2	Non households	904,046	714,328

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

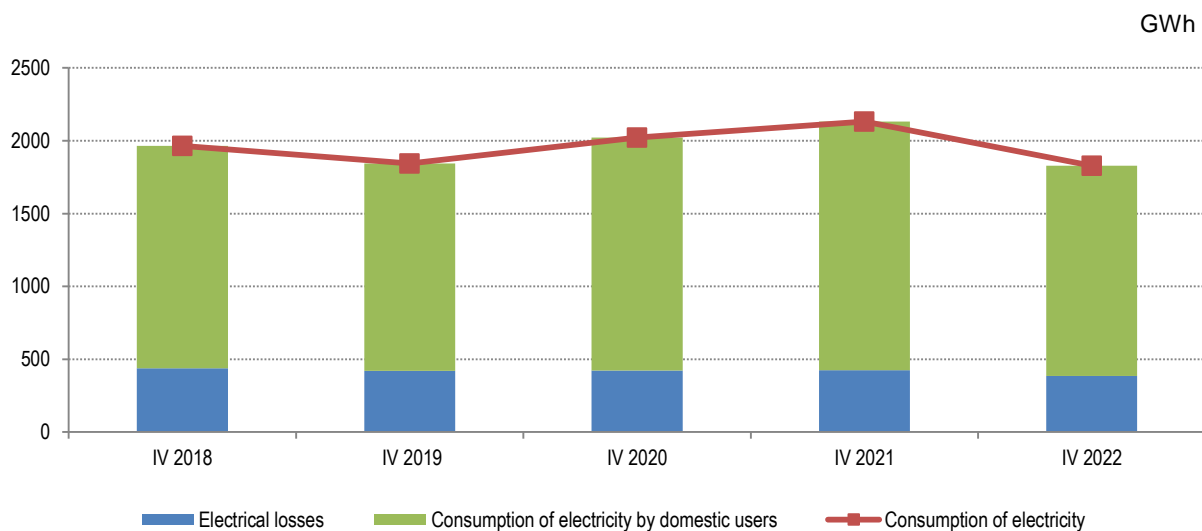
<sup>2</sup> Non-technical losses refer to the difference between total losses in distribution and technical losses in distribution and are added also statistical differences which derive from the differences in the period of measurement in production, consumption and trade of electricity.

During the fourth quarter of 2022, gross imports of electric power (including exchanges) decreased by 45.0 % and gross exports of electric power (including exchanges) increased by 63.4 %, 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 2022, **losses in transmission** increased by 3.2 %, while **losses in distribution** decreased by 10.9 % compared to the same period in 2021. (fig.7).

The **consumption of electricity by consumers** decreased by 15.5 %. The **consumption of electricity by households** decreased by 9.2 %, while the contribution of **electricity consumed by non-households** decreased by 21.0 %.

**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.