

Balance of electric power

Quarter II - 2022

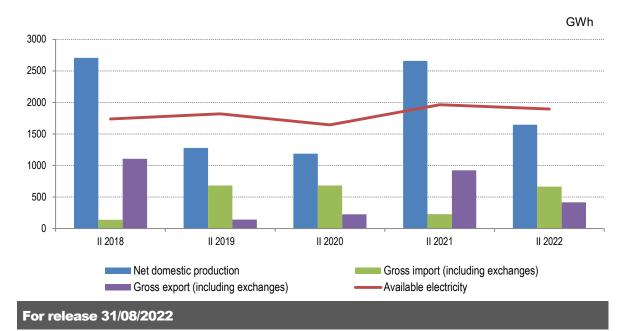
Tirana, August 31, 2022: During the second quarter of 2022, available electricity decreased by 3.5 %.

Net domestic production of electric power in this period decreased by 38.1 %, reaching the value 1,647 GWh from 2,660 GWh of electricity produced in the second quarter of 2021.

This production was realized by public hydro plants at 38.3 % of net domestic production, by independent power producers to the extent 60.9 % and other producers (Photovoltaics) that generated 0.8 % of net domestic electricity production.

Gross import of electric power (including exchanges), in the second quarter of 2022, reached the value 664 GWh from 228 GWh compared to the same period of the previous year, marking an increase by 2.9 times. Gross export (including exchanges) reached the value 415 GWh from 924 GWh marking a decrease with 55.1 % (tab.1).

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



Tab. 1 Balance of electric power

MWh

1 Net domestic production (1=1.1+1.2+1.3) 2,659,642 1,646,982 1.1 Thermo 0 0 1.2 Hydro (1.2=a+b) 2,646,536 1,633,353 a Net public producers (a=a.1-a.2) 1,556,770 631,006 a.1 Gross public producers 1,570,399 637,449 a.2 Losses and own consumption 13,629 6,443 b Independent power producers 1,089,766 1,002,347 1.3 Other producers (Photovoltaics) 13,106 13,629 2 Gross import (including exchanges) 228,239 663,815 3 Gross export (including exchanges) 923,960 415,102 B Consumption of electricity (B=1+2) 1,963,921 1,985,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in distribution (1,2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 206,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 <th>Indio</th> <th>cators</th> <th>Q.II 2021</th> <th>Q.II 2022</th>	Indio	cators	Q.II 2021	Q.II 2022
1.1 Thermo 0 0 1.2 Hydro (1/2=a+b) 2,646,536 1,633,353 a Net public producers (a=a.1-a·2) 1,556,770 631,006 a.1 Gross public producers 1,570,399 637,449 a.2 Losses and own consumption 13,629 6,443 b Independent power producers 1,089,766 1,002,347 1.3 Other producers (Photovoltaics) 13,106 13,629 2 Gross import (including exchanges) 228,239 663,815 3 Gross export (including exchanges) 923,960 415,102 B Consumption of electricity (B=1+2) 1,963,921 1,895,695 1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1,2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610 <	A	Available electricity (A=1+2-3)	1,963,921	1,895,695
1.2 Hydro (1.2=a+b) 2,646,536 1,633,353 a Net public producers (a=a.1-a.2) 1,556,770 631,006 a.1 Gross public producers 1,570,399 637,449 a.2 Losses and own consumption 13,629 6,443 b Independent power producers 1,089,766 1,002,347 1.3 Other producers (Photovoltaics) 13,106 13,629 2 Gross import (including exchanges) 228,239 663,815 3 Gross export (including exchanges) 228,239 663,815 1 Electrical losses (1=1.1+1.2) 1,963,921 1,895,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801	1	Net domestic production (1=1.1+1.2+1.3)	2,659,642	1,646,982
a Net public producers (a=a.1-a.2) 1,556,770 631,006 a.1 Gross public producers 1,570,399 637,449 a.2 Losses and own consumption 13,629 6,443 b Independent power producers 1,089,766 1,002,347 1.3 Other producers (Photovoltaics) 13,106 13,629 2 Gross import (including exchanges) 228,239 663,815 3 Gross export (including exchanges) 923,960 415,102 B Consumption of electricity (B=1+2) 1,963,921 1,895,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 206,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801	1.1	Thermo	0	0
a.1 Gross public producers 1,570,399 637,449 a.2 Losses and own consumption 13,629 6,443 b Independent power producers 1,089,766 1,002,347 1.3 Other producers (Photovoltaics) 13,106 13,629 2 Gross import (including exchanges) 228,239 663,815 3 Gross export (including exchanges) 923,960 415,102 B Consumption of electricity (B=1+2) 1,963,921 1,895,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	1.2	Hydro (1.2=a+b)	2,646,536	1,633,353
a.2 Losses and own consumption 13,629 6,443 b Independent power producers 1,089,766 1,002,347 1.3 Other producers (Photovoltaics) 13,106 13,629 2 Gross import (including exchanges) 228,239 663,815 3 Gross export (including exchanges) 923,960 415,102 B Consumption of electricity (B=1+2) 1,963,921 1,895,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	а	Net public producers (a=a.1-a.2)	1,556,770	631,006
b Independent power producers 1,089,766 1,002,347 1.3 Other producers (Photovoltaics) 13,106 13,629 2 Gross import (including exchanges) 228,239 663,815 3 Gross export (including exchanges) 923,960 415,102 B Consumption of electricity (B=1+2) 1,963,921 1,895,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	a.1	Gross public producers	1,570,399	637,449
1.3 Other producers (Photovoltaics) 13,106 13,629 2 Gross import (including exchanges) 228,239 663,815 3 Gross export (including exchanges) 923,960 415,102 B Consumption of electricity (B=1+2) 1,963,921 1,895,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	a.2	Losses and own consumption	13,629	6,443
2 Gross import (including exchanges) 228,239 663,815 3 Gross export (including exchanges) 923,960 415,102 B Consumption of electricity (B=1+2) 1,963,921 1,895,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	b	Independent power producers	1,089,766	1,002,347
3 Gross export (including exchanges) 923,960 415,102 B Consumption of electricity (B=1+2) 1,963,921 1,895,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	1.3	Other producers (Photovoltaics)	13,106	13,629
B Consumption of electricity (B=1+2) 1,963,921 1,895,695 1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	2	Gross import (including exchanges)	228,239	663,815
1 Electrical losses (1=1.1+1.2) 400,441 362,521 1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	3	Gross export (including exchanges)	923,960	415,102
1.1 Losses in transmission 60,694 55,673 1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	В	Consumption of electricity (B=1+2)	1,963,921	1,895,695
1.2 Losses in distribution (1.2=a+b) 339,747 306,848 a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	1	Electrical losses (1=1.1+1.2)	400,441	362,521
a Technical losses in distribution 222,494 208,619 b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	1.1	Losses in transmission	60,694	55,673
b Non-technical losses in distribution 117,253 98,229 2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	1.2	Losses in distribution (1.2=a+b)	339,747	306,848
2 Consumption of electricity by domestic users (2=2.1+2.2) 1,563,480 1,533,174 2.1 Households 697,801 685,610	а	Technical losses in distribution	222,494	208,619
2.1 Households 697,801 685,610	b	Non-technical losses in distribution	117,253	98,229
	2	Consumption of electricity by domestic users (2=2.1+2.2)	1,563,480	1,533,174
2.2 Non-households 865,679 847,564	2.1	Households	697,801	685,610
	2.2	Non-households	865,679	847,564

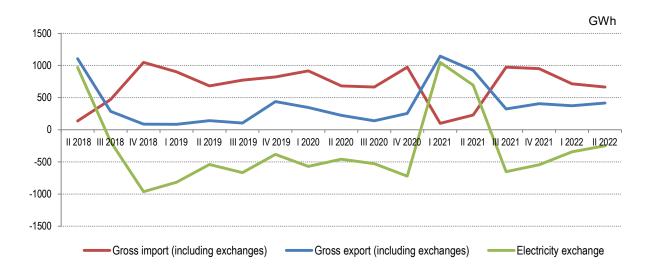
¹ Breakdown of technical and non-technical losses is an estimation made by operators in the field of electricity.

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 the second quarter of 2022, realized 631 GWh from 1,557 GWh realized in the second quarter of 2021, thus marking a decrease in production by 59.5 %. While, **independent and concessionaire power producers** realized 1,002 GWh from 1,090 GWh realized to the same period of the previous year, thus marking a decrease in production by 8.0 %.

Electricity exchange (difference between gross exports and gross imports of electricity), in the second quarter of 2022 has reached a negative value by 249 GWh compared to the same period of the previous year where it had a positive value of 696 GWh.

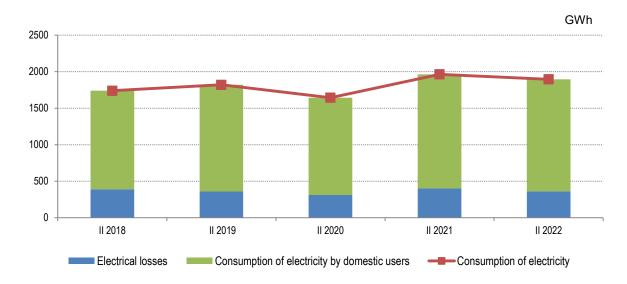
Fig. 2 Electricity exchange



Electrical losses have reached value 363 GWh from 400 GWh marking a decrease by 9.5 %. **Losses** in transmission decreased by 8.3 %, while **losses in distribution** decreased by 9.7 %.

Technical losses in distribution resulted on a decrease with 6.2 %, while **non-technical losses in distribution** resulted on a decrease with 16.2 %, compared with the second quarter of 2021 (fig.3).

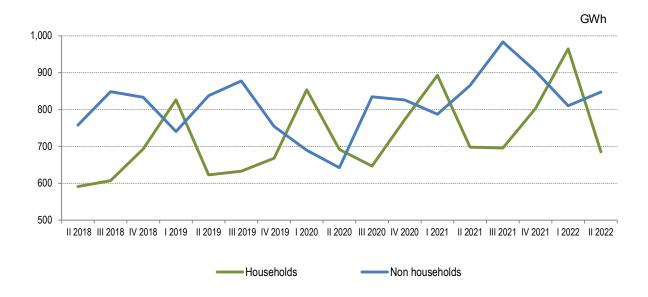
Fig. 3 Consumption of electricity, electrical losses and consumption of electricity by domestic users



The consumption of electricity by domestic users, in the second quarter of 2022, decreased by 1.9 %, reaching 1,533 GWh from 1,563 GWh realized in the second quarter of 2021.

The largest impact on the decrease of the final consumption of electricity by domestic users was provided by **consumption of electricity by non-household** with a decrease of electricity consumption by 2.1 %, against the decrease by 1.7 % of energy consumed by **household consumers (fig. 4)**.

Fig. 4 Consumption of electricity by domestic users



Methodology

Balance of electric power provides statistical information on domestic 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., a state joint stock trading company, vertically integrated, which has the leading role
 and is the key producer of electricity in Albania;
- OSSH a.s., a public company with 100% state-owned shares that carries out the supply and sales of electricity also the operation and management of the distribution network;
- OST a.s., transmission system operator is a public company with 100% state-owned shares that
 operates in the electricity transmission system from the physical and distribution concepts. OST
 a.s. 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.

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

Losses and own consumption is the total plant's consumption in generation process and production losses.

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 total quantity of electricity consumed by final users and losses in networks. It is equal to the sum of the following categories: electrical losses and consumption of electricity by domestic users.

Electrical losses refer to losses in transmission network including own consumption in transmission and distribution losses. *Technical losses* in distribution are estimated by OSSH a.s. *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.