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Balance of electric power

Year 2020

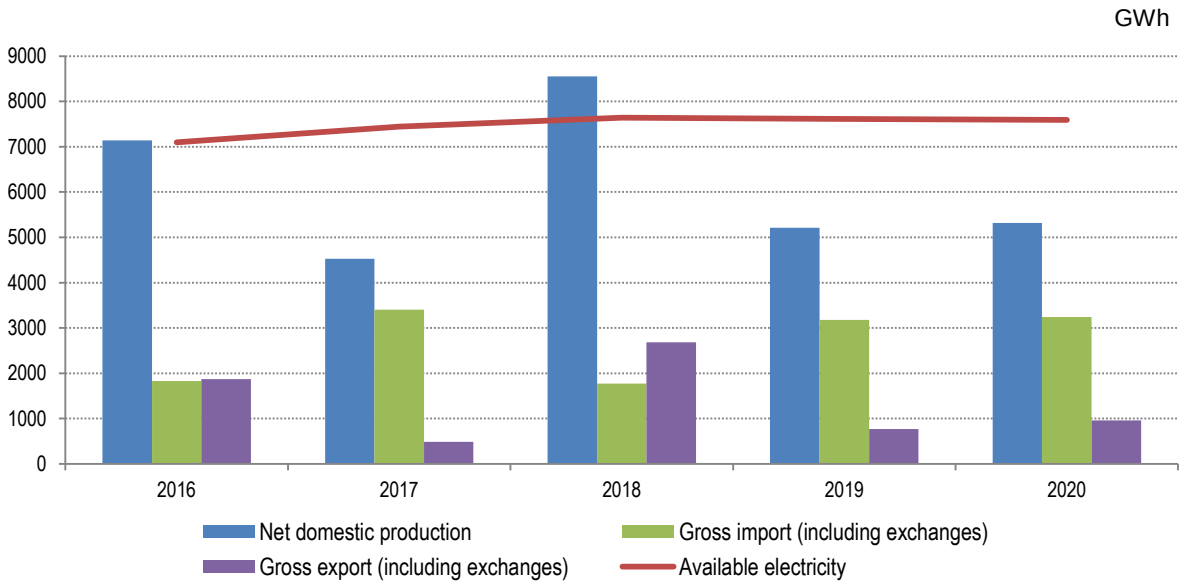
Tirana, March 3, 2021: During 2020, available electricity decreased by 0.3 %.

Net domestic production of electric power in this period reached the value 5,315 GWh from 5,208 GWh of electricity produced in 2019, with an increase in production by 2.1 %.

This production was realized by public hydro plants at 58.2 % of net domestic production, by independent power producers to the extent 41.2 % and other producers (other renewable) that generated 0.6 % of net domestic electricity production.

Gross import of electric power (including exchanges), reached the value 3,239 GWh from 3,177 GWh in the previous year, marking an increase with 2.0 %. Gross export (including exchanges) reached the value 963 GWh from 770 GWh marking an increase with 2.0 % (tab.1).

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



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Tab. 1 Balance of electric power, yearly

MWh

	Indicators	2019	2020
A	**Available electricity (A=1+2-3)**	**7,613,965**	**7,590,415**
1	Net domestic production (1=1.1+1.2+1.3)	5,207,929	5,314,811
1.1	Thermo	0	0
1.2	Hydro (1.2=a+b)	5,185,733	5,282,546
a	Net public producers (a=a.1-a.2)	2,981,136	3,091,977
a.1	Gross public producers	3,009,839	3,121,234
a.2	Losses and own consumption	28,704	29,257
b	Independent power producers	2,204,597	2,190,569
1.3	Other producers (other renewable)	22,196	32,265
2	Gross import (including exchanges)	3,176,515	3,238,631
3	Gross export (including exchanges)	770,480	963,027
B	**Consumption of electricity (B=1+2)**	**7,613,965**	**7,590,415**
1	Electrical losses (1=1.1+1.2)	1,653,466	1,631,717
1.1	Losses in transmission	168,621	172,198
1.2	Losses in distribution (1.2=a+b)[1]	1,484,845	1,459,519
a	Technical losses in distribution	954,299	932,634
b	Non technical losses in distribution[2]	530,545	526,885
2	Consumption of electricity by domestic users (2=2.1+2.2)	5,960,499	5,958,698
2.1	Households	2,750,172	2,963,786
2.2	Non households	3,210,328	2,994,912

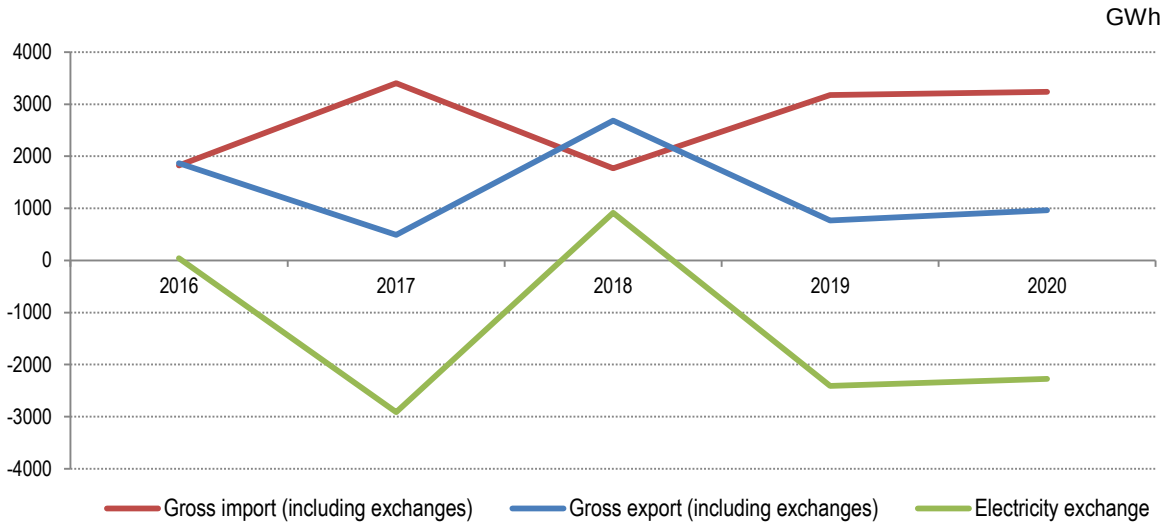
[1] Breakdown of technical and non-technical losses are estimations made by operators in the field of electricity.

[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 2020, realized 3,092 GWh from 2,981 GWh realized in 2019, thus marking an increase in production by 3.7 %. While, **independent and concessionaire power producers** realized 2,191 GWh from 2,205 GWh realized in the previous year, thus marking a decrease in production by 0.6 %.

Electricity exchange (difference between gross exports and gross imports of electricity), in 2020, has increased by 5.4 % compared to 2019 (fig.2).

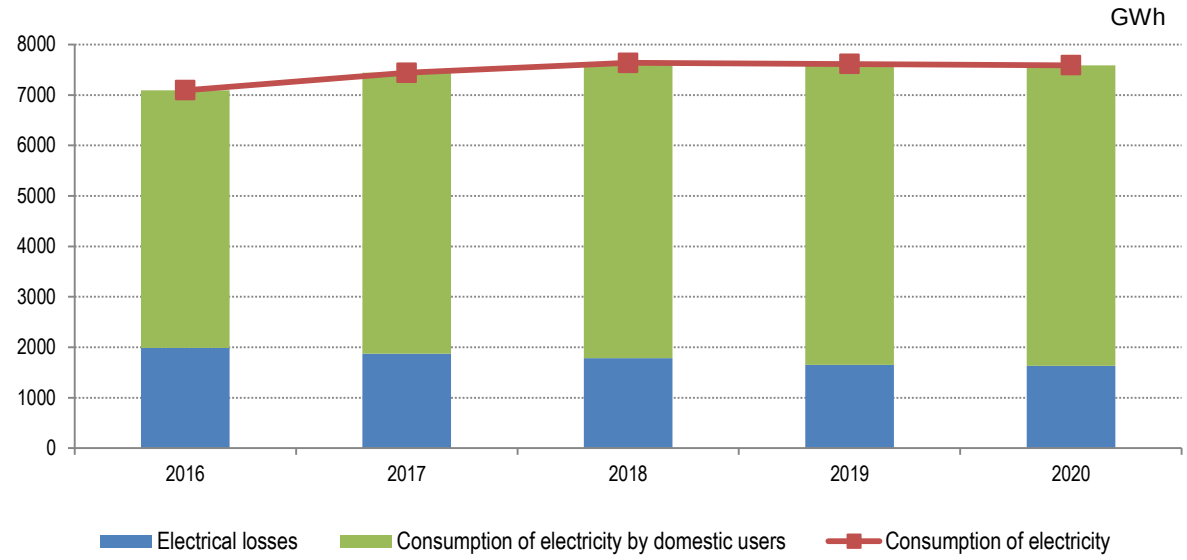
Fig. 2 Electricity exchange



Electrical losses have reached value 1,632 GWh from 1,653 GWh marking a decrease by 1.3 %. **Losses in transmission** increased by 2.1 % and the weight that occupies in the total electrical losses is 10.6 %.

Losses in distribution occupy a greater weight, around 89.4 % of electrical losses, where **technical losses in distribution** decreased by 1.7 % compared to the previous year (fig.3).

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



The consumption of electricity by domestic users, in 2020, reaching 5,959 GWh from 5,960 GWh realized in 2019.

The consumption of electricity by households increased by 7.8 %, reaching the value 2,964 GWh from 2,750 GWh in 2019, while **the consumption of electricity by non-households** decreased by 6.7 % reaching the value 2,995 GWh from 3,210 GWh compared to the previous year (fig.4).

Fig. 4 Consumption of electricity by domestic users

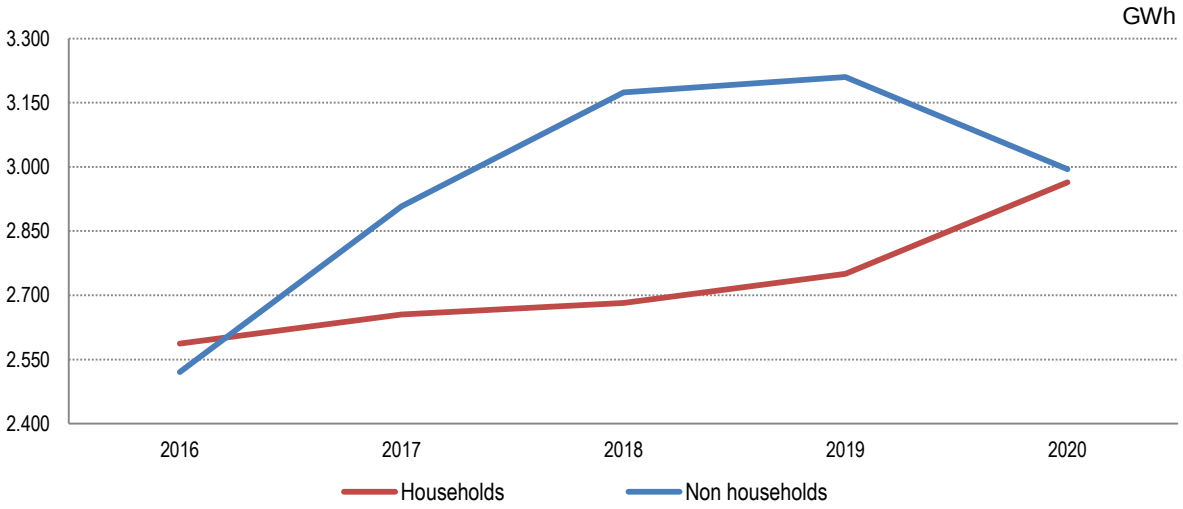
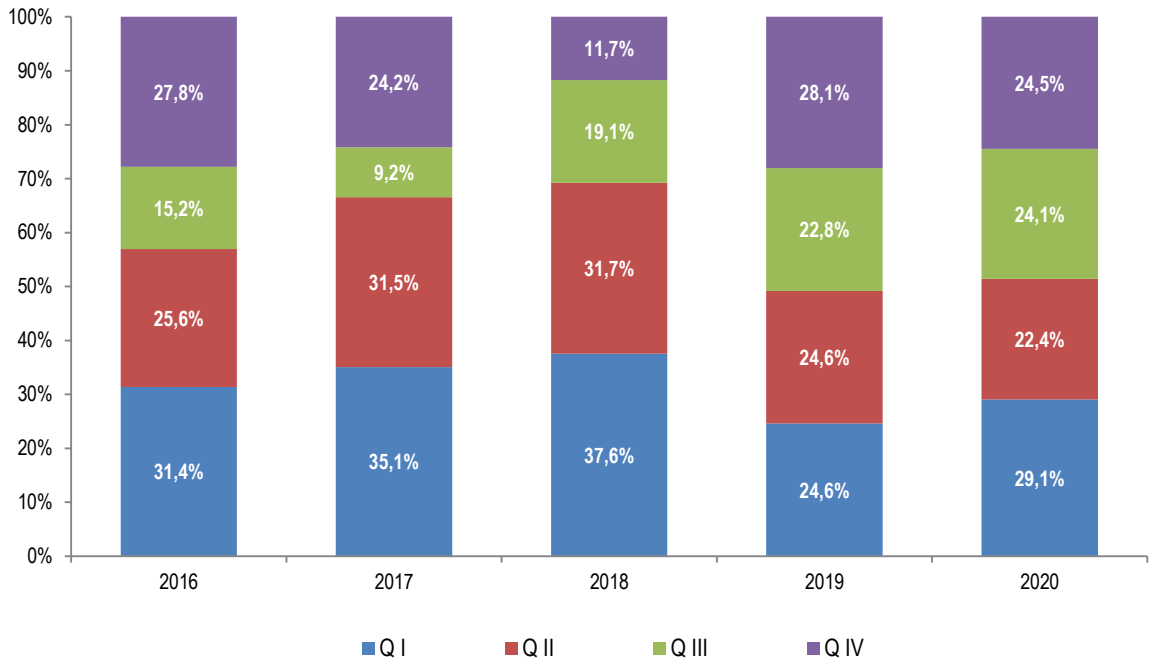


Fig. 5 shows **the structure in percentage of net domestic production by quarters** for the period 2016-2020. In 2020 noted an increase in net production in the first and third quarters and a decrease in net production in the second and fourth quarters, compared to 2019.

Fig. 5 Sructure in percentage of net domestic production by quarters, 2016-2020 (%)



Quarter IV 2020

During the fourth quarter of 2020, **available electricity** increased by 9.7 %.

Net domestic production of electric power reached the value 1,301 GWh from 1,461 GWh of electricity produced in the fourth quarter of 2019, with a decrease in production by 11.0 % (tab.2).

Tab. 2 Balance of electric power, IV quarter

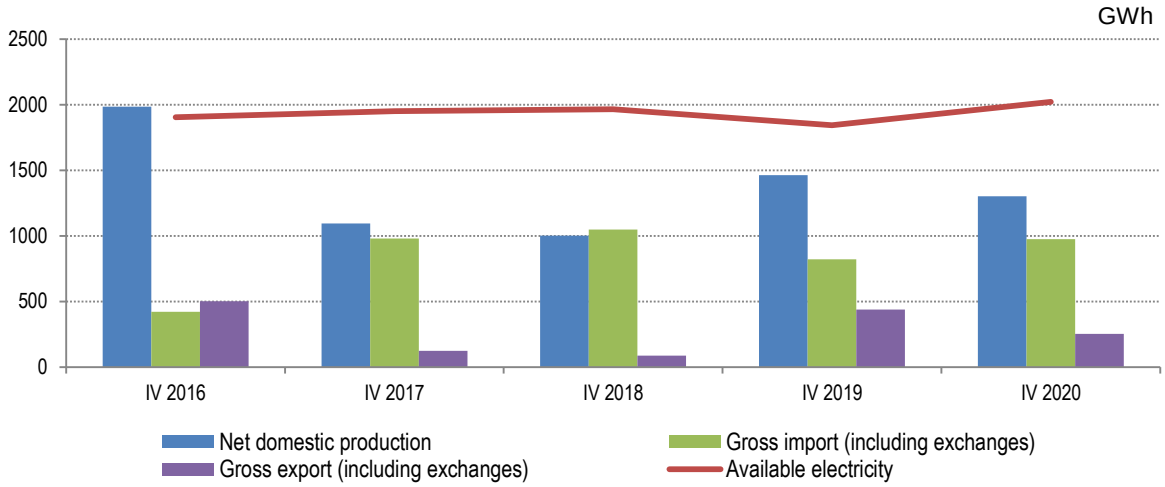
MWh

	Indicators	Q. IV 19	Q. IV 20
A	**Available electricity (A=1+2-3)**	**1,843,437**	**2,022,127**
1	Net domestic production (1=1.1+1.2+1.3)	1,461,409	1,300,567
1.1	Thermo	0	0
1.2	Hydro (1.2=a+b)	1,457,037	1,294,624
a	Net public producers (a=a.1-a.2)	869,036	799,686
a.1	Gross public producers	877,224	807,360
a.2	Losses and own consumption	8,188	7,675
b	Independent power producers	588,000	494,938
1.3	Other producers (other renewable)	4,372	5,943
2	Gross import (including exchanges)	821,090	974,710
3	Gross export (including exchanges)	439,062	253,150
B	**Consumption of electricity (B=1+2)**	**1,843,437**	**2,022,127**
1	Electrical losses (1=1.1+1.2)	421,088	423,286
1.1	Losses in transmission	46,370	44,690
1.2	Losses in distribution (1.2=a+b)[1]	374,718	378,596
a	Technical losses in distribution	235,445	243,145
b	Non technical losses in distribution[2]	139,273	135,451
2	Consumption of electricity by domestic users (2=2.1+2.2)	1,422,349	1,598,841
2.1	Households	667,871	773,026
2.2	Non households	754,477	825,815

[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.

The decrease of production of electricity during the fourth quarter of 2020, resulted on increase of gross imports of electric power (including exchanges) with 18.7 % and decrease of gross exports (including exchanges) of electric power with 42.3 %, compared to the same period of the previous year (fig.6).

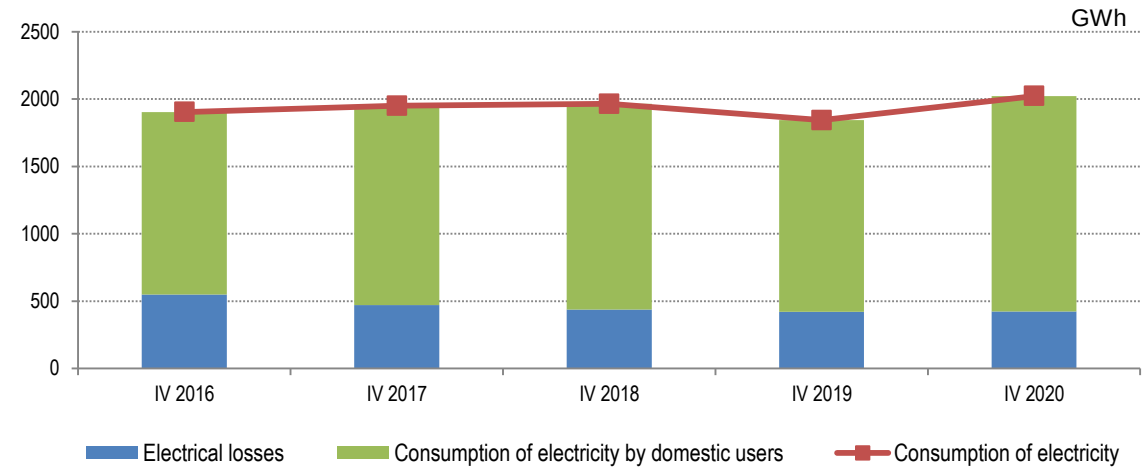
Fig. 6 Available electricity, net domestic production and electricity exchange



During the fourth quarter of 2020, **losses in transmission** dropped by 3.6 %, while **losses in distribution** increased by 1.0 % (fig.7).

The consumption of electricity by domestic users increased by 12.4 % compared to the same period in 2019. The **consumption of electricity by households** increased by 15.7 %, while the contribution of **electricity consumed by non-households** increased by 9.5 %**.**

Fig. 7 Consumption of electricity, electrical losses and 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;
- OSHEE 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 (OSHEE a.s.) 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 OSHEE, 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 OSHEE 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.

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.