

Georgia's Energy Sector Electricity Market Watch – 1Q24

Georgia | Energy Summary of 1Q24 May 27, 2024

Key Highlights of 1Q24

Domestic electricity consumption increased by 2.2% y/y in 1Q24. The growth was mainly driven by retail customers, with demand increasing by 4.7% y/y and accounting for 57.3% of total consumption. Notably, the volume of electricity supplied by Telmico saw a significant increase of 10.0% y/y, whereas EP Georgia's supply rose slightly by 1.0% y/y. Meanwhile, the downward trend in consumption by direct consumers continued, with the volume consumed decreasing by 3.3% y/y in 1Q24.

Local generation increased by 6.7% y/y, while the volume of imports decreased by 27.0% y/y in 1Q24. This is due to the increase in hydro power generation by 41.2% y/y, thanks to abundant rainfall. As a result, the need for thermal power plants decreased and TPP generation in fell by 26.2% y/y, accounting for 30.9% of the total generation in 1Q24.

Other market news:

- The gradual opening of the electricity exchange market is set to begin on July 1, 2024 (page 2)
- The results of the 2nd renewable capacity auction were announced (page 2)
- Under the new initiative by the Ministry of Economy, future renewable capacity auctions will be discontinued, allowing investors to sign memorandum of understanding (MoU) with government (page 3)
- The balancing electricity volume was 1.1 TWh (+45.5% y/y) in 1Q24. The growth was mainly driven by increased price of natural gas for TPPs (page 8).

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Opening of the electricity exchange market

The energy exchange will start functioning on July 1, 2024, after being postponed six times. At this stage, no changes have been made to the by-laws, although the phased implementation of the market is actively being considered, and the full opening is expected to take several years. In the first stage, trading may be voluntary and involve traders, suppliers, electricity producers and large/direct consumers. According to the chairman of GNERC, the next stages will be a mandatory day ahead market, and finally an intraday market. Sector players welcome the phased launch of the exchange and believe that a direct full-scale launch would be premature given the risks involved.

Before the launch of the market, there are still some unclear issues. 1) It is important for the representatives of the sector whether the imported electricity will be sold on the exchange. According to their expectation, imported electricity on the exchange will increase the tariff. 2) A clear policy towards imbalance is important. According to the new market model, the person responsible for the imbalance (either the producer or the consumer) is subject to a financial penalty, however, it is not yet known what the government's approach will be in the first stage of the market.

Second capacity auction

The results of the 2nd renewable energy capacity auction were announced. Unlike the previous auction, the 2nd auction also included power plants that have the regulation capabilities. Notably, sector players showed a large interest in this auction. An auction of 800 MW of capacity was announced, and a total of 147 projects (with a total installed capacity of 1,915.76 MW) were presented, of which 144 projects (with a total installed capacity of 1,865.31 MW) moved to the evaluation stage. Median tariffs by power plant type are provided in Table 1 below.



Power plant type	Announced capacity, MW	Total capacity of presented projects, MW	Median tariff, US cent			
Hydro run-of-river	100	223.91	6.50			
Hydro with reservoir	300					
1-4 hrs	50	229.84	7.50			
4-8 hrs	100	229.04	7.74			
8 hrs>	150		10.35			
Wind	125	634.30	6.00			
Wind with storage	70	190.40	8.60			
Sun	125	425.16	5.60			
Sun with storage	70	153.50	6.39			
Other renewable	10	8.20	15.35			

Table 1: Results of the 2nd capacity auction

Source: Ministry of Economy and Sustainable Development, Galt & Taggart

The auction winners will secure contract for difference (CFD) agreements with the government and ESCO, offering compensation based on the day-ahead market price and CFD price difference. Notably, some amendments were made into legislation stating that prior commencement of day-ahead market CFD contract owners will be compensated by ESCO with full CFD price, **similar to standard PPA principle**.

No more renewable energy capacity auctions will be announced,

although 3 auctions were initially planned. According to the Minister of Economy, the process of reviewing projects will be simplified, and signing of the memorandum of understanding (MoU) with the government will be required to start a project with no need of auction. Under the initiative, the median tariff acquired in the 2nd auction will serve as the benchmark price obtained under competitive conditions, with the terms of the MoU being structured around it.

Sector players suggest reviewing the auction tariffs before moving on with the memorandums. According to them, in case of some power plants, the set tariff is not realistic. For example, in case of hydro plants, the median tariff was established by including the proposals of plants up to 2 MW, whose business model and costs differ significantly from larger plants.



Electricity supply, demand and prices

Supply: In 1Q24, the total volume of electricity supplied to the grid amounted to 3.8 TWh. A 2.1 TWh (56.9%) was generated by HPPs, 1.2 TWh (30.9%) by TPPs, 0.02 TWh (0.5%) by WPPs, and 0.4 TWh (11.6%) was imported.

Demand: Of the 3.8 TWh delivered to the grid, local consumption at the wholesale level accounted for 3.6 TWh (95.7%), 0.02 TWh (0.5%) was exported, and 0.1 TWh (3.8%) was lost during transmission in high voltage grid.

Electricity consumption

In 1Q24, domestic electricity consumption increased by 2.2% y/y. The growth was mainly driven by retail customers, with demand increasing by 4.7% y/y. The consumption of direct consumers continued downward trend and decreased by 3.3% y/y. This decline was mainly due to a decrease in the production of ferroalloys and metals. This downward trend started in 2023, when the price of ferroalloys on the global markets gradually decreased. Prices continue to decline and this trend is not expected to change in coming months. Therefore, a significant increase in the demand of direct consumers in the local electricity market in 1H24 is not expected.



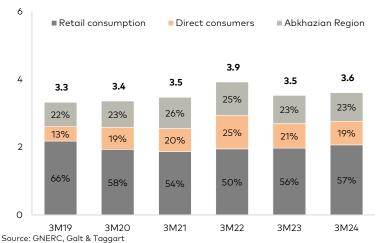


Table 2: Local demand growth breakdown, 1Q24

Consumer	Growth rate, y/y	Share in consumption		
Domestic consumption	+2.2%	100.0%		
Abkhazian region	+1.3%	23.2%		
Direct consumers**	-3.3%	19.5%		
Retail consumption*	+4.7%	57.3%		
EPG Supply*	+1.0%	32.6%		
Telmico*	+10.0%	24.6%		

* EPG Supply used to be Energo-pro Georgia and Telmico used to be Telasi prior Jun-21. The name and functions changed in line with ongoing energy reform's unbundling requirement.

requirement. ** Consumption of direct consumers increased in 2021 and 2022 mostly due to reallocation of certain consumers from retail to wholesale market in "direct consumers" category, enforced by legislative changes. Criteria for mandatory registration as direct consumer is currently 0.4GWh per month.



Supply of electricity

In 1Q24, domestic electricity generation and imports increased by

1.3% y/y. HPPs accounted for 56.9% of the total supply. Notably, hydro generation increased by 41.2% y/y. Among them, the generation of Enguri-Vardnyli (+87.4% y/y) and other regulating HPPs (+54.6% y/y) was significantly up. A 30.9% of the supply was met by the generation of TPPs, 0.5% by WPPs, and the remaining 11.6% was imported.

In 1Q24, the volume of both imports and thermal generation decreased significantly - imports decreased by 27.0% y/y to 0.4 TWh, and thermal generation decreased by 26.2% y/y to 1.2 TWh. The decline in both components is the result of increasing hydro generation, thanks to abundant rainfall. Since the HPPs were able to provide the necessary supply, there was no longer a significant need for either TPP generation or imports. Notably, 95.3% of imported electricity came from Russia, which was fully intended for Abkhazia.

Figure 2: Electricity generation and imports, TWh

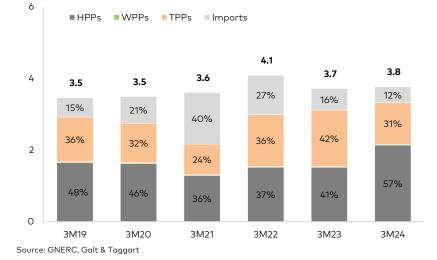


Table 3: Supply growth breakdown, 1Q24

Supply source	Annual growth	Share in supply 100.0%		
Total supply	+1.3%			
Imports	-27.0%	11.6%		
Domestic generation	+6.7%	88.4%		
TPPs	-26.2%	30.9%		
WPPs	-6.5%	0.5%		
HPPs	+41.2%	56.9%		
Enguri and Vardnili	+87.4%	12.1%		
Other regulated HPPs	+54.6%	24.2%		
Deregulated HPPs	+13.4%	20.7%		



Foreign trade: export and transit

The price of electricity in the Turkey decreased during 2023 and the trend persisted in 1Q24. In the 2023 export season of April-June, the average price was 8.8 US cents per kWh, and in the 2022 export season (April-September), the price averaged 15.1 US cents per kWh. In the 1Q24, the average price of electricity in Turkey was 6.7 US cents.

Figure 3: Average annual Market Clearing Prices in Turkey, USc/kWh

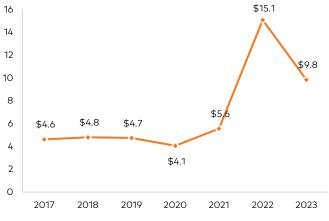
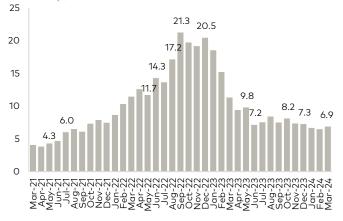


Figure 4: Average monthly Market Clearing Prices in Turkey, USc/kWh



Source: EPIAS, EVDS, Galt & Taggart

Due to reduced prices in the Turkish market, the attractiveness

weakened. Although local prices in Turkey are still slightly higher than pre-pandemic prices, at this stage, this has not been enough to maintain transit appeal. In 1Q24, 0.3 TWh of electricity was transited through Georgia to Turkey, which came entirely from Azerbaijan.

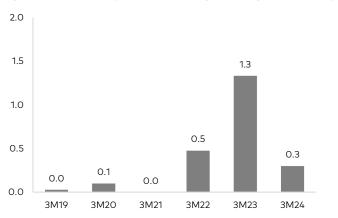


Figure 5: Electricity transit though Georgia to Turkey, TWh

Source: GNERC, Galt & Taggart

Source: EPIAS, EVDS, Galt & Taggart

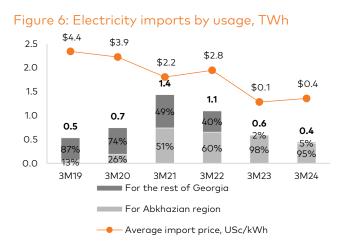


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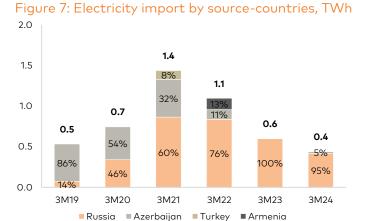
In 1Q24, electricity exports were traditionally insignificant. The total export volume amounted to 0.02 TWh (0.5% of the total supply), and the average export price was 6.2 US cents (-4.3% y/y).

Import of electricity

In 1Q24, electricity imports decreased by 27.0% y/y. Electricity import to Georgia amounted to 0.4 TWh (11.6% of total demand). Most of the imported electricity, 95.3%, came from Russia, and the remaining 4.7% came from Azerbaijan. Notably, the average import price increased by 233.5% y/y to 0.4 US cents. The increase was due to the last year's low base, when imports was only from Russia and solely for the consumption of the Abkhazia region at a special price.



Source: GNERC, Galt & Taggart



Source: GNERC, Geostat, Galt & Taggart



Balancing electricity prices in Georgia

Balancing electricity volume was 1.1 TWh (+45.5% y/y) in 1Q24, which is 30.1% of the total supply. The remaining volume of electricity was traded through bilateral contracts. The growth of balancing electricity is mainly the result of the growth of balancing energy, the share of which increased significantly reaching 27.6% in 1Q24. This increase is the result of ESCO's increased purchases of energy from TPPs - Mtkvari Energy and Tbilsres. In total, the volume of balancing electricity purchased from these two TPPs was 0.3 TWh in 1Q24, while this figure stood at 0 in 1Q23. A significant increase is the result of more expensive natural gas for TPPs, the price of which has increased from US\$ 143 to US\$ 210. Consequently, it was decided to sell the electricity generated by TPPs to ESCO instead of the retail customers, which led to the mentioned increase in the balancing energy volume.

Weighted average wholesale price of balancing electricity increased by 1.6% y/y to 5.5 US cents per kWh in 1Q24. On a monthly basis, the price of balancing electricity fluctuated within 5.8-5.9 US cents per kWh. Most of the balancing electricity (70.6%) was purchased by ESCO under a power purchase agreement (PPA), of which 50.9ppts were from the Gardabani N2 thermal plant, 46.7ppts from HPPs, and the remaining 2.4ppts from WPP. Imports accounted for only 1.8% of the balancing electricity in 1Q24.

Figure 8: Balancing electricity volume and prices

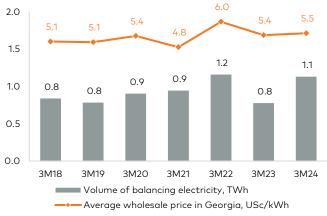
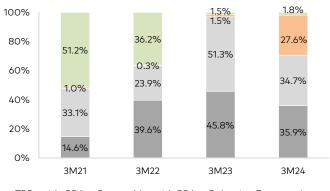


Figure 9: Composition of ESCO's balancing electricity volume



TPPs with PPA = Renewables with PPA = Balancing Energy = Import Source: ESCO, Galt & Taggart

Source: ESCO, NBG, Galt & Taggart



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Table 4: Electricity Balance in 1Q24, GWh

	May-23	Jun-23	Jul-23	Aug-23	Sep- 23	Oct-23	Nov- 23	Dec- 23	2023	Jan-24	Feb-24	Mar- 24	3M24
Domestic consumption, total	1,029	980	1,100	1,211	937	987	1,032	1,218	13,053	1,277	1,146	1,180	1,032
% change y/y	-11%	-9%	-4%	+1%	-11%	-8.3%	-8.2%	-3.3%	-7.9%	-0.4%	+1.7%	+5.8%	-8.2%
Of which:													
- Abkhazian Region	215	163	178	199	167	199	222	288	2,703	326	251	261	222
% change y/y	-15%	-11%	-10%	-3%	-9%	-7%	-8.7%	-2.9%	-10.8%	+1.5%	-1.5%	+3.6%	-8.7%
- Eligible consumers	248	238	260	257	182	204	202	229	2,779	225	233	244	202
% change y/y	-29%	-27%	-17%	-13%	-36%	-30%	-26.6%	-11.2%	-25.4%	-14.7%	+5.0%	+1.4%	-26.6%
- Retail consumption	566	579	662	755	588	584	608	701	7,571	726	662	676	608
% change y/y	+3%	+1%	+4%	+7%	+1%	+2%	+0.4%	-0.6%	+2.2%	+4.1%	+1.8%	+8.4%	+0.4%
Of which:													
- Energo-Pro Georgia + EP Georgia Supply*	335	337	392	453	356	349	357	402	4,477	417	373	386	357
% change y/y	+1%	+0%	+4%	+5%	+2%	+2%	+0.7%	-5.3%	+1.4%	-3.1%	+1.1%	+5.7%	+0.7%
-Telasi + Telmico*	230	242	270	301	232	235	251	299	3,094	309	289	290	251
% change y/y	+6%	+3%	+4%	+12%	+1%	+4%	-0.0%	+6.4%	+3.2%	+15.7%	+2.6%	+12.2%	-0.0%
Domestic Generation,	1,325	1,368	1,541	1,462	1.118	1,043	1.003	1,166	14,396	1,175	1,022	1,130	1,003
total % change y/y	-9%	-8%	+18%	+4%	-6%	+1%	-11%	+5%	+1.1%	+6%	+3%	+11%	-11%
Of which:	-770	-0.76	+ 10 /6	+4 /0	-078	+170	-1176	+378	+1.176	+0.19	+376	+1176	-11/6
- TPPs	1	2	132	162	302	429	364	378	3,446	428	342	395	364
	N/A	-46%	+4516	-32%	-5%	+179%	-27%	-45%	+1.7%	-41%	-47%	+90%	-27%
% change y/y			%										
- WPPs	8	5	9	7	8	7	6	6	86	5	6	8	6
% change y/y	-6%	-9%	+8%	-29%	+10%	-11%	-13%	-16%	-1.6%	-33%	-2%	+20%	-13%
- HPPs	1,316	1,361	1,401	1,293	808	608	633	782	10,863	742	674	727	633
% change y/y	-9%	-8%	8%	12%	-7%	-30%	1%	88%	+0.9%	98.1%	98.9%	-10%	1.1%
Imports	-	0	1	-	-	0	81	108	790	160	173	105.52	81
% change y/y	-100%	-97%	+352%	N/A	N/A	-100%	+46%	-50%	-48.5%	-35.2%	-17%	-27.7%	+46%
Exports	248	341	384	196	132	0	ο	0	1,468	8	4	8	-
% change y/y	-7.8%	-3.0%	+235.5 %	+40.1%	+41.0 %	N/A	N/A	N/A	+51.2%	N/A	+206%	N/A	N/A
Trade balance	248	341	384	196	132	(0)	(80)	(108)	679	(152)	(169)	(98)	(80)
Transit	65	-	32	240	300	251	193	243	3,444	44	45	63	193
% change y/y	N/A	N/A	-91%	-32%	-24%	-28%	-62%	-53%	+9.0%	-92%	-88%	-86%	-62%

Source: GNERC, Galt & Taggart * EPG Supply used to be Energo-pro Georgia and Telmico used to be Telasi prior Jun-21. The name and functions changed in line with ongoing energy reform's unbundling requirement. Note: N/A= not available; NM= not meaningful



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