



Georgia's Energy Sector Electricity Market Watch

Georgia | Energy
1Q20
May 7, 2020

Highlights

Ministry of Economy expects decrease in electricity consumption caused by Covid-19 to continue until Sep-20. Electricity consumption was down by 7.8% y/y in Mar-20 due to partial lockdown caused by Covid-19 pandemic. Pandemic impact on electricity consumption will be sharper in April 2020, when full lockdown was in place. However, based on the updated annual forecast of the Ministry of Economy and Sustainable Development (adopted on April 24, 2020), the annual decrease in consumption in April is expected at 5.9%, less than actual growth figure for March. The same document forecasts negative growth of electricity consumption to continue until Sep-20, resulting in 0.8% drop in annual electricity consumption in 2020 (to 12.7TWh).

In order to mitigate the negative impact of coronavirus, the government will cover population's utility bill for 3 months. This support will affect those subscribers who consume less than 200 kWh of electricity and 200 m³ of natural gas in a month. This consumption is approximately equal to the monthly payment of GEL 37 in the case of electricity and the consumption of GEL 100 for natural gas. Citizens were allowed to leave the support scheme voluntarily and 3,534 subscribers refused this support in March.

Shuakhevi HPP resumed operations in February 2020. The 178-megawatt station was first launched in 2017, but had to undergo repairs due to technical problems with the tunnel. In March 2020, its output was 58.9 GWh, which is 5.4% of the total supply this month and 8.3% of hydropower.

Policymakers are meeting their deadlines set by newly adopted energy law for market reforms. Government of Georgia has adopted concept design of electricity market; Georgian Energy and Water Regulatory Commission adopted licensing rules for Transmission System Operators and made changes into some legislative acts, including grid code.

According to concept design of electricity market:

- **Power trading on day-ahead, intraday, bilateral and balancing markets should start by Jul-21.** Before then, the trading will continue in form of bilateral agreements, as it is today. Power Exchange Company, established in Dec-19 as joint venture of ESCO and GSE, is working with Nord Pool Consulting on creation of trading platforms and supporting operational rules. They promise to launch the platforms first in July 2020, and after a year of testing, full-scale operations will begin.
- **Public service provider at wholesale level (probably ESCO)** will be in charge of price stability on the market and supply of electricity to Abkhazian region. Public service provider is allowed to trade on power markets if needed, but main mechanism they will use for price stability is contract for differences, when they compensate the difference between regulated or promised price and market clearing price. This company will be price stability guarantor for:
 - Power plants with the power purchase agreements or any other support schemes offered by government in the future;
 - Universal service providers (the companies supplying households and other end-users);
 - Regulated power plants (e.g. Enguri)
 - Guaranteed capacity providers (e.g. TPPs)
- **Balancing and ancillary services market will start operation in Jul-21.** TSO will define the requirements and the list of service providers. Imbalance fees and settlement rules will also be established by then.

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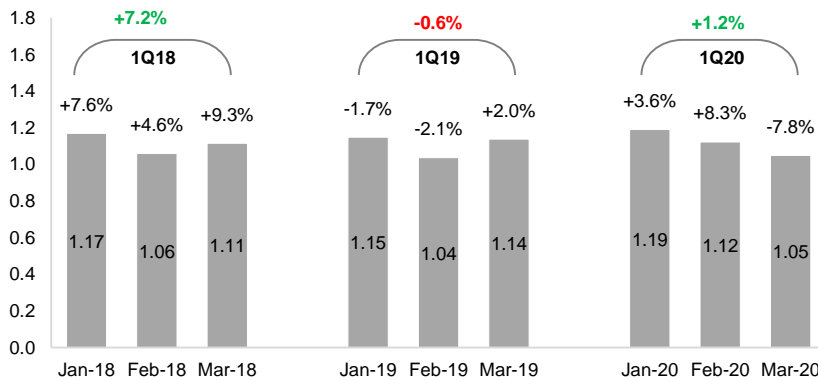
Electricity Consumption, Exports, Generation and Imports – 1Q20

Domestic consumption

Domestic consumption of electricity increased by 1.2% y/y and reached 3.4TWh in 1Q20. The growth is far below expected 5% y/y growth, but higher than 0.6% y/y decrease of 1Q19. Electricity consumption was up 3.6% y/y and 8.3% y/y in January and February, respectively. The growth was mainly attributable to eligible consumers.

Electricity consumption was down by 7.8% y/y in March 2020, caused by partial lockdown due to Covid-19 pandemic. From 2nd half of March, the lockdown affected cafes, restaurants, hotels, shopping malls, places for public gathering. Importantly, electricity consumption of eligible consumers was unaffected by Covid-19 lockdown as large industrial users continued their everyday operations.

Figure 1: Domestic electricity consumption and annual growth rates, TWh

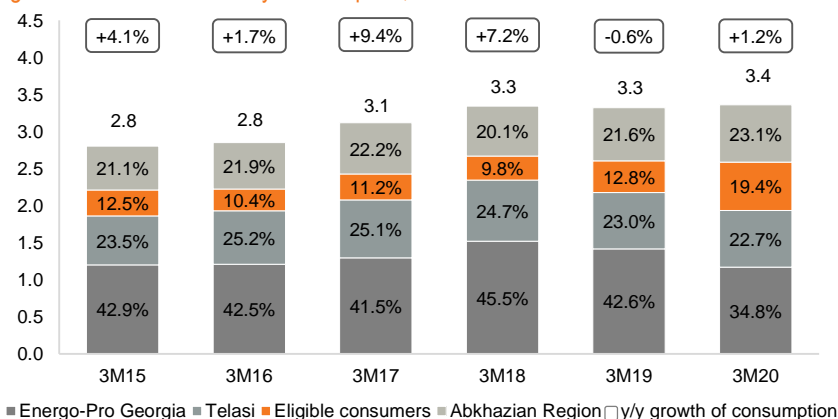


Source: ESCO

Note: Percentages on the graph represent y/y growth rates

Electricity consumption dynamics of certain consumer groups in 1Q20 are explained by legislative changes. Consumption by eligible consumers (also known as direct consumers) increased by 52.8% y/y, while distribution licensees' consumption was down 11.2% y/y in 1Q20. From the group of distribution licensees, Energo-pro Georgia's consumption reduced the most (-17.2% y/y), as its several subscribers were registered as direct consumers. In line with market deregulation, started in May 2018, all companies with average monthly consumption over 5GWh were mandatory registered as direct consumers. As a result, the number of direct consumers increased from 2 to total 15 companies. Moreover, their share in overall domestic consumption increased from 9.8% in 1Q18 to 19.4% in 1Q20.

Figure 2: Domestic electricity consumption, TWh



Source: ESCO

Table 1: Demand growth breakdown, 1Q20

Consumer	Growth rate, y/y	Share in consumption
Domestic consumption	+1.2%	100.0%
Abkhazian region	+8.0%	23.1%
Eligible consumers	+52.8%	19.4%
Distribution	-11.2%	57.5%
Energo-Pro Georgia	-17.2%	34.8%
Telasi	+0.01%	22.7%

Source: ESCO



Domestic supply

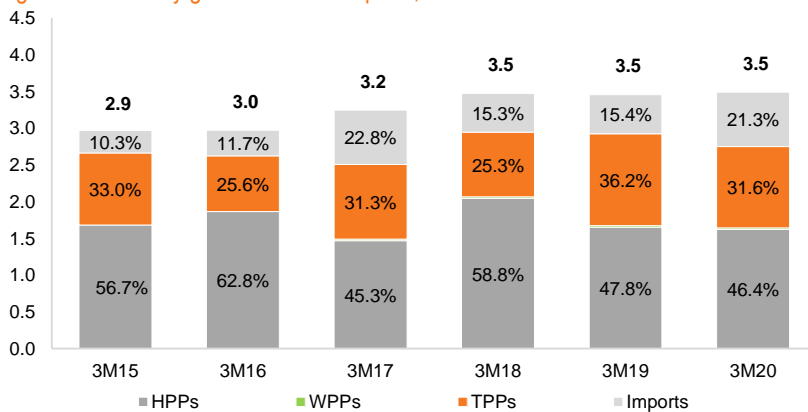
78.7% of the demand on electricity was satisfied by local generation in 1Q20, the rest was imported from Russia and Azerbaijan.

Generation of **hydro power plants** was down by 1.9% y/y and satisfied 46.4% of total demand in 1Q20. This decrease is attributable to an unfavourable hydrological condition, mostly affecting generation of January and February, down by 21.7% y/y and 12.9% y/y, respectively. After start of rainy season and melting of snow, hydrogeneration was up by 30% y/y in Mar-20, but the growth was not enough to compensate the decline of 2M20.

Increased consumption of Abkhazian region (+8.0% y/y) fully absorbed generation of Enguri and Vardnili (-10.9% y/y) in 1Q20 and created need of electricity imports from Russia through Salkhino interconnection line.

Thermal generation was down by 11.7% in 1Q20 from a very high base in 1Q19 (+42.1% y/y). **Wind generation** (+9.2% y/y) accounted for a mere 0.7% of total supply.

Figure 3: Electricity generation and imports, TWh



Source: ESCO

Table 2: Supply growth breakdown, 1Q20

Supply source	Growth rate, y/y	Share in supply
Total Supply	+1.0%	100.0%
Imports	+39.6%	21.3%
Domestic generation	-6.0%	78.7%
TPPs	-11.7%	31.6%
WPPs	+9.2%	0.7%
HPPs	-1.9%	46.4%
Enguri and Vardnili	-10.9%	15.1%
Other regulated HPPs	-2.9%	16.2%
Deregulated HPPs	+10.5%	15.1%

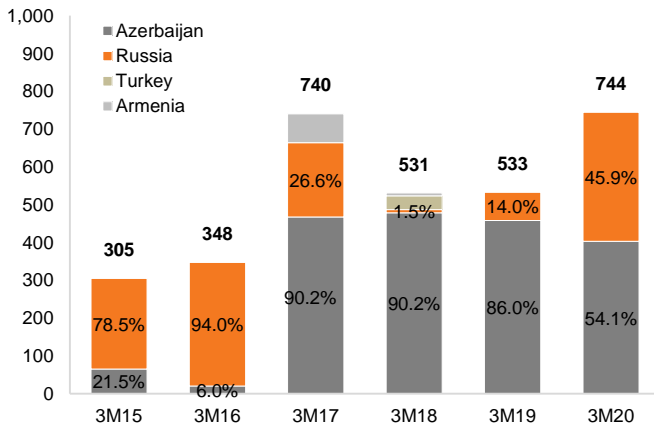
Source: ESCO



Electricity imports, exports and transit

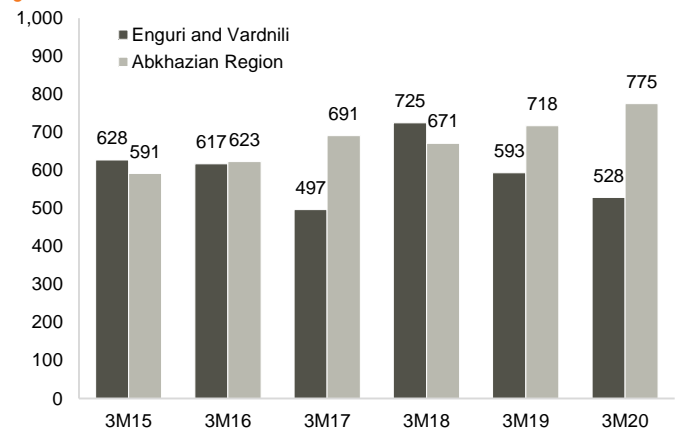
Import of electricity increased by 39.6% y/y and accounted for 21.3% of total supply in 1Q20. 54.1% of electricity was imported from Azerbaijan and the rest came from Russia (45.9% of total). Most significant increase of imports took place in Feb-20 (+119% y/y), compared to 17.9% y/y and 4.3% y/y growth figures in Jan-20 and Mar-20, respectively. Notably, electricity imports for Abkhazian region via Salkhino line accounted c. 1/3 of total electricity imports and c.70% of imports from Russia.

Figure 4: Electricity imports, TWh



Source: ESCO

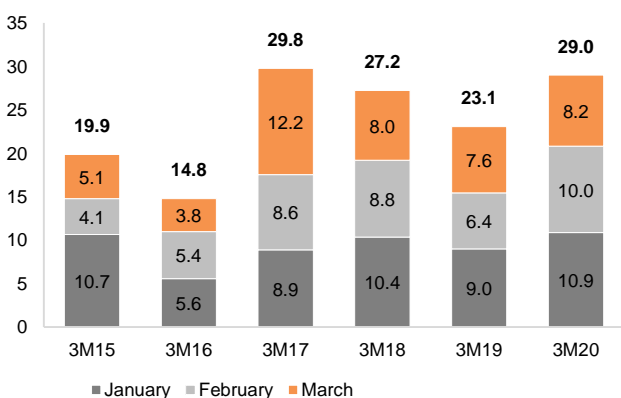
Figure 5: Consumption of Abkhazian regions and Engur/Vardnili's generation, TWh



Source: ESCO

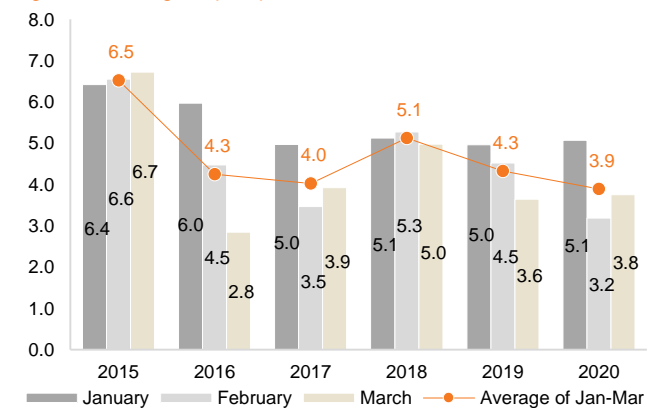
The cost of electricity imports was up by 25.7% y/y and reached US\$ 29.0mn in 1Q20. The difference between growth rates of imports volume and value is explained by comparatively low cost of electricity imports via Salkhino line for Abkhazian region. The same reason caused reduction of average import price from USc 4.3/kWh to USc 3.9/kWh (-10.0% y/y).

Figure 6: Electricity imports, US\$ mn



Source: GeoStat

Figure 7: Average import prices, USc/kWh



Source: ESCO, GeoStat

The export of electricity was insignificant in 1Q20, as expected.

Electricity transit from Azerbaijan to Turkey increased 3.4x times and reached 51.1GWh in 1Q20, 10% below the high transit levels of 2016.

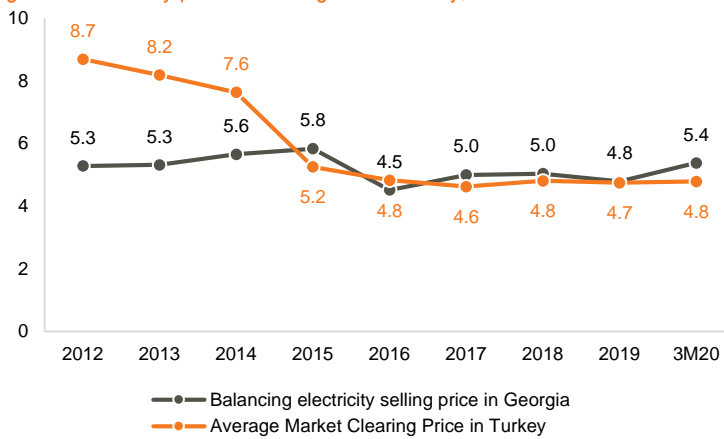


Electricity Prices in Georgia and Turkey –1Q20

Balancing electricity price in Georgia was USc 5.4/kWh (+5.8% y/y) in 1Q20. A 25.9% of total electricity supplied to the grid was traded through the market operator (ESCO), with the rest traded through bilateral contracts. Balancing electricity price mostly derived from import price and guaranteed power purchase agreements (PPA) tariffs, accounting for 61.0% and 36.4% of total balancing electricity, respectively.

Turkish electricity prices averaged USc 4.8/kWh in 1Q20 (+0.8% y/y), 11% below the Georgian balancing electricity price.

Figure 8: Electricity prices in Georgia and Turkey, USc/kWh



Source: ESCO, GeoStat, NBG, EPIAS

Table 3: Electricity prices in Georgia and Turkey, USc/kWh

	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	2019	Jan-20	Feb-20	Mar-20	1Q20
Balancing electricity price in Georgia	4.8	2.7	2.6	4.7	4.9	5.0	5.0	5.2	5.1	4.8	5.1	4.9	6.1	5.4
% change y/y	-3%	-50%	-50%	30%	4%	12%	-6%	2%	-4%	-5.0%	0%	-5%	21%	5.8%
Average price of electricity imports in Georgia	5.0	5.5	5.5	5.2	5.2	5.1	4.7	5.0	5.2	4.8	5.1	3.2	3.8	3.9
% change y/y	-12%	-5%	-4%	-13%	12%	20%	-7%	1%	0%	-4.1%	2%	-29%	3%	-10.0%
Average price of electricity exports from Georgia	1.2	3.0	3.2	7.2	5.5	1.7	4.7	5.5	-	3.2	NM	NM	NM	NM
% change y/y	-59%	-8%	1%	110%	-7%	-71%	-36%	0%	-	-0.4%				
Market clearing price in Turkey	3.4	3.4	4.1	5.4	5.4	5.3	5.1	5.3	5.4	4.7	5.4	5.0	4.0	4.8
% change y/y	-29%	-18%	1%	23%	2%	1%	-7%	-4%	9%	-0.3%	23%	1%	-18%	0.6%

Source: ESCO, GeoStat, NBG, EPIAS

Note: when export or import is insignificant the average tariff is not-meaningful (NM)



Table 4: Electricity Balance, GWh

	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	2019	Jan-20	Feb-20	Mar-20	1Q20
Domestic consumption, total	1,010	984	1,064	1,107	1,103	971	958	1,068	1,173	12,759	1,190	1,122	1,049	3,360
% change y/y	+3%	+2%	+9%	+1%	+5%	+2%	-1.9%	-0.8%	+0.2%	+1.4%	+3.6%	+8.3%	-7.8%	+1.2%
<i>Of which:</i>														
- Abkhazian Region	187	114	108	117	128	115	126	197	251	2,060	273	269	233	775
% change y/y	+26%	+13%	+7%	+1%	+6%	+9%	+3%	+2%	+3%	+7.2%	+7%	+22%	-4%	+8.0%
- Eligible consumers	144	313	324	334	308	290	257	239	227	2,864	225	203	224	652
% change y/y	+31%	+74%	+84%	+84%	+80%	+81%	+52%	+50%	+42%	+59.6%	+56%	+58%	+45%	+52.8%
- Distribution Companies	680	557	631	656	666	566	575	632	695	7,835	692	649	592	1,934
% change y/y	-6%	-18%	-10%	-17%	-12%	-18%	-16%	-13%	-10%	-11.6%	-8%	-5%	-20%	-11.2%
<i>Of which:</i>														
- Energo-Pro Georgia	458	341	379	404	424	358	360	379	416	4,933	412	388	370	1,171
% change y/y	-5%	-27%	-20%	-23%	-19%	-23%	-23%	-21%	-16%	-16.3%	-14%	-13%	-24%	-17.2%
- Telasi	221	216	252	252	243	208	215	253	279	2,902	279	262	222	763
% change y/y	-7%	+1%	+12%	-7%	+3%	-6%	-2%	+2%	+1%	-2.3%	+4%	+9%	-12%	+0.0%
Domestic Generation, total	966	1,156	1,198	1,055	1,020	821	800	913	1,012	11,865	1,031	851	867	2,749
% change y/y	-9%	-0%	-1%	-17%	+4%	-3%	+2%	+1%	+3%	-2.3%	+2%	-9%	-11%	-6.0%
<i>Of which:</i>														
- TPPs	159	0	7	3	138	207	214	402	460	2,840	552	398	153	1,104
% change y/y	+348%	-100%	+141%	-52%	-8%	+29%	+8%	+22%	+67%	+34.3%	+37%	-5%	-64%	-11.7%
- WPPs	7	6	5	9	8	7	6	8	7	85	8	7	9	23
% change y/y	-27%	+17%	+6%	+11%	+9%	-11%	-19%	+16%	+5%	+0.5%	+36%	-9%	+7%	+9.2%
- HPPs	801	1,150	1,185	1,043	874	607	580	503	545	8,940	471	445	705	1,621
% change y/y	-21%	7%	-1%	-17%	6%	-11%	0%	-11%	-23%	-10.1%	-22%	-13%	30%	-1.9%
<i>Of which:</i>														
- Enguri and Vardnili	239	531	653	540	518	276	225	223	230	4,028	214	141	173	528
% change y/y	-43%	+5%	-5%	-35%	+1%	-26%	-9%	+12%	-11%	-15.3%	-19%	-31%	+41%	-10.9%
- Other regulated HPPs	311	320	257	268	200	162	182	135	179	2,593	135	168	262	564
% change y/y	-8%	+6%	-8%	+8%	+26%	-11%	-5%	-33%	-20%	-11.6%	-24%	+0%	+11%	-2.9%
- Other HPPs	252	300	275	235	157	168	173	145	137	2,319	122	136	270	529
% change y/y	-6%	9%	17%	39%	1%	33%	23%	-10%	-29%	+2.7%	-23%	-2%	49%	+10.6%
Imports	81	0	8	94	119	185	195	200	211	1,627	214	312	218	744
% change y/y	+621%	-99%	+29%	NM	+20%	+33%	-15%	-9%	-8%	+7.8%	+18%	+119%	+4%	+39.6%
Exports	0	134	100	6	0	0	3	0	0	243	0	1	0	1
% change y/y	N/A	-32.8%	-48.7%	-95%	N/A	N/A	N/A	N/A	N/A	-58.6%	N/A	N/A	N/A	N/A
Trade balance	(81)	134	92	(88)	(119)	(185)	(193)	(200)	(211)	(1,383)	(214)	(312)	(218)	(744)
Transit	9	-	-	-	38	33	-	22	19	14	26	25	-	51
% change y/y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-80%	-83%	-94.3%	N/A	+174%	N/A	+244.7%

Source: ESCO

Note: Eligible consumers are commercial entities consuming over 5GWh electricity per month.

Other regulated HPPs have tariff cap set by GNERC. These HPPs are Vartsikhe, Zhinvali, Khrami-1, Khrami-2, Lajanuri, Dzevrula, Gumati, Rioni, Shaori



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