



# Georgia's Energy Sector Electricity Market Watch

Georgia | Energy  
1H20  
August 13, 2020

## Highlights

**Electricity consumption was down by 4.5% y/y to 6.1TWh in 1H20**, caused by lockdown and related decreased economic activity due to Covid-19 pandemic. The decrease was most significant in 2Q20 (-10.7% y/y), as lockdown started in mid-March. Ministry of economy and sustainable development forecasts 5.8% y/y decrease in annual consumption of 2020, according to the updated (as of Jul-20) annual balance of electricity.

**The energy market will undergo significant changes from July 2021.** The GNERC adopted the day-ahead and intraday market rules, as well as the balancing and ancillary services market rules, and appointed the relevant market operators. The day-ahead market will start operating and an imbalance settlement mechanism will be introduced in Jul-21. The full launch of the intraday market and ancillary services market is scheduled for 2022. Relevant platforms are in the test mode, and trainings of market participants will start from Sep-20. See more information about these reforms on P 2-4.

**A new incentive mechanism has been introduced for hydropower plants with a capacity of more than 5 MW.** During the first 10 years of operation, for each September-April period, ESCO will assist HPPs in market risk insurance. If the market price for any hour falls below USc 5.5/kWh, ESCO will cover the difference between the market price and USc 5.5/kWh. Maximum limit of this assistance/insurance will be USc 1.5/kWh. Before 2017, the Guaranteed Power Purchase Agreement (PPA) mechanism was used to encourage renewable energy investments. The instrument was terminated in 2017 because it was considered to pose high fiscal risk to the state and to be the possible disruption to competitive markets. The new mechanism limits fiscal risk of the state to USc 1.5/kWh, while effectively guaranteeing the investor income of USc 5.5/kWh, as market prices are not expected to fall below USc 4/kWh in the long run.

**The sale of more than 5% of the shares of the licensed companies must be agreed with GNERC.** According to the Jun-20 amendment to the new Energy law, distribution and transmission system operators must notify GENRC in advance regarding the terms of sale (or change in ownership) of over 5% of company's shares. The Georgian National Energy and Water Supply Regulatory Commission is authorized to cancel the transaction or request change of terms, if it considers that the terms of the transaction impair the quality of service or affect the tariff of the system operator.

**The Partnership Fund handed over ESCO and GSE to the state, while its shareholding in JSC Telasi (24.5% of shares) was put up for auction.** The State owned Partnership Fund has transferred two subsidiary energy enterprises, the Electricity System Commercial Operator (ESCO) and distribution and transmission licensee Georgian State Electrosystem (GSE), to state ownership. The transfer did not lead to a change in the management of the companies, as the companies have already been monitored by the Ministry of Economy and Sustainable Development. Moreover, as part of the reform, the Partnership Fund also plans to sell a 24.5% share in JSC Telasi, for which a public auction has been announced. The starting price at the auction is US\$ 10.5mn and the final sale price will be announced in Sep-20. The remaining 75% of Telasi shares are owned by Inter-RAO.

**In order to mitigate the negative impact of coronavirus, the government announced subsidies to cover the population's utility bills.** First phase of the Government's subsidy was launched in March-May period, while second phase is planned in 2020-21 for November-February period.

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This support covers those subscribers who consume less than 200 kWh of electricity and 200 m<sup>3</sup> of natural gas in a month. This consumption translates into monthly payment of GEL 37 in the case of electricity bill and GEL 100 in case of natural gas. During March-May period, the subsidy covered bills for a total amount of GEL 167.7mn of 7.6 mn subscribers. Subscribers are allowed to opt out from the support scheme voluntarily. During first phase 9,600 subscribers left this support scheme.

## Market reform and consequent regulatory changes

**Market reforms follow the planned timeline.** Policymakers are meeting their deadlines set by law on energy and water supply (adopted in Dec-19) and fulfil the liabilities undertaken by accession protocol (the protocol concerning the accession of Georgia to the treaty establishing the energy community, signed by Georgia in 2016). In 2Q20, following regulatory changes were made:

- Parliament of Georgia adopted laws on energy efficiency and energy efficiency of buildings
- Government of Georgia adopted national renewable energy action plan for 2020 (NREAP) and national energy efficiency action plan for 2030 (NEEAP). Government also adopted new support mechanism for hydropower plants and made some changes into the newly adopted energy law.
- Georgian National Energy and Water Supply Regulatory Commission (GNERC) adopted rules for: day-ahead and intraday markets; balancing and ancillary services; unbundling of distribution system operator. GNERC also changed the licensing rules and issued relevant licenses, including licences for day-ahead and balancing market operators.

### Day-ahead and intraday markets

Electricity trading on day-ahead and intraday markets are carried out through a special platform in a completely transparent manner. The subject of trade is electricity for a specific hour of next day. On day-ahead market the trading is carried out on the principle of auction, and in the intraday market bids and offers are matched based on appearance time.

**Day-ahead market (DAM)** is an organized auction held a day before actual delivery. Market participants bid on the desired volume and price of electricity they want to sell or buy. The bids and offers are matched via a special algorithm and a unified market price is formed for each hour of the delivery day. These price setting algorithm maximizes the welfare of market participants and encourages market participants to make marginal cost bids.

**Intraday market (IDM)** is a market where bids and offers are continuously placed and matched on an organized platform. The settlement and payment between the parties is handled by the market operator to insure the counterparty risk.

**Regulatory framework.** The principles of trade on day-ahead and intraday markets is set in relative market rules, adopted by GNERC, while detailed instruction manuals and registration forms will be published by the Georgian Energy Exchange before the final launch of the platform.

The day-ahead and intraday market **operation license was granted to the Georgian Energy Exchange**, a 50/50 subsidiary of GSE and ESCO, established at the end of



2019. The Georgian Energy Exchange is responsible for operating the day-ahead and intraday markets, ensuring the proper functioning of the relevant platform and ensuring settlement with market players.

**The platform** of day-ahead and intraday markets was purchased from the consulting company Nord Pool, the platform is already running in the test mode and training of market participants is underway. The full launch of day-ahead and intraday markets is scheduled for Jul-21 and summer 2022, respectively.

### **Ancillary service and balancing energy market**

GNERC adopted the rules of balancing and ancillary services market in August 2020 and appointed Georgian State Electrosystem as operator of this market.

**Rules introduce imbalance settlement mechanism.** When a market participant fails to meet its contractual obligations at a particular hour, it bears responsibility for the resulting imbalance and has to pay the appropriate fee. The fee calculation rule is written in the market rules and GSE will do the calculation and invoicing.

**Balancing and ancillary services will help GSE for optimal system management.** These products will create the reserve capacity for emergency situations and imbalance settlement, helping GSE to do optimal (cheapest, effective, timely) balancing of the system in any situation. The purchaser on the market is GSE and sellers are power producers. To access this market, the power plant must meet the predetermined requirements and must be inspected by the GSE. The requirements mainly relate to the technical characteristics of the plant, such as power increase time and amplitude, flexibility, etc.

Ancillary services may be in form of capacity or energy, respectively contracted in advance or purchased when needed. GSE evaluates the need for reserve capacities and determines the list of balancing and ancillary services products, its purchase sequence and requirements for market participants.

The launch of balancing and ancillary services market and its platform is planned by the summer of 2021. Trainings for market participants are scheduled from Sep-20.

### **Other legislative changes under market reform**

**GNERC adopted licensing rules and issued relevant licenses.** Under the new energy law and the market concept, new licensed activities have emerged in the market, such as the day-ahead and intraday market operator and the balancing market operator. Under the new licensing rules, the GNERC defined the scope, obligations and terms of licensing of these new activities. GNERC also made modifications to the generation, distribution and transmission licensing rules and converted all the licensing rules into a single, updated document. GNERC has already issued new licenses to relevant entities.

### **Three documents related to the topic of energy efficiency were adopted in 2020:**

1. Law on Energy Efficiency - the main energy efficiency policy document in the country, defines the regulatory framework and sets deadlines for the transition period to sets target indicators, prepare action plans and adopt bylaws;
2. The Law on Energy Efficiency of Buildings, which provides set of regulations for construction of buildings to be gradually applied



3. The National Energy Efficiency Action Plan (NEEAP) - defines targets for Georgia for years 2020-23 and gives list of steps to be made for each target year.

The energy efficiency principles introduced in these documents will be gradually implemented and will finally come into force by 2030.

**The rules for the unbundling of a distribution system operator** specifies the meaning under the term "unbundling" and defines what legal, managerial or shareholder relationship a distribution system operator may have with other market participants. According to the EU directives and the new Energy Law adopted in Dec-19, the distribution system operator does not have the right to be an energy producer, supplier or consumer. For Georgia this means reorganization of Energo-Pro Georgia and Telasi and separation of their distribution and supply activities. The newly adopted unbundling rules set legal framework of this reorganisation.

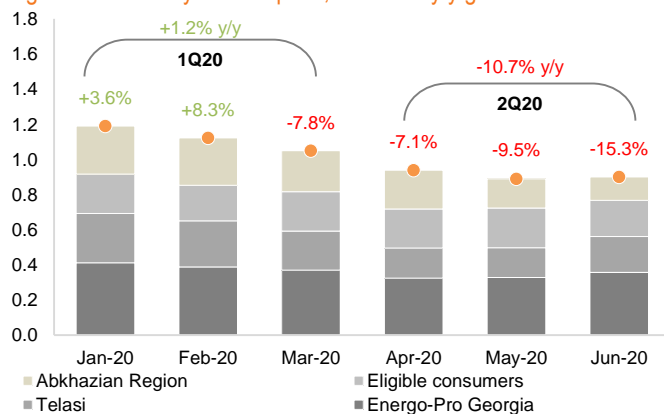
## Electricity Supply, Demand and prices – 1H20

### Domestic consumption

Electricity consumption was down by 4.5% y/y to 6.1TWh in 1H20, caused by lockdown and related decreased economic activity due to Covid-19 pandemic. The decrease was most significant in 2Q20 (-10.7% y/y). Due to the economic restrictions caused by Covid-19, Ministry of economy forecasts 5.8% y/y decrease in annual consumption of 2020.

Notably, Abkhazian region's electricity consumption increased in both quarters by 8.0% y/y and 27.8%y/y respectively, while for the rest of Georgia drop in consumption was 0.7% y/y in 1Q20 and deepened to 16.7% in 2Q20. In 1H20, the Abkhazian region's consumption was up by 15.2% y/y, while consumption by rest of Georgia was down by 8.8% y/y.

Figure 1: Electricity consumption, TWh and y/y growths



Source: ESCO

Table 1: Demand growth breakdown

Consumer	y/y growth in 1Q20	y/y growth in 2Q20	y/y growth in 1H20	y/y growth 2020F
<b>Domestic consumption</b>	<b>+1.2%</b>	<b>-10.7%</b>	<b>-4.5%</b>	<b>-5.8%</b>
Abkhazian region	+8.0%	+27.8%	+15.2%	+ 12.1%
Eligible consumers	+52.8%	-16.2%	+8.2%	-14.8%
Distribution	-11.2%	-16.9%	-13.8%	-7.1%
Energo-Pro Georgia	-17.2%	-14.4%	-15.9%	-8.2%
Telasi	+0.01%	-21.2%	-10.1%	-5.2%

Source: ESCO, Ministry of Economy

Note: 2020 figures are forecast of electricity consumption according to the electricity (capacity) balance, adopted by Ministry of economy in Jul-20

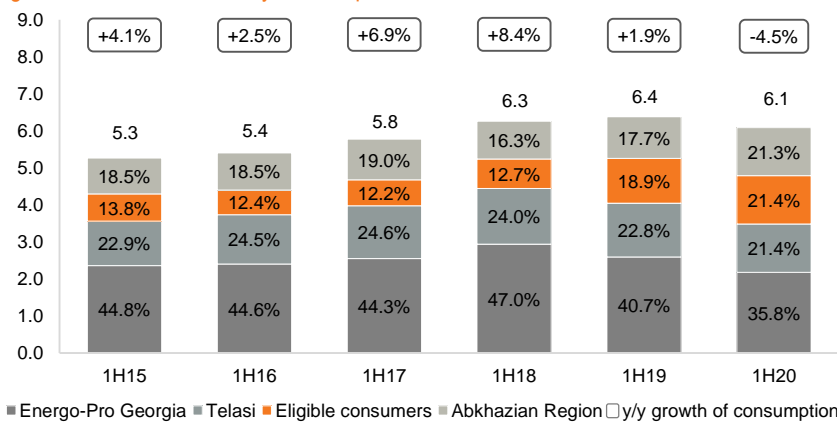
**Electricity consumption dynamics of certain consumer groups in 1Q20 are explained by legislative changes.** In 1Q20, consumption by eligible consumers (also known as direct consumers) was up by 52.8% y/y, while distribution licensees' consumption was down 11.2% y/y. From the group of distribution licensees, 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 12.7% in 1H18 to 21.4% in 1H20.

**In 2Q20, electricity consumption was down by 10.7% y/y** mostly attributable to the lockdown and related decreased economic activity due to Covid-19 pandemic. Telasi's consumption decreased most significantly by 21.2% in 2Q20. Consumption by eligible consumers was down by 16.2% y/y in 2Q20. These decrease, apart from Covid-19 restrictions is explained by decreased economic activity of certain companies operating in crypto-currency business.

Figure 2: Domestic electricity consumption, TWh

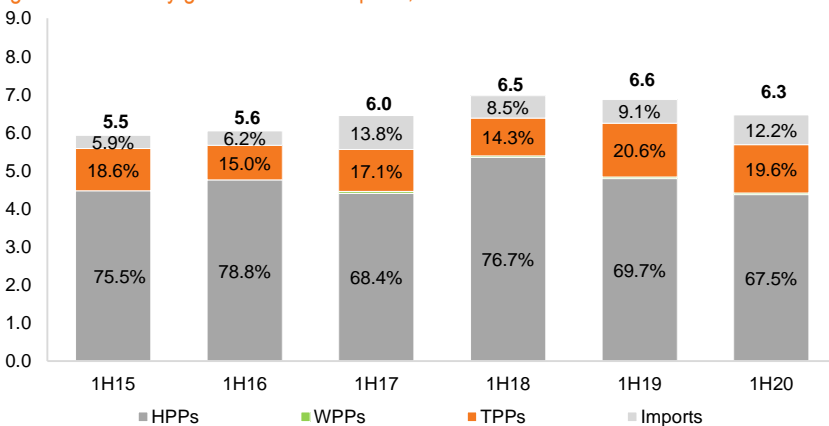


Source: ESCO

### Domestic supply

**Decreased demand on electricity impacted the pattern of electricity generation.** In 1H20, both hydro and thermal generation were down by 8.8% y/y and 10.7% y/y, respectively. In overall, 87.8% of the demand on electricity was satisfied by local generation in 1H20, the rest was imported from Russia and Azerbaijan. The impact of decreased demand was most significant in 2Q20, in particular in May and June.

Figure 3: Electricity generation and imports, TWh

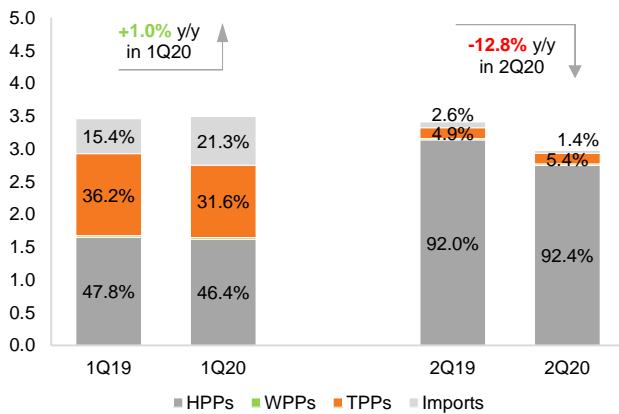


Source: ESCO



Only deregulated HPP's generation was up in 1H20 (+18.7% y/y), while Engurvardnili and other regulated HPPs generated respectively 29.1% y/y and 5.4% y/y less electricity. The group of deregulated HPPs mostly combines run-off-river HPPs without any significant reservoir capacities, which would allow them to save the water for later and do the seasonal regulation as Enguri does. Furthermore, group of deregulated HPPs had several additions in 1H20, including Shuakhevi HPP commissioned in Apr-20, satisfying c. 3.5% of electricity demand in 1H20.

Figure 4: Electricity supply, TWh and y/y growths



Source: ESCO

Table 2: Electricity supply growth breakdown, y/y

Supply source	1Q20	2Q20	1H20
<b>Total Supply</b>	<b>+1.0%</b>	<b>-12.8%</b>	<b>-5.8%</b>
Imports	+39.6%	-51.8%	+26.5%
Domestic generation	-6.0%	-11.8%	-9.1%
TPPs	-11.7%	-2.8%	-10.7%
WPPs	+9.2%	+26.3%	+17.1%
HPPs	-1.9%	-12.5%	-8.8%
Enguri and Vardnili	-10.9%	-36.7%	-29.1%
Other regulated HPPs	-2.9%	-7.1%	-5.4%
Deregulated HPPs	+10.5%	+23.4%	+18.7%

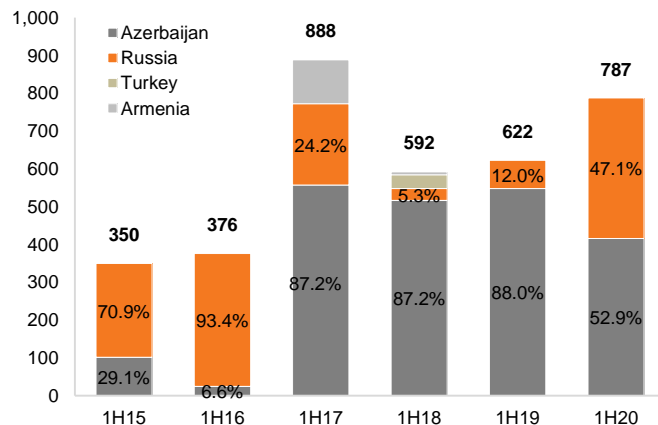
Source: ESCO

### Electricity imports, exports and transit

Despite the decreased consumption, import of electricity was up by 26.5% y/y in 1H20, as most of the import (94.6% of total) was made in 1Q20 (+39.6% y/y), before spread of Coronavirus. Notably, electricity imports for Abkhazian region accounted c. 1/3 of total electricity imports and c.70% of imports from Russia. This import was made as Enguri's generation was not enough to satisfy the increased demand of Abkhazian region in 1Q20.

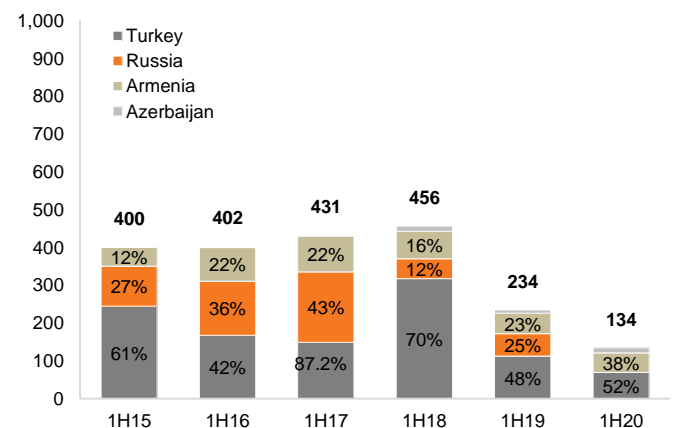
In 1H20, 52.9% of imported electricity came from Azerbaijan, the rest was imported from Russia.

Figure 5: Electricity imports, TWh



Source: ESCO

Figure 6: Electricity exports, TWh



Source: ESCO

The export of electricity was down by 42.7% y/y in 1H20 from already low base (-48.6% y/y in 1H19), as Covid-19 pandemic impacted the export markets, decreasing



their demand on electricity and market prices. Export of electricity started in mid-April. 51.8% of electricity exports was made to Turkey, 38.4% to Armenia and 9.9% to Azerbaijan.

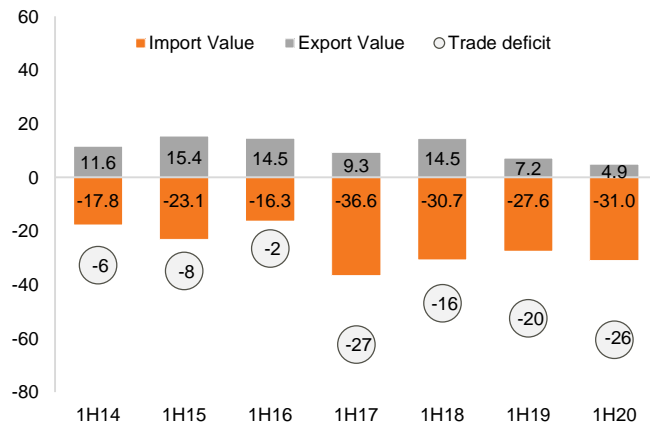
**Foreign trade of electricity**

**Electricity transit** from Azerbaijan to Turkey increased 3.5x times and reached 82.2GWh in 1H20, 34% below the high transit levels of 2016.

**The cost of electricity imports was up by 12.4% y/y and reached US\$ 31.0mn in 1H20.** 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 4.4/kWh to USc 3.9/kWh (-11.2% y/y). On average, the cost of commercial import of electricity ranges between USc 4.7-5.2/kWh.

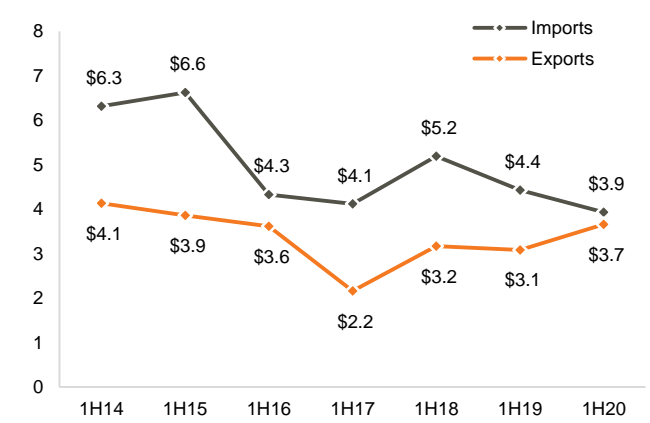
**Almost halved amount of electricity export, decreased export revenue by 32.0% y/y to US\$ 4.9mn.** Average price of electricity exports reached USc 3.7/kWh, an 18.6% annual growth. This growth is mostly attributable to the change in export mix, rather than changes on export markets.

Figure 7: Foreign trade, US\$ mn



Source: GeoStat

Figure 8: Average price of electricity imports and exports, USc/kWh



Source: ESCO, GeoStat

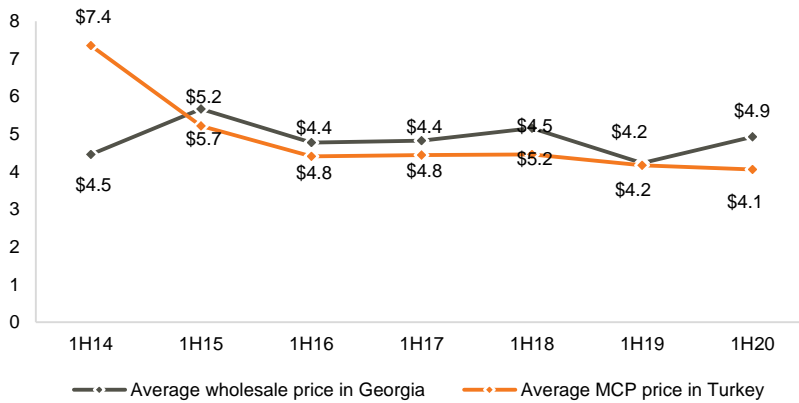


**Electricity Prices in Georgia and Turkey**

**Balancing electricity price** in Georgia was USc 4.9/kWh (+16.5% y/y) in 1H20. A 24.4% 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 37.8% and 55.7% of total balancing electricity, respectively.

**Turkish electricity prices** averaged at USc 4.1/kWh in 1H20, down by 2.7% y/y.

Figure 9: Electricity prices in Georgia and Turkey, USc/kWh



Source: ESCO, GeoStat, NBG, EPIAS

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

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	2019	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	1H20
Balancing electricity price in Georgia	4.7	4.9	5.0	5.0	5.2	5.1	4.8	5.1	4.9	6.1	5.1	4.1	4.3	4.9
% change y/y	30%	4%	12%	-6%	2%	-4%	-5.0%	0%	-5%	21%	5%	54%	66%	16.5%
Average price of electricity imports in Georgia	5.2	5.2	5.1	4.7	5.0	5.2	4.8	5.1	3.2	3.8	4.4	5.5	1.5	3.9
% change y/y	-13%	12%	20%	-7%	1%	0%	-4.1%	2%	-29%	3%	-11%	0%	-72%	-11.2%
Average price of electricity exports from Georgia	7.2	5.5	1.7	5.5	5.5	-	3.2	5.1	6.3	5.5	5.5	3.7	3.4	3.7
% change y/y	110%	-7%	-71%	-26%	0%	0%	-0.4%	0%	0%	-8%	357%	22%	7%	18.6%
Market clearing price in Turkey	5.4	5.4	5.3	5.1	5.3	5.4	4.7	5.4	5.0	4.0	2.7	3.0	4.3	4.1
% change y/y	23%	2%	1%	-7%	-4%	9%	-0.3%	23%	1%	-18%	-21%	-11%	6%	-2.7%

Source: ESCO, GeoStat, NBG, EPIAS

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





Table 4: Electricity Balance, GWh

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	2019	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	1H20
<b>Domestic consumption, total</b>	<b>1,107</b>	<b>1,103</b>	<b>971</b>	<b>958</b>	<b>1,068</b>	<b>1,173</b>	<b>12,759</b>	<b>1,190</b>	<b>1,122</b>	<b>1,049</b>	<b>939</b>	<b>890</b>	<b>901</b>	<b>6,090</b>
% change y/y	+1%	+5%	+2%	-1.9%	-0.8%	+0.2%	+1.4%	+3.6%	+8.3%	-7.8%	-7.1%	-9.5%	-15.3%	-4.5%
<i>Of which:</i>														
- Abkhazian Region	117	128	115	126	197	251	<b>2,060</b>	273	269	233	221	168	133	<b>1,298</b>
% change y/y	+1%	+6%	+9%	+3%	+2%	+3%	+7.2%	+7%	+22%	-4%	+18%	+47%	+24%	+15.2%
- Eligible consumers	334	308	290	257	239	227	<b>2,864</b>	225	203	224	223	225	207	<b>1,306</b>
% change y/y	+84%	+80%	+81%	+52%	+50%	+42%	+59.6%	+56%	+58%	+45%	+55%	-28%	-36%	+8.2%
- Distribution Companies	656	666	566	575	632	695	<b>7,835</b>	692	649	592	495	497	561	<b>3,487</b>
% change y/y	-17%	-12%	-18%	-16%	-13%	-10%	-11.6%	-8%	-5%	-20%	-27%	-11%	-11%	-13.8%
<i>Of which:</i>														
- Energo-Pro Georgia	404	424	358	360	379	416	<b>4,933</b>	412	388	370	324	328	357	<b>2,180</b>
% change y/y	-23%	-19%	-23%	-23%	-21%	-16%	-16.3%	-14%	-13%	-24%	-29%	-4%	-6%	-15.9%
- Telasi	252	243	208	215	253	279	<b>2,902</b>	279	262	222	170	169	204	<b>1,306</b>
% change y/y	-7%	+3%	-6%	-2%	+2%	+1%	-2.3%	+4%	+9%	-12%	-23.0%	-21.8%	-19.1%	-10.1%
<b>Domestic Generation, total</b>	<b>1,055</b>	<b>1,020</b>	<b>821</b>	<b>800</b>	<b>913</b>	<b>1,012</b>	<b>11,865</b>	<b>1,031</b>	<b>851</b>	<b>867</b>	<b>944</b>	<b>986</b>	<b>999</b>	<b>5,678</b>
% change y/y	-17%	+4%	-3%	+2%	+1%	+3%	-2.3%	+2%	-9%	-11%	-2%	-15%	-17%	-9.1%
<i>Of which:</i>														
- TPPs	3	138	207	214	402	460	<b>2,840</b>	552	398	153	148	13	0	<b>1,265</b>
% change y/y	-52%	-8%	+29%	+8%	+22%	+67%	+34.3%	+37%	-5%	-64%	-6%	+8380%	-100%	-10.7%
- WPPs	9	8	7	6	8	7	<b>85</b>	8	7	9	8	8	7	<b>47</b>
% change y/y	+11%	+9%	-11%	-19%	+16%	+5%	+0.5%	+36%	-9%	+7%	+23%	+34%	+21%	+17.1%
- HPPs	1,043	874	607	580	503	545	<b>8,940</b>	471	445	705	787	965	993	<b>4,366</b>
% change y/y	-17%	6%	-11%	0%	-11%	-23%	-10.1%	-22%	-13%	30%	-1.7%	-16.1%	-16%	-8.8%
<i>Of which:</i>														
- Enguri and Vardnili	540	518	276	225	223	230	<b>4,028</b>	214	141	173	194	262	446	<b>1,430</b>
% change y/y	-35%	+1%	-26%	-9%	+12%	-11%	-15.3%	-19%	-31%	+41%	-19%	-51%	-31.7%	-29.1%
- Other regulated HPPs	268	200	162	182	135	179	<b>2,593</b>	135	168	262	307	279	239	<b>1,388</b>
% change y/y	+8%	+26%	-11%	-5%	-33%	-29%	-11.6%	-24%	+0%	+11%	-1%	-13%	-7.0%	-5.4%
- Other HPPs	235	157	168	173	145	137	<b>2,319</b>	122	136	270	287	425	308	<b>1,548</b>
% change y/y	39%	1%	33%	23%	-10%	-29%	+2.7%	-23%	-2%	49%	14%	42%	12%	+18.7%
<b>Imports</b>	<b>94</b>	<b>119</b>	<b>185</b>	<b>195</b>	<b>200</b>	<b>211</b>	<b>1,627</b>	<b>214</b>	<b>312</b>	<b>218</b>	<b>36</b>	<b>7</b>	<b>0</b>	<b>787</b>
% change y/y	NM	+20%	+33%	-15%	-9%	-8%	+7.8%	+18%	+119%	+4%	-55.2%	NM	-98.8%	+26.5%
<b>Exports</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>243</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>65</b>	<b>62</b>	<b>134</b>
% change y/y	-95%	N/A	N/A	N/A	N/A	N/A	-58.6%	N/A	N/A	N/A	N/A	-51%	-38%	-42.7%
<b>Trade balance</b>	<b>(88)</b>	<b>(119)</b>	<b>(185)</b>	<b>(193)</b>	<b>(200)</b>	<b>(211)</b>	<b>(1,383)</b>	<b>(214)</b>	<b>(312)</b>	<b>(218)</b>	<b>(30)</b>	<b>59</b>	<b>62</b>	<b>(653)</b>
<b>Transit</b>	<b>-</b>	<b>38</b>	<b>33</b>	<b>-</b>	<b>22</b>	<b>19</b>	<b>14</b>	<b>26</b>	<b>25</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>31</b>	<b>82</b>
% change y/y	N/A	N/A	N/A	N/A	-80%	-83%	-94.3%	N/A	+174%	N/A	N/A	N/A	N/A	+249.9%

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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