



Georgia's Energy Sector Electricity Market Watch

Georgia | Energy
11M19
December 27, 2019

Highlights of 11M19 – Legislative changes

Parliament adopted two energy-related laws: 1) Law on Energy and Water Supply - important roadmap for the energy sector reform process and 2) Law on Promotion of the Production and Use of Energy from Renewable Sources (Renewable Energy law) – setting renewable energy targets and implementation deadlines.

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The laws define general framework of the upcoming markets and give guidelines for transition period. The changes envisaged by the laws include: unbundling of distribution and transmission activities, introduction of new market players (e.g. power suppliers, universal service providers, supplier of last resort), adoption of imbalance settlement mechanism, definition of renewable energy promotion mechanisms, etc. The laws set deadlines and responsible bodies for the adoption of secondary legislation, which should define the most important details of market organisation and action plans of their implementation. Importantly, donor organisations are actively involved and assisting Georgia in this transitional process.

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Diagram 1: Timeline for adoption of key documents under energy law



Source: Parliament of Georgia, Galt & Taggart Research

The most important takeaways from the newly adopted laws are given in our Electricity Market Watch of 3 October 2019 ([see here](#)).

Energy community membership also obliges Georgia to adopt three other laws by end of 2019, currently under discussion in the parliament. These laws are:

1. Law on Energy Efficiency - setting energy efficiency targets for the country and encouraging energy savings.
2. Law on Energy Performance of Buildings - tightening the construction norms in 2020 and enforcement of penalties from 2021.
3. Draft law on Energy Labelling - will force all consumer electronics vendors to include energy-related information on the product label. The list of information and form of labelling will be set during 2020, and penalties for non-compliance to these norms will come into force from 2021.

The timeframes mentioned in the draft laws may change during its review and approval process.



Other highlights of 11M19

Electricity trade deficit widened by 29.7% y/y to US\$ 58.2mn in 11M19. Electricity consumption increased by mere 1.6% y/y, significantly below forecasted numbers as well as growth levels of previous periods. On supply side, hydrogenation decreased by 9.2% y/y due to unfavourable hydrological conditions. Reduced hydro generation created demand on electricity imports (+10.5% y/y) and thermal generation (+29.4% y/y), despite the low consumption growth rate. Importantly, 36% of imported electricity came from Russia in 11M19.

GNERC revised tariffs for Khrami 1 and Khrami 2 to 10.837 Tetri/kWh (+18.5% y/y) and 12.304Tetri/kWh (+15.9% y/y), respectively. These tariffs are set from Dec-19 until Dec-21. Notably, Khami 2 HPP's has the highest regulated tariff on the market, which, according to current market rules, is used as reference price of balancing electricity, purchased by the ESCO from deregulated small capacity HPPs. Respectively, after enforcement of new tariffs on Khrami cascade in Dec-19, the purchase price of balancing electricity will increase to 12.304 Tetri/kWh from the current 10.614 Tetri/kWh.

Thermal power plant Gardabani-2 has been put into test mode. The 250 MW plant is equipped with modern technologies and will be able to produce electricity more efficiently than the old ones. Unlike other TPPs, Gardabani-2 will not receive a guaranteed capacity fee. Its income source is a 14-year guaranteed power purchase agreement for 1,200kWh annually at USc 5.5/kWh. The owner of Garabani-2 TPP is the state-owned company - Georgian Oil and Gas Corporation.



Electricity Consumption, Exports, Generation and Imports – 11M19

Domestic consumption

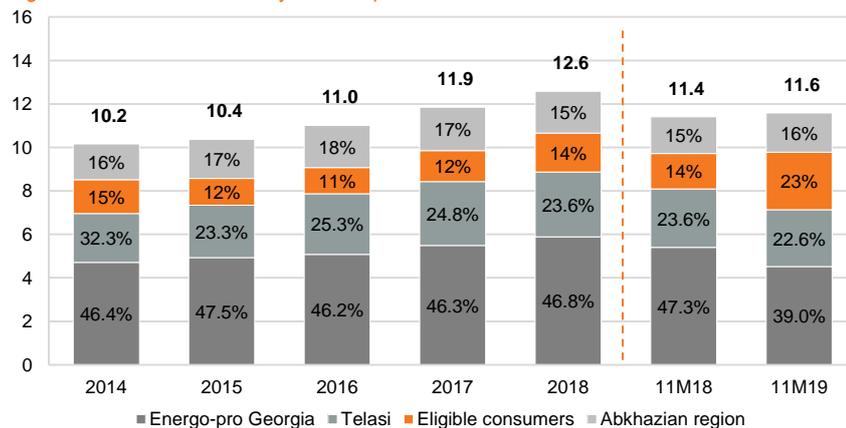
Domestic consumption of electricity increased by 1.6% y/y and reached 11.6TWh in 11M19. The growth is far below expected, as well as last years' similar figures. The growth of electricity consumption in 2018 and 2017 was 6.7% and 8.6%, respectively. The slowdown in growth is explained by climate conditions. We expect annual growth of electricity consumption to be 1.8% in 2019.

Electricity consumption dynamics of certain consumer groups are explained by legislative changes. Consumption by **eligible consumers** (also known as direct consumers) increased by 61.3% y/y, while **distribution** licensees' consumption was down 11.8% y/y in 11M19. From the group of distribution licensees, Energo-pro Georgia's consumption reduced the most (-16.3% y/y), as its several subscribers were registered as direct consumers.

As a reminder, the above-mentioned is in line with planned market deregulation, 11 new companies with average monthly consumption over 5GWh were mandatory registered as direct consumers since May-19. The same also happened in May-18 for companies consuming 15GWh/month or above. As a result of these legislative changes, the number of direct consumers increased to total 15 companies. Moreover, the 11M consumption of the group doubled over 2017-19 and their share in overall domestic consumption increased from 12.4% in 11M17 to 22.8% in 11M19. ESCO was the main provider of energy to the direct consumers (42.0% in 11M19) due to the low balancing energy price in May and June (see Table 3).

In 11M19, 10 new companies entered the wholesale energy market as power traders, from which only 3 were actively involved in trading (Tbilisi Investment Group, GIEC, Georgian Energy Trading Company). Electricity sold by power traders accounted to mere 2.3% of total electricity trade. We expect power traders to become more active on the market after enforcement of all the changes envisaged in new energy law.

Figure 1: Domestic electricity consumption, TWh



Source: ESCO

Note: Kakheti Energy Distribution was purchased by Energo-Pro Georgia in August, 2017

Table 1: Demand growth breakdown, 11M19

| Consumer | Growth rate, y/y | Share in consumption |
|-----------------------------|------------------|----------------------|
| Domestic consumption | +1.6% | 100.0% |
| Abkhazian region | +7.8% | 15.6% |
| Eligible consumers | +61.3% | 22.8% |
| Distribution | -11.8% | 61.6% |
| Energo-Pro Georgia | -16.3% | 39.0% |
| Telasi | -2.6% | 22.6% |

Source: ESCO



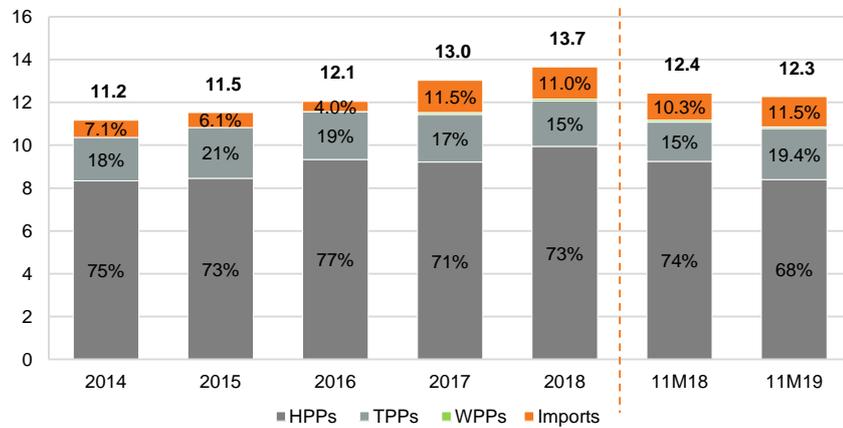
Domestic supply

Hydro generation was down by 9.2% y/y in 11M19 due to unfavourable hydrological conditions and accounted for 68.4% of total supply compared to 74.3% in 11M18.

Reduced hydro generation was compensated by increased thermal generation (+29.4% y/y) and imports (+10.5% y/y). In total, electricity from imported sources (both thermal generation and electricity imports) reached 3.8TWh in 11M19, a 30.9% of total supply.

Increased consumption of Abkhazian region (+7.8% y/y) absorbed 47.6% of Enguri and Vardnili's generation of 11M19 and created need of electricity imports from Russia through Salkhino interconnection line during February and March.

Figure 2: Electricity generation and imports, TWh



Source: ESCO

The guaranteed capacity fee averaged USc 0.54/kWh over 11M19 (-2.4% y/y). The reduction of the fee is explained by planned maintenance works on all thermal power plans during the summer months.

Import of electricity – 11M19

Import of electricity increased by 10.5% y/y in 11M19. Notably, for the first time this year electricity was imported in July along with August – the months generally considered as most suitable for export.

Electricity was imported from Azerbaijan (64% of total) and Russia (36% of total). The main import source during January-August period was Azerbaijan with a 91.1% of total imports. From September to November, the Azeri import was replaced by Russian import, with a 75% share in total. This switch is explained by cheaper electricity imports price from Russia - average import price in August, when electricity was fully imported from Azerbaijan, was USc 5.2/kWh, while average import price in October, when 99% of electricity was imported from Russia, was USc 4.7/kWh (-8.8% difference). Importantly, electricity import from Russia was suspended and replaced fully with Azeri imports in Dec-19, probably due to technical constraints.

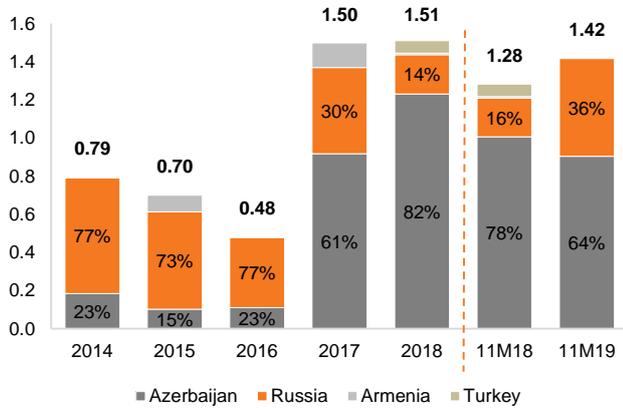
Table 2: Supply growth breakdown, 11M19

| Supply source | Growth rate, y/y | Share in supply |
|----------------------|------------------|-----------------|
| Total Supply | -1.4% | 100.0% |
| Imports | +10.5% | 11.5% |
| Domestic generation | -2.8% | 88.5% |
| TPPs | +29.4% | 19.4% |
| WPPs | +0.1% | 0.6% |
| HPPs | -9.2% | 68.4% |
| Enguri and Vardnili | -15.6% | 31.0% |
| Other regulated HPPs | -10.0% | 19.7% |
| Deregulated HPPs | +5.8% | 17.8% |

Source: ESCO



Figure 3: Electricity imports, TWh

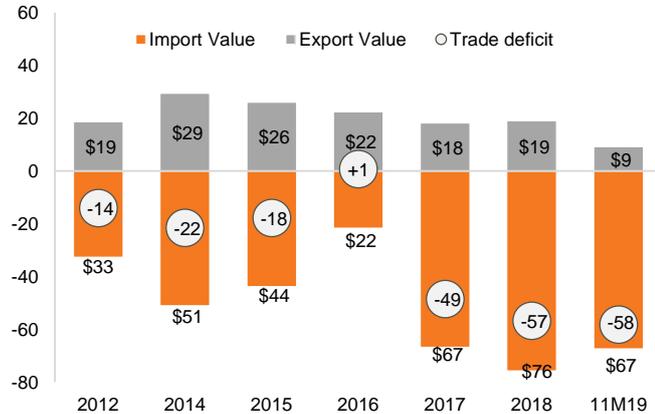


Source: ESCO

The cost of import increased by 5.4% y/y and reached US\$ 67.3mn in 11M19, from which c. US\$22mn was spent on imports from Russia. ESCO was the largest importer of electricity in 11M19. Notably, first time this year, BFDC Georgia – one of the newly registered eligible consumers – imported mere 2.3% of total imports for its own consumption.

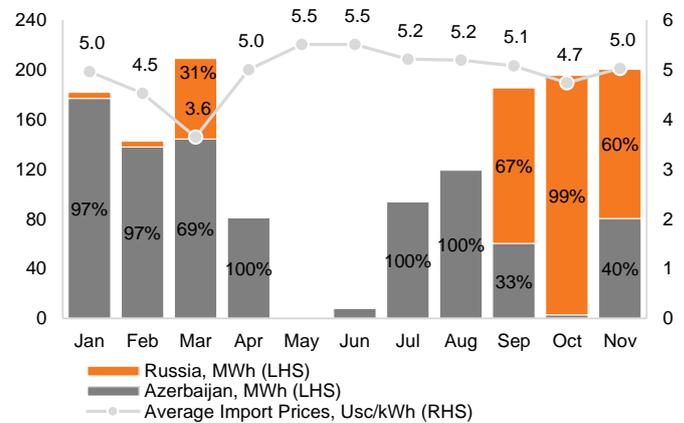
Trade deficit in electricity is expected at record high in 2019. In 11M19, electricity exports reached mere 0.2TWh (-58.6% y/y), while imports were up by 10.5% y/y to 1.4TWh. In value terms, the electricity trade deficit widened by 29.7% y/y to US\$ 58.2 mn in 11M19.

Figure 5: Trade deficit, US\$ mn



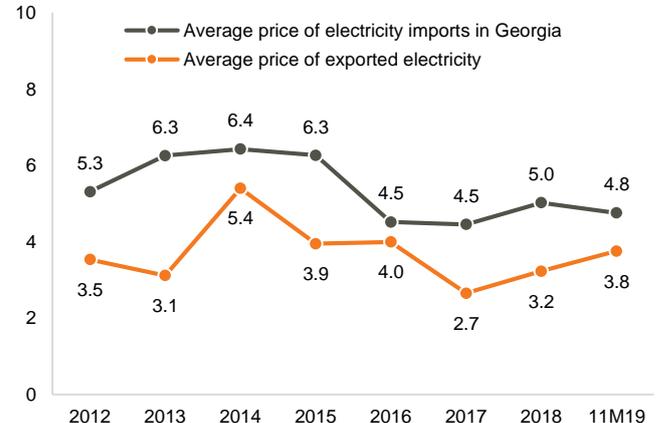
Source: GeoStat

Figure 4: Electricity import dynamics and average monthly prices, 2019



Source: ESCO

Figure 6: Average import and export prices, US\$/kWh



Source: ESCO, GeoStat

Electricity transit from Azerbaijan to Turkey reached 116.7GWh in 11M19. The transit amount increased 8.7 times compared to 11M18, but is far below the high transit levels of 2016 and 2017.

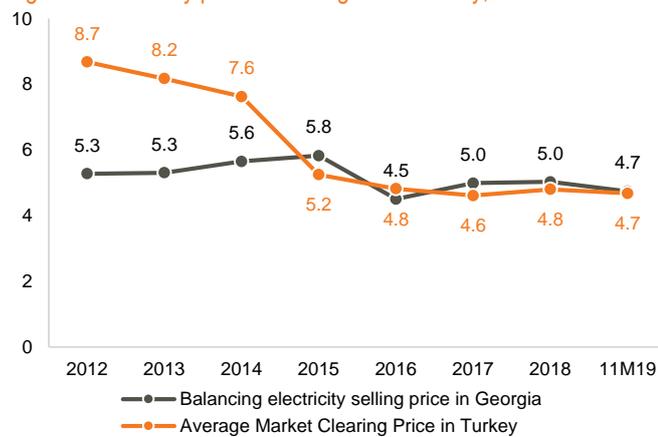


Electricity Prices in Georgia and Turkey – 11M19

Balancing electricity price in Georgia was USc 4.7/kWh (-5.0% y/y) in 11M19. The slight decrease of the average balancing price is attributable to the access of ESCO to the Enguri's cheap electricity and consequently decreased average price of electricity. A 21.1% of total electricity supplied to the grid was traded through the market operator (ESCO), with the rest traded through bilateral contracts.

Turkish electricity prices averaged USc 4.7/kWh in 11M19 (-2.2% y/y). Notably, in May and June which are the export months for Georgia average electricity prices in Turkey was lower at USc 3.4/kWh and USc 4.1/kWh, respectively.

Figure 7: Electricity prices in Georgia and Turkey, USc/kWh



Source: ESCO, Geostat, NBG, EPIAS

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

| | Dec-18 | 2018 | Jan-19 | Feb-19 | Mar-19 | Apr-19 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Nov-19 | 11M19 |
|---|--------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Balancing electricity price in Georgia | 5.3 | 5.0 | 5.1 | 5.2 | 5.0 | 4.8 | 2.7 | 2.6 | 4.7 | 4.9 | 5.0 | 5.0 | 5.2 | 4.7 |
| % change y/y | +9% | +1% | +1% | -3% | +0% | -3% | -50% | -50% | +30% | +4% | +12% | -6% | +2% | -5.0% |
| Average price of electricity imports in Georgia | 5.2 | 5.0 | 5.0 | 4.5 | 3.6 | 5.0 | 5.5 | 5.5 | 5.2 | 5.2 | 5.1 | 4.7 | 5.0 | 4.8 |
| % change y/y | +7% | +13% | -3% | -14% | -27% | -12% | -5% | -4% | -13% | +12% | +20% | -7% | +1% | -4.6% |
| Average price of electricity exports from Georgia | - | 3.2 | - | - | NM | NM | 4.0 | 5.5 | NM | NM | - | NM | - | 3.8 |
| % change y/y | -100% | +22% | - | - | - | - | +22% | +1.2% | NM | - | - | - | - | +16.2% |
| Market clearing price in Turkey | 5.0 | 4.8 | 4.4 | 5.0 | 4.8 | 3.4 | 3.4 | 4.1 | 5.4 | 5.4 | 5.3 | 5.1 | 5.3 | 4.7 |
| % change y/y | +21% | +4% | -11% | +6% | +16% | -29% | -18% | +1% | +22.5% | +1.9% | +1% | -7% | -4% | -2.2% |

Source: ESCO, Geostat, NBG, EPIAS

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



Table 4: Electricity Balance, GWh

| | Dec-18 | 2018 | Jan-19 | Feb-19 | Mar-19 | Apr-19 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Nov-19 | 11M19 |
|------------------------------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Domestic consumption, total | 1,171 | 12,577 | 1,148 | 1,036 | 1,137 | 1,010 | 984 | 1,064 | 1,107 | 1,103 | 971 | 958 | 1,068 | 11,586 |
| % change y/y | +1% | +6.1% | -2% | -2% | +2% | +3% | +2% | +8.6% | +1.5% | +5.3% | +1.8% | -1.9% | -0.8% | +1.6% |
| <i>Of which:</i> | | | | | | | | | | | | | | |
| - Abkhazian Region | 243 | 1,922 | 254 | 221 | 242 | 187 | 114 | 108 | 117 | 128 | 115 | 126 | 197 | 1,809 |
| % change y/y | +1% | -4.0% | +3% | +2% | +17% | +26% | +13% | +7% | +1% | +6% | +9% | +3% | +2% | +7.8% |
| - Eligible consumers | 159 | 1,794 | 144 | 129 | 154 | 144 | 313 | 324 | 334 | 308 | 290 | 257 | 239 | 2,637 |
| % change y/y | +56% | +25.7% | +33% | +24% | +34% | +31% | +74% | +84% | +84% | +80% | +81% | +52% | +50% | +61.3% |
| - Distribution Companies | 769 | 8,862 | 750 | 686 | 741 | 680 | 557 | 631 | 656 | 666 | 566 | 575 | 632 | 7,140 |
| % change y/y | -6% | +5.2% | -8% | -7% | -6% | -6% | -18% | -10% | -17% | -12% | -18% | -16% | -13% | -11.8% |
| <i>Of which:</i> | | | | | | | | | | | | | | |
| - Energo-Pro Georgia | 492 | 5,891 | 481 | 445 | 488 | 458 | 341 | 379 | 404 | 424 | 358 | 360 | 379 | 4,517 |
| % change y/y | -7% | +12.1% | -8% | -6% | -6% | -5% | -27% | -20% | -23% | -19% | -23% | -23% | -21% | -16.3% |
| - Telasi | 276 | 2,970 | 269 | 241 | 253 | 221 | 216 | 252 | 252 | 243 | 208 | 215 | 253 | 2,623 |
| % change y/y | -5% | +1.2% | -8% | -8% | -7% | -7% | +1% | +12% | -7% | +3% | -6% | -2% | +2% | -2.6% |
| Domestic Generation, total | 986 | 12,149 | 1,011 | 939 | 974 | 966 | 1,156 | 1,198 | 1,055 | 1,020 | 821 | 800 | 913 | 10,853 |
| % change y/y | -9% | +5.4% | -0% | +0% | -2% | -9% | -0% | -1% | -17% | +4% | -3% | +2% | +1% | -2.8% |
| <i>Of which:</i> | | | | | | | | | | | | | | |
| - HPPs | 705 | 9,949 | 601 | 511 | 540 | 801 | 1,150 | 1,185 | 1,043 | 874 | 607 | 580 | 503 | 8,395 |
| % change y/y | +3% | +8.0% | -11% | -14% | -30% | -21% | +7% | -1% | -17% | +6% | -11% | +0% | -11% | -9.2% |
| - TPPs | 275 | 2,115 | 405 | 420 | 426 | 159 | 0 | 7 | 3 | 138 | 207 | 214 | 402 | 2,381 |
| % change y/y | -30% | -5.3% | +22% | +26% | +98% | +348% | -100% | +141% | -52% | -8% | +29% | +8% | +22% | +29.4% |
| - WPPs | 6 | 84 | 6 | 7 | 8 | 7 | 6 | 5 | 9 | 8 | 7 | 6 | 8 | 78 |
| % change y/y | 11% | -4.0% | -18% | 18% | 17% | -27% | 17% | 6% | 11% | 9% | -11% | -19% | 16% | +0.1% |
| Imports | 228 | 1,509 | 182 | 142 | 209 | 81 | 0 | 8 | 94 | 119 | 185 | 195 | 200 | 1,416 |
| % change y/y | +69% | +0.8% | -10% | -15% | +30% | +621% | -99% | +29% | NM | +20% | +33% | -15% | -9% | +10.5% |
| Exports | - | 589 | - | - | 0 | 0 | 134 | 100 | 6 | 0 | 0 | 3 | 0 | 243 |
| % change y/y | N/A | -14.2% | N/A | N/A | N/A | N/A | -32.8% | 48.7% | -95% | N/A | N/A | N/A | N/A | -58.6% |
| Net Export/Import | (228) | (920) | (182) | (142) | (209) | (81) | 134 | 92 | (88) | (119) | (185) | (193) | (200) | (1,173) |
| Transit | 112 | 13 | - | 9 | 6 | 9 | - | - | - | 38 | 33 | - | 22 | 117 |
| % change y/y | +113% | -94.7% | N/A | -33% | N/A | -80% | +768.7% |

Source: ESCO



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