



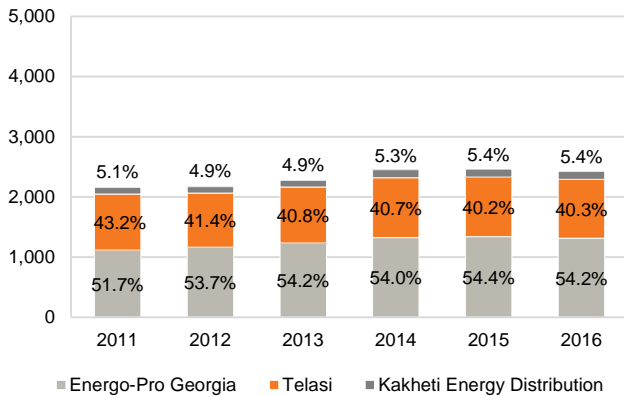
# Georgia's Energy Sector Electricity Market Watch

Electricity consumption by the residential sector, which accounted for one-third of the electricity supplied by distribution companies, was down 1.6% y/y in 2016. The rest was consumed by non-residential subscribers, whose usage was up 12.5% y/y in 2016 and contributed 5.2 percentage points to the overall 6.2% increase in Georgia's electricity consumption. The key drivers of growth were new commercial entities added to the distribution grid. Telasi posted the largest increase (+28.7% y/y) in the non-residential sector, followed by Energo-Pro Georgia (+5.7% y/y) and Kakheti Energy Distribution (+2.9% y/y). Commercial users have the right to purchase electricity via bilateral agreements, but most of them prefer to go through the distribution companies, largely because of existing price regulations.

Electricity market highlights	
Balancing price of electricity in Georgia, March*	USc 5.1/ KWh
Market clearing price of electricity in Turkey, March*	USc 4.0/ KWh
Average export price for Georgian electricity, March**	USc 6.7/ KWh
Average import price for electricity, March	USc 3.9/ KWh
Guaranteed Capacity Fee, March	USc 0.8/ KWh
Y/Y change in domestic consumption in KWh, 3M17	9.4%
Y/Y change in exports in KWh, 3M17	n/a
Y/Y change in exports to Turkey in KWh, 3M17	n/a

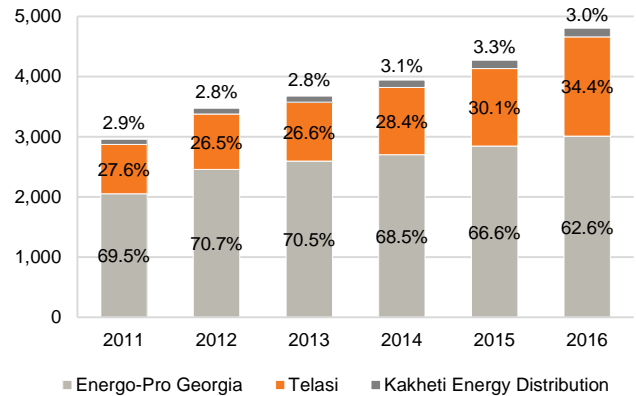
\*Average exchange rates in March GEL/US\$ = 2.4689; TRY/US\$= 3.6659  
\*\* Exports were negligible in March (0.024 GWh)

Figure 1: Residential sector electricity consumption, GWh



Source: GNERC

Figure 2: Non-residential sector electricity consumption, GWh



Source: GNERC

**Eight users across various regions in Georgia (0.15MW total capacity) have taken advantage of the net metering mechanism, introduced in the legislation last year.** Based on changes in legislation, energy consumers are allowed to install micro power plants (less than 0.1MW of installed capacity) that use renewable energy sources (mainly solar panels) to meet their own energy needs and supply surplus energy to the DSOs (Telasi, Energo-Pro, or Kakheti Distribution). The amount of energy consumed and supplied will be netted on an annual basis for settlement with the DSO. According to a recent initiative, revenues generated by supply of electricity from micro power plants will not be subject to taxation. Successful implementation of the initiative should support development of the sector.

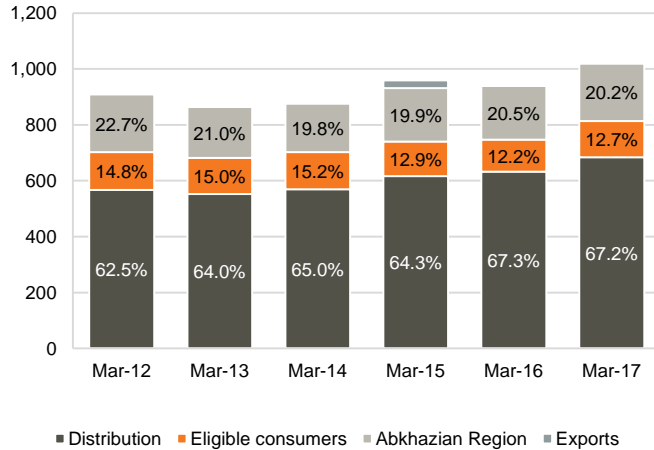
**Natural gas consumed by TPPs was down 19.5% y/y in 2016, while electricity generated by TPPs decreased by only 6.0% y/y.** Commissioning of the more efficient Gardabani combined cycle power plant at the end of 2015 was the main driver of this improvement. Gardabani CCGT accounted for half of TPP-generated electricity in 2016, partially substituting for the less efficient Mtkvari TPP and Tbilisres blocks, which operated at full capacity in previous years.



### Electricity Consumption, Exports, and Generation

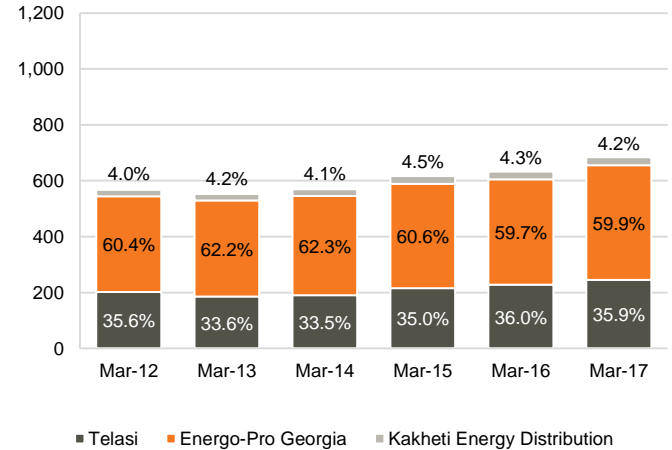
**Domestic consumption increased 8.4% y/y in March 2017, with distribution companies driving the growth.** Consumption of distribution companies increased 8.2% y/y: consumption was up 7.7% y/y by Telasi, 8.5% y/y by Energo-Pro, and 7.3% y/y by Kakheti Energy Distribution. The Abkhazian region's electricity usage was up 6.8% y/y and accounted for 20.2% of domestic consumption. Consumption by eligible consumers was up 12.4% y/y, with Georgian Manganese usage up 16.4% y/y and contributing 1.6 percentage points to the overall growth in energy demand in March 2017. Electricity exports were negligible. Electricity transit from Azerbaijan to Turkey amounted to 4.0 GWh in March 2017, down 84.1% y/y. The large reduction in transit was largely the result of lower transit capacity due to the high level of electricity imports.

Figure 3: Domestic electricity consumption and export, GWh



Source: ESCO

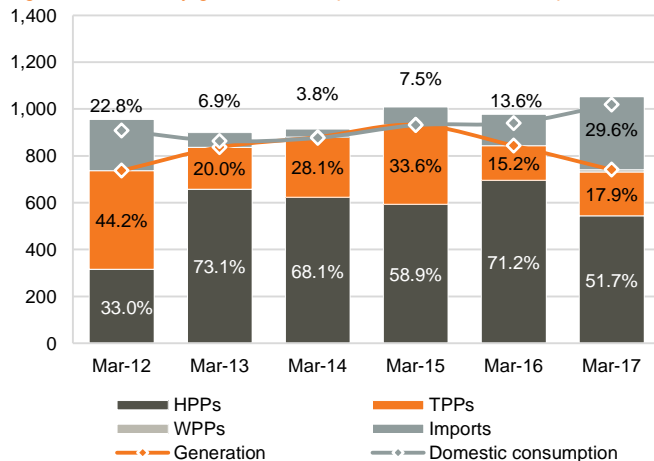
Figure 4: Consumption of distribution companies, GWh



Source: ESCO

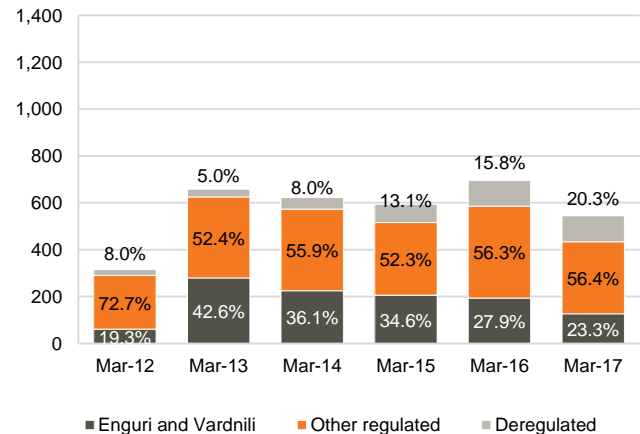
**Growth in domestic consumption was met mostly through imported electricity.** Total electricity supply from domestic sources was down 12.2% y/y, while imports more than doubled (+133.6% y/y) in March 2017. Only half (51.7%) of domestic consumption needs was met by hydro generation; the rest was satisfied by thermal (17.9%) and imported (29.6%) electricity, while the newly built wind power plant accounted for 0.8% of total electricity supply. The main reasons for the change in the electricity supply mix were bad hydrological conditions affecting most HPPs and a decreased water level in the Enguri dam due to the HPP's 10-day closure in February. Total hydro generation decreased 21.7% y/y, with generation down 34.6% y/y by Enguri/Vardnili and 21.6% y/y by other regulated HPPs. Despite bad hydrological conditions, deregulated HPP generation was flat (+0.4% y/y), mainly due to the addition of Dariali HPP (108.0MW), Khelvachauri HPP (47.5 MW), and other new HPPs (9.4MW) to this group at the end of 2016. The drop in hydro generation was partially compensated by TPPs, which posted a significant increase (+26.5% y/y), albeit from a very low base in March 2016 (-56.2% y/y). Only one TPP, the Gardabani CCGT, operated at full power for the entire month, while other TPPs mainly provided reserve for the system. The guaranteed capacity fee was down 9.9% y/y to USc 0.75/kWh, with guaranteed capacity provided by each of the five sources for the entire month. The share of electricity imports in total electricity supply was at a historical high of 29.6% in March 2017. More than half of the imported electricity came from Azerbaijan (56.8%), with the rest imported from Russia (27.0%) and Armenia (16.2%). 61.6% of the Abkhazian region's consumption was satisfied by Enguri/Vardnili generation, while the rest was met through imports from Russia via the Salkhino line.

Figure 5: Electricity generation, import, domestic consumption, GWh



Source: ESCO

Figure 6: Hydro generation, GWh



Source: ESCO

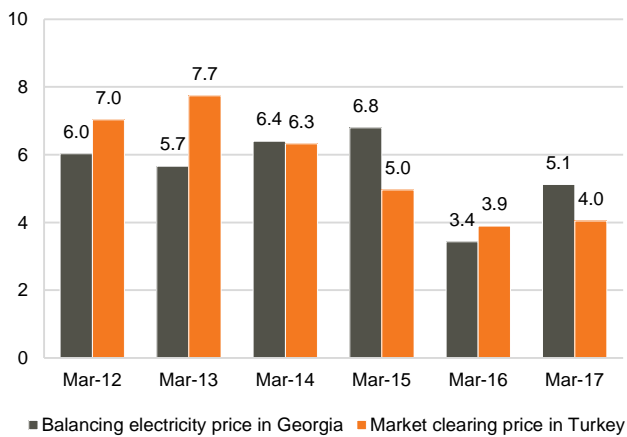


### Electricity Prices in Georgia and Turkey

Wholesale market prices in Georgia increased 48.5% y/y to USc 5.1/kWh, 26.7% above the Turkish market clearing price in March 2017. Turkish electricity prices increased 3.8% y/y to USc 4.0/kWh from a low base in March 2016 (-21.5% y/y). 33.8% of total electricity supplied to the grid in March 2017 was traded through the market operator, with the rest traded through bilateral contracts. The increases in the price and share of balancing electricity were due to the high level of imports in March 2017.

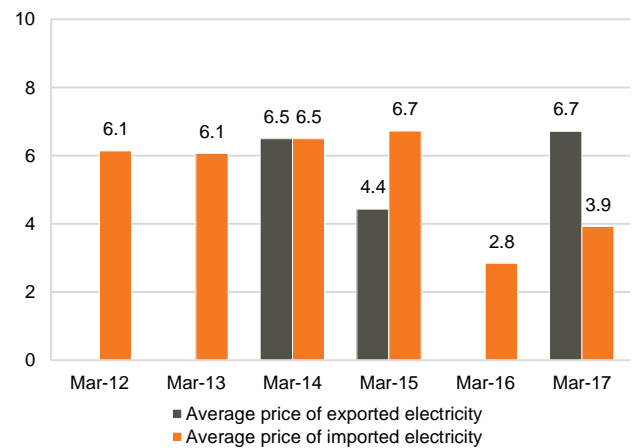
The average price of imported electricity in Georgia was USc 3.9/kWh, up 38.0% y/y from the fully subsidized price of USc 2.8/kWh in March 2016 (-57.7% y/y). The main reason for such low prices in the last two years was the subsidized price of electricity imported from Russia (via the Salkhino line) to meet the Abkhazian region's continuously increasing demand.

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



Source: ESCO, EPIAS

Figure 8: Average prices for imports and exports, USc/kWh



Source: ESCO, GeoStat  
Note: Exports were negligible



## Disclaimer

This document is strictly confidential and has been prepared by JSC Galt & Taggart ("Galt & Taggart"), a member of JSC Bank of Georgia group ("Group") solely for informational purposes and independently of the respective companies mentioned herein. This document does not constitute or form part of, and should not be construed as, an offer or solicitation or invitation of an offer to buy, sell or subscribe for any securities or assets and nothing contained herein shall form the basis of any contract or commitment whatsoever or shall be considered as a recommendation to take any such actions.

Galt & Taggart is authorized to perform professional activities on the Georgian market. The distribution of this document in certain jurisdictions may be restricted by law. Persons into whose possession this document comes are required by Galt & Taggart to inform themselves about and to observe any and all restrictions applicable to them. This document is not directed to, or intended for distribution, directly or indirectly, to, or use by, any person or entity that is a citizen or resident located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would require any registration or licensing within such jurisdiction.

Investments (or any short-term transactions) in emerging markets involve significant risk and volatility and may not be suitable for everyone. The recipients of this document must make their own investment decisions as they believe appropriate based on their specific objectives and financial situation. When doing so, such recipients should be sure to make their own assessment of the risks inherent in emerging market investments, including potential political and economic instability, other political risks including without limitation changes to laws and tariffs, and nationalization of assets, and currency exchange risk.

No representation, warranty or undertaking, express or implied, is or will be made by Galt & Taggart or any other member of the Group or their respective directors, employees, affiliates, advisers or agents or any other person as to, and no reliance should be placed on, the fairness, accuracy, completeness or correctness of this document and the information contained herein (and whether any information has been omitted from this document) and no reliance should be placed on it. This document should not be considered as a complete description of the markets, industries and/or companies referred to herein. Nothing contained in this document is, is to be construed as, or shall be relied on as legal, investment, business or tax advice, whether relating to the past or the future, by Galt & Taggart any other member of the Group or any of their respective directors, employees, affiliates, advisers or agents in any respect. Recipients are required to make their own independent investigation and appraisal of the matters discussed herein. Any investment decision should be made at the investor's sole discretion. To the extent permitted by law, Galt & Taggart, any other member of the Group and their respective directors, employees, affiliates, advisers and agents disclaim all liability whatsoever (in negligence or otherwise) for any loss or damages however arising, directly or indirectly, from any use of this document or its contents or otherwise arising in connection with this document, or for any act, or failure to act, by any party, on the basis of this document.

The information in this document is subject to verification, completion and change without notice and Galt & Taggart is not under any obligation to update or keep current the information contained herein. The delivery of this document shall not, under any circumstances, create any implication that there has been no change in the information since the date hereof or the date upon which this document has been most recently updated, or that the information contained in this document is correct as at any time subsequent to the date on which it is supplied or, if different, the date indicated in the document containing the same. No representation or warranty, expressed or implied, is made by Galt & Taggart or any other member of the Group, or any of their respective directors, employees, affiliates, advisers or agents with respect to the accuracy or completeness of such information.

The information provided and opinions expressed in this document are based on the information available as of the issue date and are solely those of Galt & Taggart as part of its internal research coverage. Opinions, forecasts and estimates contained herein are based on information obtained from third party sources believed to be reliable and in good faith, and may change without notice. Third party publications, studies and surveys generally state that the data contained therein have been obtained from sources believed to be reliable, but that there is no guarantee of the accuracy or completeness of such data. Accordingly, undue reliance should not be placed on any such data contained in this document. Neither Galt & Taggart, any other member of the Group, nor their respective directors, employees, affiliates, advisers or agents make any representation or warranty, express or implied, of this document's usefulness in predicting the future performance, or in estimating the current or future value, of any security or asset.

Galt & Taggart does, and seeks to do, and any other member of the Group may or seek to do business with companies covered in its research. As a result, investors should be aware of a potential conflict of interest that may affect the objectivity of the information contained in this document.

This document is confidential to clients of Galt & Taggart. Unauthorized copying, distribution, publication or retransmission of all or any part of this document by any medium or in any form for any purpose is strictly prohibited.

The recipients of this document are responsible for protecting against viruses and other destructive items. Receipt of the electronic transmission is at risk of the recipient and it is his/her responsibility to take precautions to ensure that it is free from viruses and other items of a destructive nature.

### Head of Investment Research

Nino Papava | n.papava@gt.ge

### Economist

Eva Bochorishvili | evabochorishvili@gt.ge

### Economist

Alim Hasanov | ahasanov@gt.ge

### Head of Analytics Unit

Giorgi Iremashvili | giremashvili@gt.ge

### Senior Analyst

David Ninikashvili | dninikashvili@gt.ge

### Analyst

Mariam Chakhvashvili | mchakhvashvili@gt.ge

### Analyst

Bachana Shengelia | bshengelia@gt.ge

### Analyst

Kakhaber Samkurashvili | ksamkurashvili@gt.ge

### Analyst

Ioseb Kumsishvili | ikumsishvili@gt.ge

**Address:** 79 D. Agmashenebeli Avenue, Tbilisi 0102, Georgia

**Tel:** + (995) 32 2401 111

**Email:** research@gt.ge