



Georgia's Energy Sector Electricity Market Watch

Georgia | Energy
Monthly Bulletin
June 6, 2017

Price volatility on the Turkish market led to a reduction in the number of companies willing to export from Georgia to Turkey, leaving unallocated capacity of 4MW out of the 250MW allowed export capacity (ATC) in May 2017. Private companies with priority access to the Meskheti transmission line connecting Georgia and Turkey will be the main exporters to Turkey in 2017. For the second consecutive year, Georgian Urban Energy (owner of Paravani HPP), which has priority access to the Meskheti line, has chosen to export to Turkey only May through July, in order to secure its income at an average of USc 4.5/kWh and contribute to filling the country's deficit in winter months. Armenia has also become an attractive market for Georgian companies. Among the exporters to Armenia, besides the privately owned GIEC, is ESCO. In exchange for the imported electricity during 4M17 (116.3GWh), ESCO is exporting electricity to Armenia in May and June. The practice of repaying the import bill with exports is also used for repaying 2012 imports from Azerbaijan with exports to Turkey in 2016 and 2017.

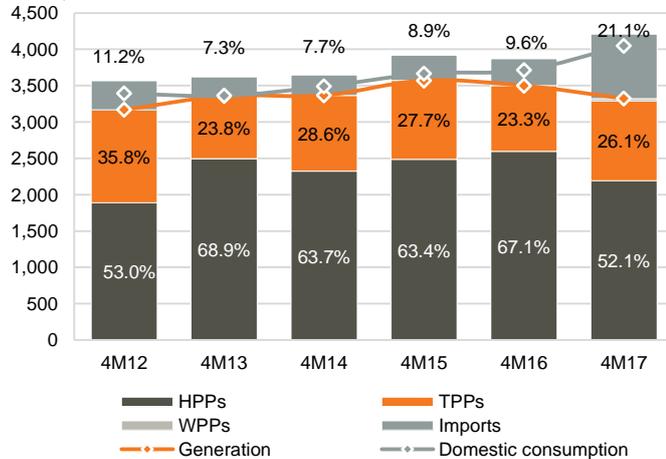
Electricity market highlights	
Balancing price of electricity in Georgia, April*	USc 4.7/ kWh
Market clearing price of electricity in Turkey, April*	USc 4.1/ kWh
Average export price for Georgian electricity, April**	USc 6.0/ kWh
Average import price for electricity, April	USc 4.6/ kWh
Guaranteed Capacity Fee, April	USc 0.8/ kWh
Y/Y change in domestic consumption in kWh, 4M17	9.1%
Y/Y change in exports in kWh, 4M17	n/a
Y/Y change in exports to Turkey in kWh, 4M17	n/a

*Average exchange rates in April GEL/US\$ = 2.4164; TRY/US\$ = 3.6538

** Exports were negligible in April (0.111 GWh)

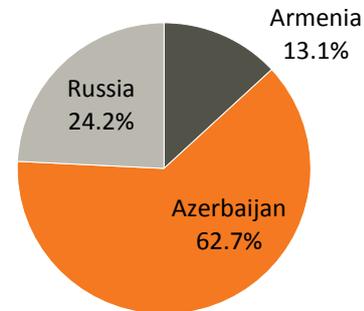
Electricity imports in 4M17 have already exceeded 2016 total imports by 85.1% and 2017 planned imports by 7.6%. 886.7 GWh of electricity (+138.2% y/y) was imported in 4M17, with Azerbaijan being the main source of imports (62.7% of total) and the rest coming from Russia (24.2%) and Armenia (13.1%). Electricity imports accounted for 21.1% of total electricity supply in 4M17. Imported electricity was directed at satisfying higher consumption (+9.1% y/y) and filling the gap created by a drop in hydro generation (-15.6% y/y), which was caused by bad hydrological conditions and the two-week closure of Enguri HPP in February 2017. TPP generation in 4M17 was at the level of the annual balance forecasted on November 28, 2016, posting an increase of 21.9% y/y.

Figure 1: Electricity generation, import, domestic consumption, 4M17, GWh



Source: ESCO

Figure 2: Electricity import, 4M17, GWh



Source: ESCO

Relative prices of TPP-generated electricity and imports were the main reason behind choosing imports over TPPs to satisfy high demand (5.3% higher than planned) and make up for low HPP generation (11.0% lower than planned). According to GNERC's last resolution, the price of TPP-generated electricity in 2017 has ranged from USc 3.7/kWh for Gardabani TPP to USc 5.0/kWh for Block 9 and USc 5.9/kWh for Blocks 3 and 4, while the average import price in 4M17 was USc 4.1/kWh. The decrease in the average import price was a one-off event, caused by subsidized imports from Russia (via the Salkhino line), negotiated mainly to meet the increased demand of the Abkhazian region during and after Enguri HPP's temporary closure. Imports from Armenia were also on negotiated terms.

Electricity consumption is expected to increase 7.7% y/y, according to the updated annual forecast for 2017 issued on April 7. The annual forecast is a document prepared by GSE and approved by Ministry of Energy, outlining the generation and consumption plans for each market participant. Main modifications include the addition of the WPP and HPPs, which were commissioned after the preparation of the last annual forecast on November 28, 2016; changes in import and export amounts and directions; and an update of the first three months' forecast with actual figures. According to the modified annual forecast, imports will account for 12.9% of planned supply of electricity in 2017, with an additional 763.1 GWh of imports expected from Azerbaijan (83.1%) and Armenia (16.9%) over the remainder of the year.

Nino Papava (G&T)
Head of Investment Research | n.papava@gt.ge | +995 322 401 111 ext.4693
Mariam Chakhvashvili
Analyst | mchakhvashvili@gt.ge | +995 322 401 111 ext.7897

Please refer to important disclaimers on the final page of this document.

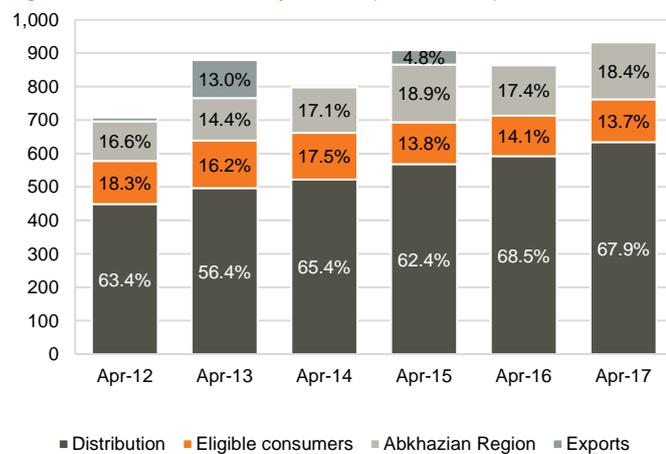


IMF has declared PPAs for power plants as a fiscal risk for Georgia in its country report issued in April 2017. IMF recommends refraining from initiating any PPAs until the institutional framework is in place. Taking into consideration the existing fall-winter period power deficit, partial PPAs currently under negotiation, with cumulative installed capacity of up to 500MW, are permitted to proceed, as long as the guaranteed purchase period is limited to eight months and the purchase price to USc 6.0/kWh. Exceptions might be made for two specific projects, Namakhvani HPP cascade and Koromkheti HPP, subject to a detailed fiscal risk assessment and evaluation.

Electricity Consumption, Exports, and Generation

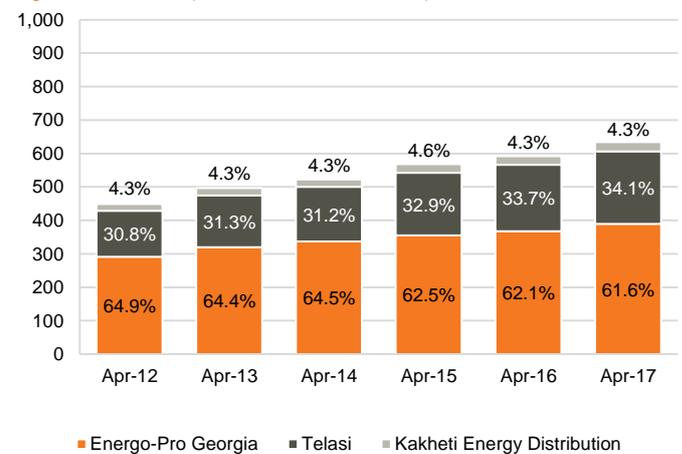
Domestic consumption increased 7.9% y/y in April 2017 and 9.1% y/y in 4M17. Consumption of distribution companies increased 7.1% y/y in April: consumption was up 8.5% y/y by Telasi, 6.2% y/y by Energo-Pro, and 8.1% y/y by Kakheti Energy Distribution. The Abkhazian region's electricity usage was up 13.7% y/y and accounted for 18.4% of domestic consumption. Consumption by eligible consumers was up 5.0% y/y, with Georgian Manganese usage up 8.7% y/y. Electricity exports were negligible. Electricity transit from Azerbaijan to Turkey amounted to 4.7 GWh in April 2017, down 90.1% y/y and 34.7 GWh in 4M17, down 66.8% 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

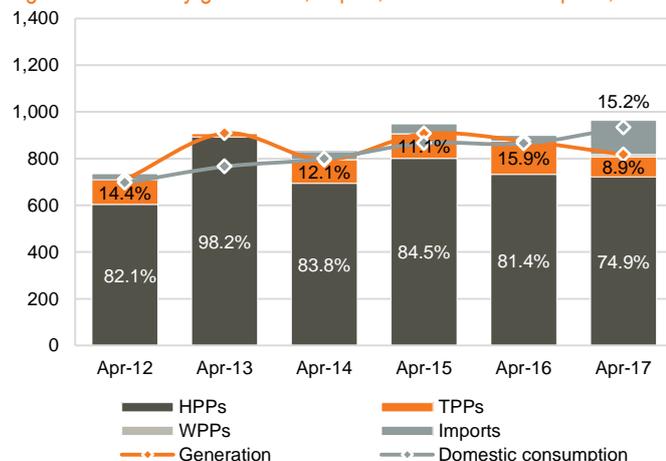
Figure 4: Consumption of distribution companies, GWh



Source: ESCO

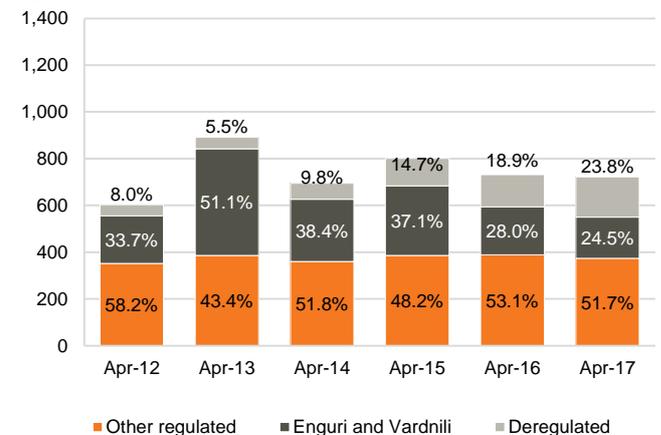
Growth in domestic consumption was met mostly through imported electricity. Total electricity supply from domestic sources was down 6.6% y/y, while imports increased almost six-fold. Three quarters (74.9%) of domestic consumption needs were met by hydro generation; the rest was satisfied by thermal (8.9%) and imported (15.2%) electricity, while the newly built wind power plant accounted for 1.0% of total electricity supply. The main reasons for the change in the electricity supply mix were bad hydrological conditions affecting most HPPs. Total hydro generation was down only 1.3% y/y. Generation was down 13.8% y/y by Enguri/Vardnili and 4.0% y/y by other regulated HPPs, while deregulated HPP generation posted an increase of 24.5% 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.

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



Source: ESCO

Figure 6: Hydro generation, GWh



Source: ESCO

The decrease in domestic supply was mainly the result of lower TPP generation (-40.1% y/y), albeit from the high level of April 2016 (+36.5% y/y). Only one TPP, the Gardabani CCGT, operated at full power for half of the month, while other TPPs mainly provided reserve for the system. The guaranteed capacity fee was down 13.4% y/y to USc 0.8/kWh, with guaranteed capacity provided by each of the five sources for the entire month. The share of electricity imports



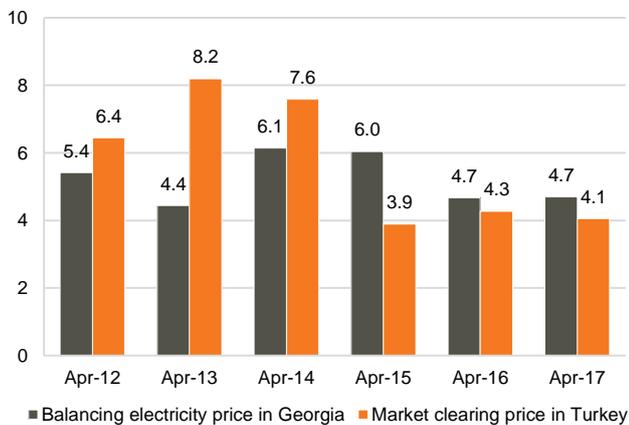
in total electricity supply was 15.2%, a historical high for the month of April. More than half of the imported electricity came from Azerbaijan (60.2%), with the rest imported from Russia (12.2%) and Armenia (27.6%). 10.4% of the Abkhazian region's consumption was satisfied by imports from Russia via the Salkhino line, while the rest was met through Enguri/Vardnili generation.

Electricity Prices in Georgia and Turkey

Wholesale market prices in Georgia were 16.0% above the Turkish market clearing price in April 2017. Turkish electricity prices increased 22.2% y/y in local currency, but due to Lira depreciation (-22.4% y/y), prices in US\$ terms decreased 5.2% y/y to USc 4.1/kWh. The Georgian wholesale price in April 2017 was flat at USc 4.7/kWh (+0.7% y/y), mainly due to the low import price and a change in the balancing electricity purchase price methodology. Starting April 1, the price paid by the market operator (ESCO) to deregulated HPPs for balancing energy supply was lowered from the highest regulated TPP price (14.234 tetri/kWh) to the highest regulated HPP price (9.4 tetri/kWh). In April 2017 the share of such electricity in total balancing energy market was 9.1%, while imports were the leading component (52.3%). Overall, electricity traded through the market operator in April 2017 reached 280.0 GWh, 29.1% of total electricity supplied to the grid, with the rest traded through bilateral contracts.

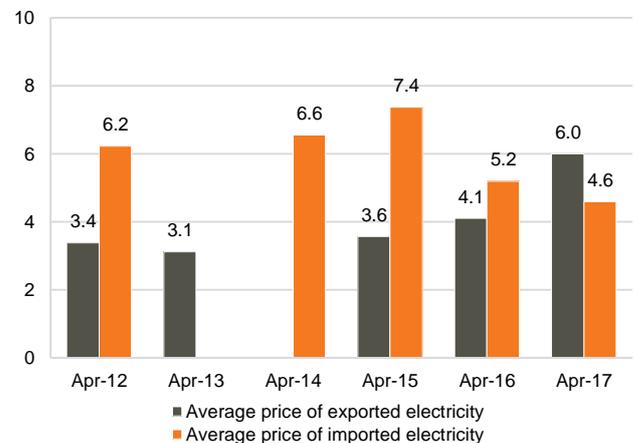
The average price of imported electricity in Georgia was USc 4.6/kWh, down 11.6% y/y from the already low base in April 2016 (-29.5% y/y). The high share of subsidized imports from Russia via the Salkhino line has been the main reason for the lower average import prices in 2017.

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



Table 1: Electricity Balance (GWh)

	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	2016	4M17
Domestic consumption	845	844	898	906	789	883	967	1,162	1,085	1,012	1,019	933	11,007	4,049
<i>y/y growth rate</i>	4%	7%	7%	8%	4%	13%	11%	14%	7%	13%	8%	8%	6%	9%
Abkhazian Region	123	101	110	117	110	142	196	254	252	234	205	171	1,927	863
<i>y/y growth rate</i>	1%	15%	9%	12%	17%	24%	10%	9%	7%	20%	7%	14%	7%	11%
Eligible consumers	129	124	113	83	64	75	81	123	107	113	129	128	1,209	477
<i>y/y growth rate</i>	-4%	6%	13%	11%	-13%	-2%	-4%	44%	18%	25%	12%	5%	-1%	14%
Distribution Companies	593	620	675	706	615	666	690	785	726	666	685	634	7,872	2,710
<i>y/y growth rate</i>	6%	6%	6%	7%	4%	13%	14%	13%	6%	9%	8%	7%	7%	14%
Energo-Pro Georgia	372	382	417	434	375	405	407	455	413	381	410	390	4,740	1,594
<i>y/y growth rate</i>	4%	3%	1%	0%	-1%	8%	10%	8%	3%	10%	9%	6%	3%	7%
Telasi	196	211	230	240	213	231	253	297	281	256	246	216	2,789	999
<i>y/y growth rate</i>	12%	13%	18%	22%	17%	25%	22%	21%	11%	8%	8%	9%	15%	9%
Kakheti Energy Distr.	25	26	29	32	28	30	30	33	32	28	29	27	343	117
<i>y/y growth rate</i>	1%	-2%	-3%	6%	2%	5%	6%	6%	8%	5%	7%	8%	2%	7%
Domestic Generation	1,070	1,095	1,060	957	798	907	999	1,187	956	809	741	817	11,574	3,323
<i>y/y growth rate</i>	7%	9%	2%	11%	3%	14%	18%	27%	-1%	0%	-12%	-7%	7%	-5%
HPPs	1,071	1,091	1,060	894	640	653	642	682	564	362	544	722	9,329	2,191
<i>y/y growth rate</i>	7%	10%	5%	17%	26%	22%	17%	12%	-10%	-33%	-22%	-1%	10%	-16%
TPPs	0	5	1	63	159	254	354	497	385	442	188	86	2,235	1,100
<i>y/y growth rate</i>	-100%	-72%	-96%	-34%	-41%	-1%	19%	51%	14%	62%	26%	-40%	-6%	22%
WPPs	0	0	0	0	0	0	2	7	7	6	9	9	9	31
<i>y/y growth rate</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Imports	3	1	5	10	24	17	13	33	179	250	311	147	479	887
<i>y/y growth rate</i>	197%	-41%	298%	-73%	-47%	-71%	-85%	-73%	92%	106%	134%	493%	-32%	138%
Exports	190	212	130	27	0	0	0	0	1	0	0	0	559	1
<i>y/y growth rate</i>	32%	15%	-22%	13%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-15%	N/A
Net Export/Import	187	211	124	17	(24)	(17)	(13)	(33)	(178)	(250)	(311)	(146)	80	(886)
Transit	-	20	88	139	101	131	131	134	10	16	4	5	850	35
<i>y/y growth rate</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-49%	-84%	-90%	N/A	-67%

Source: ESCO



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 Niniklashvili | dnikelashvili@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