



Georgia's Energy Sector Electricity Market Watch

Georgia | Energy
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The government announced plans for a public offering of the Qartli Wind Farm on the Georgian Stock Exchange. The 20.7MW WPP in Gori has generated 38.6 GWh in 2017 and annual generation is forecasted at 88.0 GWh. There is a 10-year PPA in place with ESCO for a guaranteed USc 6.89/kWh. Georgian Energy Development Fund (GEDF) and Georgian Oil and Gas Corporation (GOGC) are the current shareholders of Qartli Wind Farm Ltd. EBRD provided a 10-year US\$ 22.0mn loan for the project. The EBRD transaction was named the best renewable energy transaction of 2016 by EMEA Finance. Details of the public offering will be announced in the coming months.

Adjaristsqali Georgia LLC has completed the construction of the 187MW Shuakhevi HPP.

The expected annual generation of 450.0 GWh will contribute positively to Georgia's electricity trade balance and increase energy independence and security of supply. This is the largest HPP constructed in Georgia in the last 50 years, boasting the world's second longest hydropower tunnel (37.5km). Total investment amounted to US\$ 420.0mn, with 40.5% in equity financing by Norway's Clean Energy Invest AS, India's Tata Power, and IFC InfraVentures. The remaining 59.5% (US\$ 250.0mn) was financed by loans from EBRD, ADB, and IFC. Company's social responsibility program encompasses more than 70 social projects, including education in energy and construction sectors and infrastructure and local business development.

Georgian Railway relinquished its direct consumer status. Georgian Railway's share in total domestic consumption was insignificant (0.1% last year). According to new regulation, aimed at increasing the number of players on the bilateral contract market, the minimum threshold to qualify as a direct consumer was lowered to annual consumption of 1 kWh. Despite this change, the number of registered direct consumers has decreased from six to two over the last two years. Georgian Water and Power Ltd (2.4% of 2016 consumption) and Georgian Manganese Ltd (8.5% of 2016 consumption) are the only remaining direct consumers on the market. The drop in the number of direct consumers is likely due to the nature of the tariff methodology, which favors distribution companies and reduces the incentive for eligible consumers to trade outside the distribution network.

Electric vehicle (EV) chargers will be installed throughout Georgia, enabling hybrid and electric cars to cover the distance from Telavi to Batumi on a single charge. The project was initiated by E-Space and supported by m2 Real Estate. 20 charging stations are already in place in Tbilisi, Kutaisi, and Batumi. EUR 100,000 in capital expenses will be covered by m2 Real Estate's corporate social responsibility program, expressing the company's dedication to Georgia's green development. By end-2017, E-space plans to install up to 100 EV chargers at gas stations, hotels, and supermarkets owned by partner organizations. The charging stations can be used free of charge through the end of the year, while minor fees, covering variable and maintenance costs, will be applied starting in 2018.

Fourteen municipalities of Georgia have signed the Covenant of Mayors for Climate & Energy. The covenant is a EU-initiated program, connecting local and regional governments with the aim to increase renewable energy usage and energy efficiency and decrease CO2 emissions. Over 7,500 local municipalities have joined the initiative since 2008. The Georgian municipalities who have signed the covenant have voluntarily taken on the obligation to meet the goals set out in their action plans by 2020. Actions to be taken include modernizing municipal buildings and public transport. Being a signatory of the Covenant of Mayors opens up new credit lines and grant opportunities from various organizations and international banks for projects aimed at decreasing CO2 emissions and increasing energy efficiency.

Inter Rao has filed a dispute against GoG in the international court of arbitration. Inter Rao owns 75% of JSC Telasi and 100% of Khrami 1 and Khrami 2 HPPs through two separate subsidiary companies based in the Netherlands. There is a Bilateral Investment Treaty in place between Georgia and the Netherlands, which protects the interests of foreign investors. Inter Rao claims that exchange rate fluctuation, which negatively affected its revenues, was not taken into account by GNERC in its 2016 tariff calculation. Generally, the tariff methodology in Georgia does not factor in losses due to exchange rate movements. Before filing the dispute, Inter Rao submitted a list of claims to the Georgian government, but the parties were unable to reach an agreement. According to preliminary information, the investor is suing for US\$ 125.0mn in damages.

Electricity market highlights

Balancing price of electricity in Georgia, May*	USc 3.9/ kWh
Market clearing price of electricity in Turkey, May*	USc 4.4/ kWh
Average export price for Georgian electricity, May	USc 3.4/ kWh
Average import price for electricity, May**	USc 5.9/ kWh
Guaranteed Capacity Fee, May	USc 0.6/ kWh
Y/Y change in domestic consumption in kWh, 5M17	7.6%
Y/Y change in exports in kWh, 5M17	6.0%
Y/Y change in exports to Turkey in kWh, 5M17	38.1%

*Average exchange rates in May GEL/US\$ = 2.428; TRY/US\$= 3.5639

** Imports were negligible in May (1.605 GWh)

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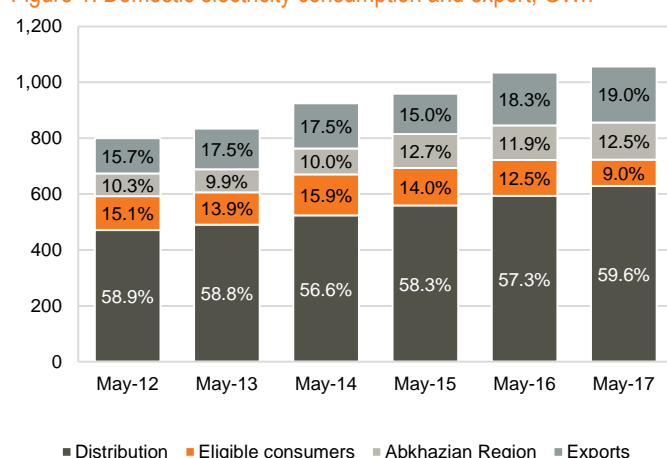


Electricity Consumption, Exports, and Generation

Domestic consumption increased 1.3% y/y in May 2017. Consumption of distribution companies increased 6.0% y/y in May: consumption was up 6.8% y/y by Telasi, 5.5% y/y by Energo-Pro, and 6.2% y/y by Kakheti Energy Distribution. The Abkhazian region's electricity usage was up 7.7% y/y and accounted for 12.5% of domestic consumption. The low overall growth in domestic consumption (1.3% y/y) was largely the result of a 26.6% y/y decrease in direct consumption (-4.1ppts. in total domestic consumption growth), with Georgian Manganese usage down 30.1% y/y. Georgian Manganese's production dropped in May 2017 after the government's appointment of a special administrator at the company.

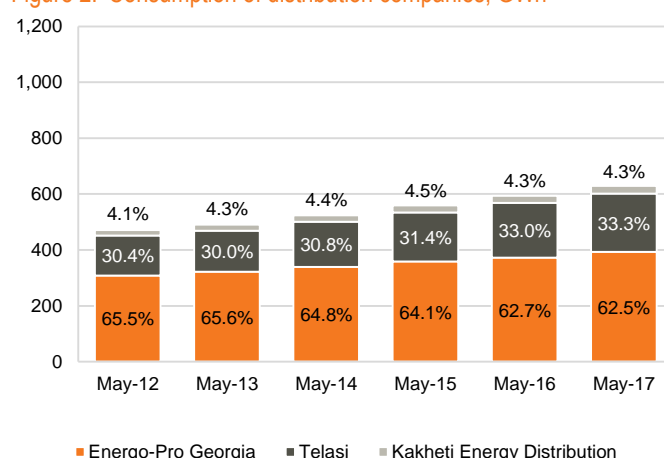
Electricity exports increased 5.4% y/y in May 2017 to 200.1 GWh. The top export destination was Turkey (42.1% of total), posting a 38.1% y/y increase, albeit from the low base in 2016 (-29.7% y/y). The top exporters to Turkey were Georgian Urban Energy (69.8% of total), owner of the 89MW Paravani HPP, and Adjar Energy 2007 (22.5% of total), owner of the newly commissioned 47.5MW Khelvachauri HPP. Electricity exports to Russia decreased 22.6% y/y and accounted for 31.6% of exports, while exports to Armenia posted a 14.1% y/y increase and accounted for 25.8% of total. Azerbaijan accounted for the rest (0.5%). ESCO was the sole exporter to Russia and Azerbaijan, while export to Armenia was split between GIEC (51.0%) and ESCO (49.0%), which exported electricity in exchange for the electricity imported during Feb-Apr from Armenia.

Figure 1: Domestic electricity consumption and export, GWh



Source: ESCO

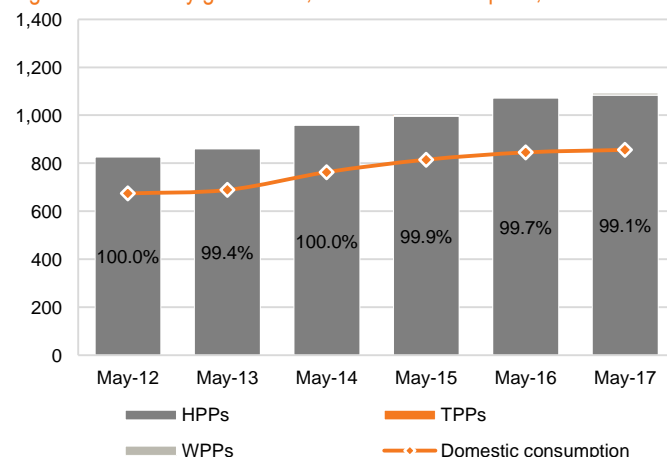
Figure 2: Consumption of distribution companies, GWh



Source: ESCO

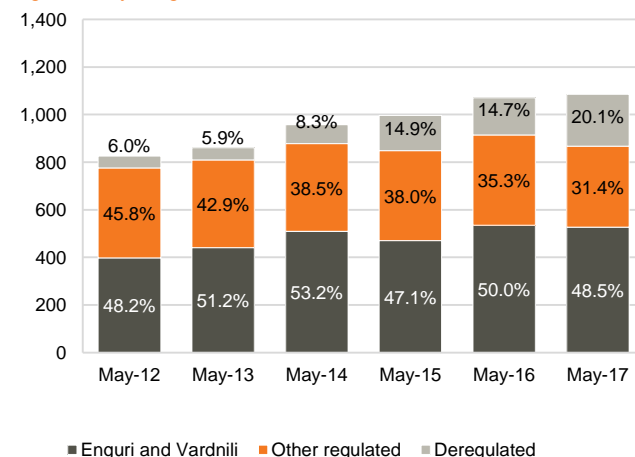
Electricity demand was satisfied largely by hydro generation, with 99.1% in the supply mix. The new wind power plant accounted for 0.7% of total electricity supply, while imports and TPPs together comprised only 0.2%. 19.0% of domestic generation was exported. Total hydro generation was up only 1.3% y/y. Deregulated HPPs posted a 38.7% y/y increase in generation, with 29.5ppts due to the addition of new large HPPs – Dariali HPP (108.0MW) and Khelvachauri HPP (47.5 MW) – and the remaining 9.2ppts attributed to good hydrological conditions in May 2017. However, generation was down 1.7% y/y by Enguri/Vardnili and 10.0% y/y by other regulated HPPs due to the low water levels in reservoirs resulting from bad hydrological conditions in the winter (Oct-16 to Apr-17). The guaranteed capacity fee was up 12.9% y/y to US\$ 0.64/kWh, with guaranteed capacity provided by most of the sources for the entire month. Block 3, which was under maintenance for the month, was the exception.

Figure 3: Electricity generation, domestic consumption, GWh



Source: ESCO

Figure 4: Hydro generation, GWh



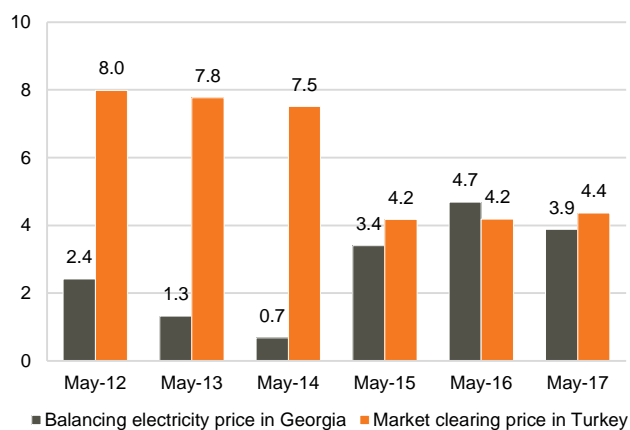
Source: ESCO



Electricity Prices in Georgia and Turkey

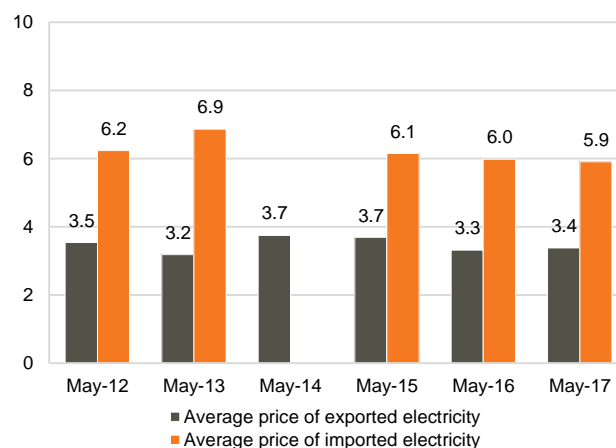
Wholesale market prices in Georgia decreased 16.8% y/y to USc 3.9/kWh. Only 7.2% of total electricity supplied to the grid in May 2017 was traded through the market operator, with the rest traded through bilateral contracts. The average price of electricity exported from Georgia was USc 3.4/kWh (+2.0% y/y), 22.7% below the Turkish market clearing price. The average monthly market clearing price in Turkey was USc 4.4/kWh (+4.4% y/y), 12.5% above the Georgian wholesale market price in May 2017.

Figure 5: Electricity prices in Georgia and Turkey, USc/kWh



Source: ESCO, EPIAS

Figure 6: Average prices for imports and exports, USc/kWh



Source: ESCO, GeoStat
Note: Imports were negligible



Table 1: Electricity Balance (GWh)

	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	2016	5M17
Domestic consumption	844	898	906	789	883	967	1,162	1,085	1,012	1,019	933	856	11,007	4,905
y/y growth rate	7%	7%	8%	4%	13%	11%	14%	7%	13%	8%	8%	1%	6%	8%
Abkhazian Region	101	110	117	110	142	196	254	252	234	205	171	132	1,927	995
y/y growth rate	15%	9%	12%	17%	24%	10%	9%	7%	20%	7%	14%	8%	7%	11%
Eligible consumers	124	113	83	64	75	81	123	107	113	129	128	95	1,209	572
y/y growth rate	6%	13%	11%	-13%	-2%	-4%	44%	18%	25%	12%	5%	-27%	-1%	5%
Distribution Companies	620	675	706	615	666	690	785	726	666	685	634	629	7,872	3,339
y/y growth rate	6%	6%	7%	4%	13%	14%	13%	6%	9%	8%	7%	6%	7%	5%
Energo-Pro Georgia	382	417	434	375	405	407	455	413	381	410	390	393	4,740	1,986
y/y growth rate	3%	1%	0%	-1%	8%	10%	8%	3%	10%	9%	6%	6%	3%	6%
Telasi	211	230	240	213	231	253	297	281	256	246	216	209	2,789	1,209
y/y growth rate	13%	18%	22%	17%	25%	22%	21%	11%	8%	8%	9%	7%	15%	8%
Kakheti Energy Distr.	26	29	32	28	30	30	33	32	28	29	27	27	343	144
y/y growth rate	-2%	-3%	6%	2%	5%	6%	6%	8%	5%	7%	8%	6%	2%	7%
Domestic Generation	1,095	1,060	957	798	907	999	1,187	956	809	741	817	1,093	11,574	4,415
y/y growth rate	9%	2%	11%	3%	14%	18%	27%	-1%	0%	-12%	-7%	2%	7%	-3%
HPPs	1,091	1,060	894	640	653	642	682	564	362	544	722	1,085	9,329	3,276
y/y growth rate	10%	5%	17%	26%	22%	17%	12%	-10%	-33%	-22%	-1%	1%	10%	-11%
TPPs	5	1	63	159	254	354	497	385	442	188	86	0	2,235	1,101
y/y growth rate	-72%	-96%	-34%	-41%	-1%	19%	51%	14%	62%	26%	-40%	N/A	-6%	22%
WPPs	-	-	-	-	-	2	7	7	6	9	9	8	9	39
y/y growth rate	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	1	5	10	24	17	13	33	179	250	311	147	2	479	888
y/y growth rate	-41%	298%	-73%	-47%	-71%	-85%	-73%	92%	106%	134%	493%	-41%	-32%	137%
Exports	212	130	27	0	0	0	0	1	0	0	0	200	559	201
y/y growth rate	15%	-22%	13%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5%	-15%	0.06
Net Export/Import	211	124	17	(24)	(17)	(13)	(33)	(178)	(250)	(311)	(146)	199	80	(687)
Transit	20	88	139	101	131	131	134	10	16	4	5	4	850	39
y/y growth rate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-49%	-84%	-90%	N/A	N/A	-63%

Source: ESCO



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