

Georgia's Energy Sector Electricity Market Watch

New Year - new tariffs. GNERC has announced new tariffs for certain HPPs and TPPs, as well as for commercial users of Telasi and Energo-Pro; residential tariffs remain unchanged in 2017.

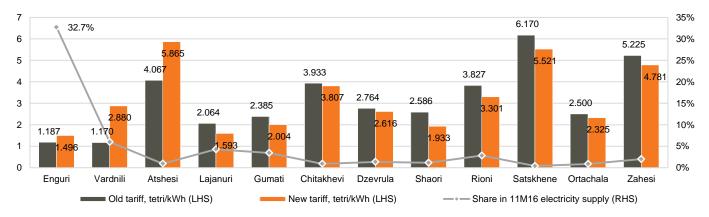
Enguri and Vardnili tariffs were revised for the first time since 2006. The tariff was increased to 1.496 tetri/kWh (from 1.187 tetri) for Enguri and to 2.88 tetri/kWh (from 1.17 tetri) for Vardnili. Enguri and Vardnili are the largest state-owned HPPs, generating 38.9% of total and 51.7% of hydro generation, on average. Tariffs were revised for ten other HPPs (all owned by Energo-Pro), which together accounted for 18.1% of total generation in 11M16. Only one of them got a tariff increase, while tariffs were lowered by 12.5%, on average, for the remainder.

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| Electricity market highlights | |
|--|---------------|
| Balancing price of electricity in Georgia, November* | USc 4.3 / kWh |
| Market clearing price of electricity in Turkey, November * | USc 4.7 / kWh |
| Average export price for Georgian electricity, November ** | USc 4.2 / kWh |
| Average import price for electricity, November | USc 5.5 / kWh |
| Y/Y change in domestic consumption in kWh, 11M16 | 5.3% |
| Y/Y change in exports in kWh, 11M16 | -15.3% |
| Y/Y change in exports to Turkey in kWh, 11M16 | -29.8% |

*Average exchange rates in November GEL/US\$ = 2.4758 ; TRY/US\$ = 3.2675 ** Exports were negligible in November (0.004 gWh)

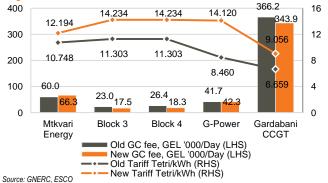
Figure 1: HPP tariff changes and share in electricity supply



Source: GNERC, ESCO

Tariffs were revised upward for all TPPs for the year 2017. Revisions varied from a 13.5% increase for the Gardabani CCGT to a 66.9% increase for GPower. The highest tariff (14.234 tetri/kWh) was received by Blocks 3 and 4, owned by Georgian International Energy Corporation Ltd (GIEC). According to Market Rules, this tariff is the new balancing electricity price that deregulated power plants will receive for electricity sold to ESCO without a contract September through April. The guaranteed capacity fee, received by TPPs for the number of days they are on standby, was decreased for Block 3 (-23.8%), Block 4 (-30.6%), and the Gardabani CCGT (-6.1%), while it was increased for Block 9 (+10.5%) and GPower (+1.4%). The guaranteed capacity payments are collected by ESCO from all consumers and exporters in proportion to their consumption or export.

Figure 2: TPP tariffs and GC fees, 2016 vs 2017



Changes were applied to GSE and Energo-Trans tariffs as well. GSE is a transmission and dispatch licensee, while Energo-Trans (subsidiary of GSE) is only a transmission licensee. GSE was granted a 15.6% increase for transmission services (0.872 vs.0.754 tetri/kWh), while its tariff for dispatch services was lowered by 16.3% (0.082 vs. 0.098 tetri/kWh). Energo-Trans saw its tariff lowered by 7.9% for the 500kv lines and increased by 71.0% for its 400kv lines. The latter is paid mainly by exporters, while the former three tariffs are payable by both consumers and exporters. The aforementioned changes resulted in a 5.4% increase in the total fees for transmission and dispatch services for consumers and a 17.6% increase for exporters.

Despite all the changes on the regulated wholesale electricity market, household tariffs remain unchanged. The Telasi and Energo-Pro tariffs were increased insignificantly and only for commercial users connecting to high voltage lines (6kv and above).

The new tariffs become effective on January 1, 2017.

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EBRD has approved a US\$ 5.5mn loan for the 17.2MW Lukhuni 2, a run-of-the-river hydropower plant on the Lukhuni river near the Uravi village in the Ambrolauri region of northern Georgia. Rustavi Group LLC is a special purpose vehicle (SPV) established for the sole purpose of constructing the HPP. Rustavi Group LLC is owned by Rusmetali Ltd (51%), a company registered in Georgia, and JSC Partnership Fund (49%). EBRD is providing a senior loan of up to US\$ 5.5mn, partnering with TBC Bank on the project. Total investment cost of the project is estimated at US\$ 26.4mn.

The Ten Year Network Development Plan (TYNDP) 2017-2027 was approved by Ministry of Energy on December 15, 2016 TYNDP is to be updated on an annual basis, starting in 2015. This (third) edition of TYNDP features revised forecasts of electricity consumption growth and updated pipelines of power plant and transmission network projects. The annual consumption growth rate in the optimistic scenario is revised downward from 5.0% to 3.5%, which would result in 16.4tWh of electricity consumption in 2027. Expected commissioning dates for several large HPPs (Khudoni, Nenskra, Oni) have been pushed back, resulting in certain infrastructural projects also being postponed. Total investment over 2017-2027 is estimated at EUR 735.4mn, with 40% of that amount to be spent over the first three years. The previous edition of TYNDP featured total estimated investment of EUR 800mn, with the decrease largely attributable to projects already implemented in 2016 (500kv Marneuli S/S, 500kv Jvari S/S, etc.).

Electricity Consumption, Exports, and Generation

Domestic consumption increased 11.5% y/y in November 2016, with Telasi and other DNOs driving the growth. DNO consumption was up 14.0% y/y, with the greater Tbilisi area (Telasi subscribers) posting an outsized 21.5% y/y growth rate. Usage of Energo-Pro subscribers was up 10.3% y/y, while Kakheti Energy Distribution usage was up 5.9% y/y. Consumption of the Abkhazian region was up 10.4% y/y, following a 20.8% y/y increase in October 2016. Eligible consumer usage was down 4.3% y/y from an already very low base in November 2015 (-32.7% y/y). Consumption by Georgian Manganese, the largest direct consumer (73.9% of direct consumption), was up 1.7% y/y from the November 2015 low base (-35.7 % y/y). Consumption by GWP, the second-largest direct consumer (24.8% of direct consumption), declined 6.3% y/y.

Electricity exports were negligible in November 2016, compared to 19.8GWh in November 2015. Exports in 11M16 are down 15.3% y/y, largely due to the fewer export months in 2016 for Paravani HPP, per the amended MoU with Georgian Urban Energy. A significant amount of electricity transit (131.5gWh) took place from Azerbaijan to Turkey.

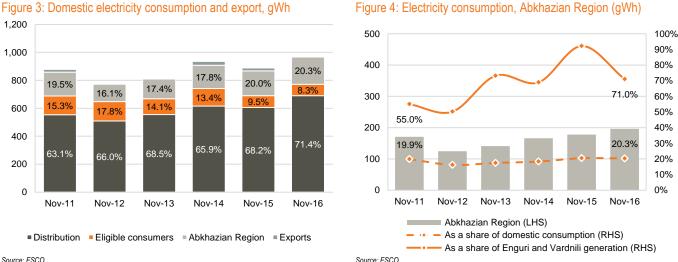


Figure 3: Domestic electricity consumption and export, gWh

Domestic consumption needs were met almost entirely by domestic generation in November 2016. Imports accounted for a mere 1.3% of total electricity supplied to the grid. The newly commissioned wind power plant generated 1.8gWh, accounting for 0.2% of total electricity supplied to the grid. Total generation increased 17.9% v/v, with HPP generation up 17.0% v/v (63.5% of total) and TPP generation up 18.9% v/v (35.0% of total). The main drivers of the increase in hydro generation were Enguri and Vardnili (+43.3% y/y). Electricity imports in November 2016 were down 84.8% y/y to 12.7gWh, with 76.4% coming from Azerbaijan and the rest from Russia. The GC fee was down 5.4% y/y to USc 0.8/kWh. Guaranteed capacity was provided by each of the five guaranteed capacity sources for most of the month. Mtkvari Energy and Gardabani CCGT operated at full power for the whole month, while Blocks 3 and 4 and GPower were mainly providing reserve for the system.



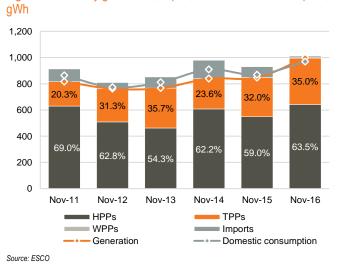


Figure 5: Electricity generation, import, and domestic consumption,

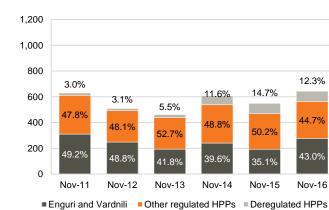


Figure 6: Hydro generation, gWh

Electricity Prices in Georgia and Turkey

Wholesale market prices in Georgia decreased 21.2% y/y to USc 4.3/kWh, 9.0% below the Turkish market clearing price in November 2016. Turkish electricity prices decreased 0.2% y/y to USc 4.7/kWh from a significantly low base in November 2015 (-42.4% y/y). 16.2% of total electricity supplied to the grid in November 2016 was traded through the market operator, with the rest traded through bilateral contracts.

Source: ESCO



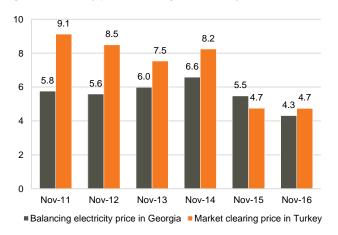
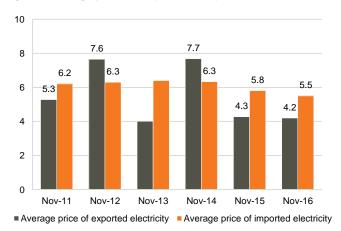


Figure 8: Average prices for imports and exports, USc/kWh



Source: ESCO, EPIAS

Source: ESCO, GeoStat Note: Exports were negligible in November 2016.



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