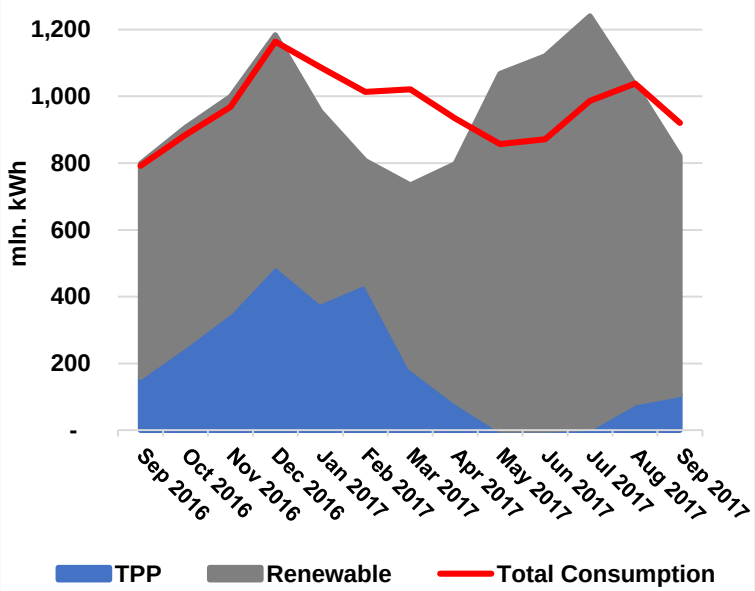
1. Electricity Generation – Consumption – Trade

Figure 1. Electricity Consumption and Generation (mln. kWh)



Source: Electricity System Commercial Operator (ESCO)

In September 2017, Georgian power plants generated 820 mln. kWh of electricity. This corresponds to a 3% increase in total generation in comparison with the previous year (in 2016, total generation in September was 798 mln. kWh). On a monthly basis generation decreased by21% with respect to August 2017 (in August 2017, total generation was 1,035 mln. kWh).

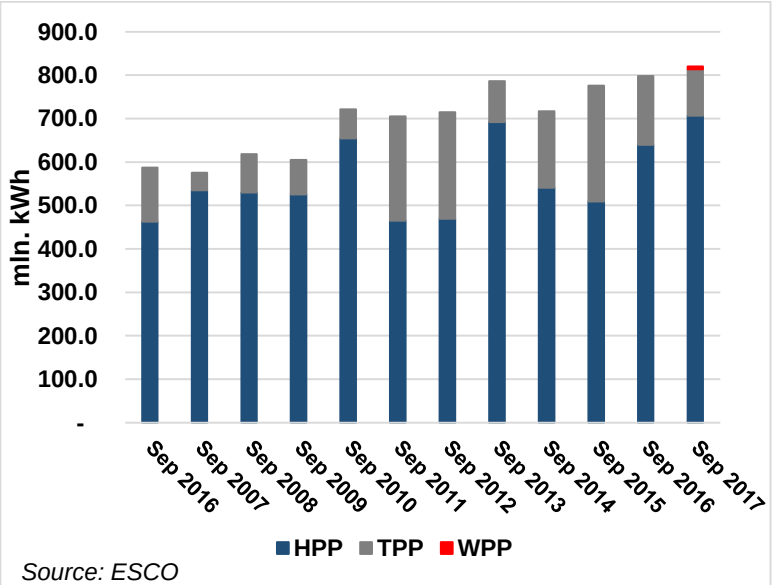
Following the traditional seasonal pattern, renewable sources of electricity produced 87% of total generation (713 mil kWh), while thermal power generation has started increasing, accounting for 13% of total generation (103 mln. kWh). Looking at the seasonal trends, generation from TPP was highest between December and February, and lowest between May and July, when renewable generation peaked.

Consumption of electricity on the local market was 920 mln. kWh, 12% more than the amount generated (a 16% increase compared to September 2016). The gap between consumption and generation amounted to 100 mln. kWh.

Considering seasonal characteristics, it is also important to note that on a monthly basis electricity consumption decreased by 11% (in August 2017, total consumption was 1,038 mln. kWh).

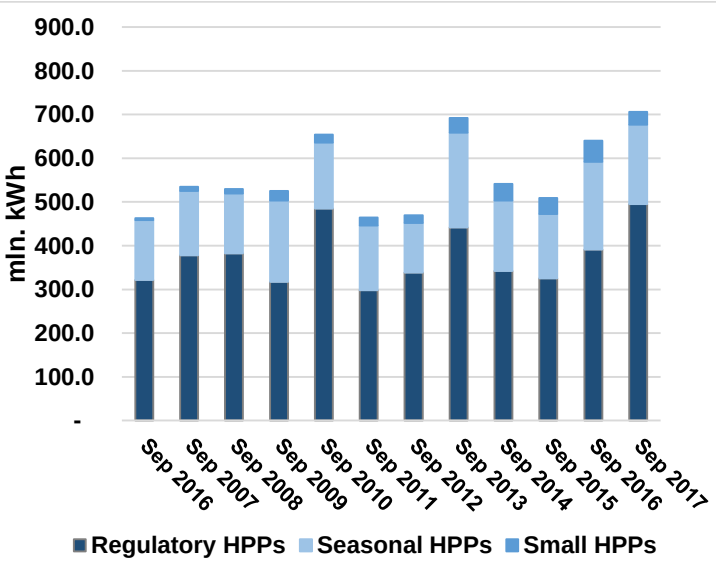
Among different sources of electricity, hydropower remained dominant. Specifically, in September 2017, hydropower (HPP) generation amounted to 706 mln. kWh (86% of total), wind power (WPP) was 6.9 mln. kWh (1% of total), and thermal power (TPP) was 107 mln. kWh (13% of total) (Figure 2). In hydropower generation, large (regulatory) HPPs produced 70% (495 mln. kWh) of electricity, while seasonal and small HPPs produced 26% (181 mln. kWh) and 4% (30 mln. kWh), respectively (Figure 3).

Figure 2. Electricity Generation by Sources (mln. kWh)



Source: ESCO

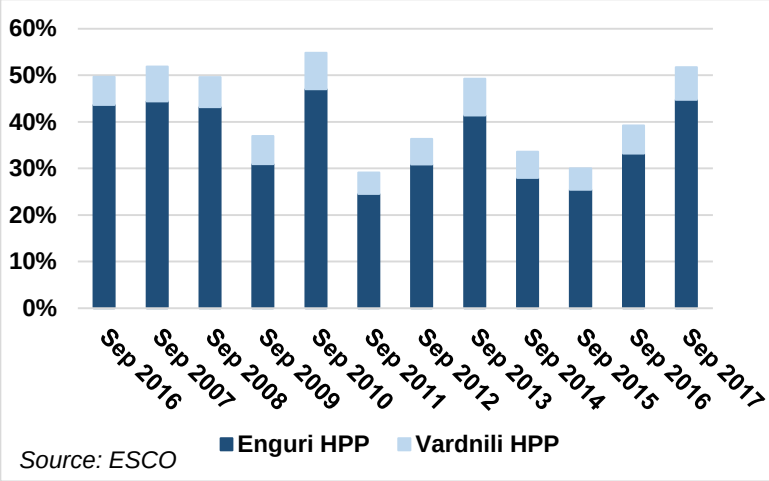
Figure 3. HPP generation by type (mln. kWh)



Source: ESCO

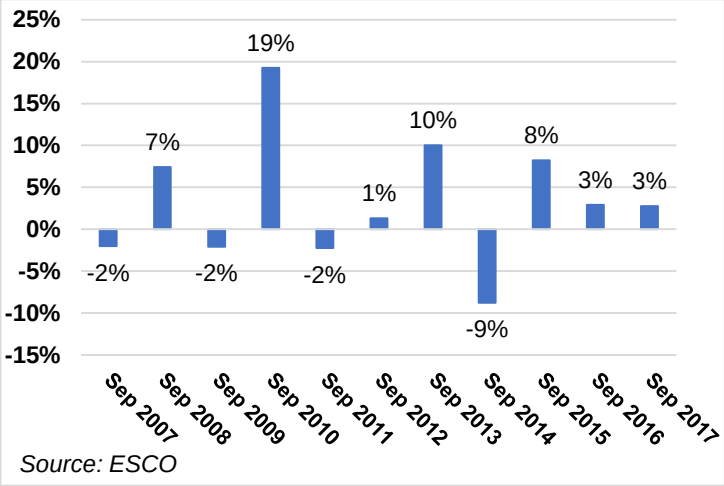
Among the large HPPs, Enguri and Vardnili generated the largest amounts of power, producing 367 mln. kWh and 57 mln. kWh, respectively, representing 52% of total generation (Figure 4). These HPPs also represent around 86% of generation for regulatory HPPs. Overall power generation has increased by 3% (Figure 5) from September 2016, mainly due to a 10% increase in HPPs, accompanied with 32% decrease in TPP generation.

Figure 4. Share of Enguri and Vardnili in total generation (mln. kWh)



Source: ESCO

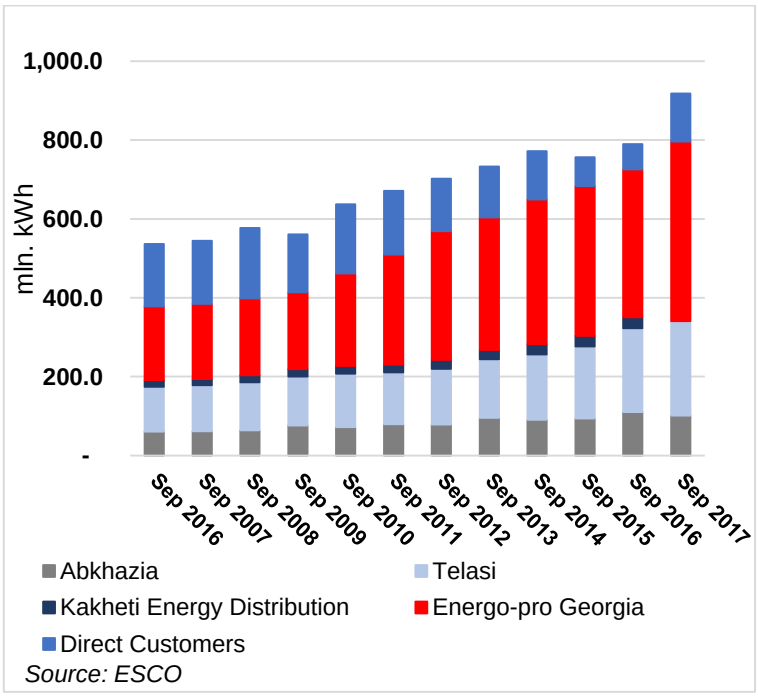
Figure 5. Growth of generation (%, y/y)



Source: ESCO

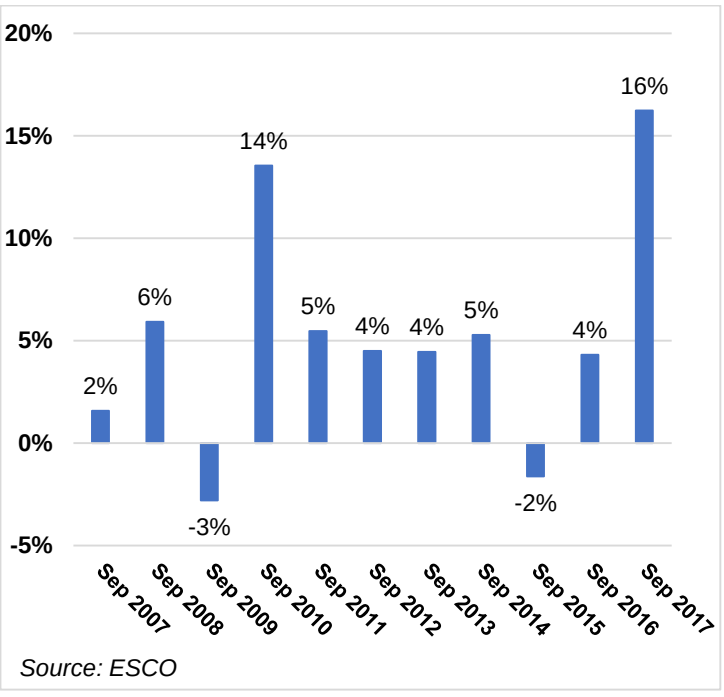
In September 2017, total electricity consumption of Georgia came from: Telasi – 30% (239 mln. kWh), Energo-Pro Georgia – 57% (456 mln. kWh), Abkhazia – 13% (101 mln. kWh) and direct customers – 15% (122 mln. kWh) (Figure 6). Compared to August 2016, demand from Telasi increased by 12%, from Energo-Pro Georgia by 22%, and from direct customers by 91% (a large increase caused primarily by consumption of "Georgian Manganese"), and decreased in Abkhazia by 8%. Overall, the annual increase in electricity consumption reached 16% in September 2017 (Figure 7).

Figure 6. Electricity Consumption by Type of Customer (mln. kWh)



Source: ESCO

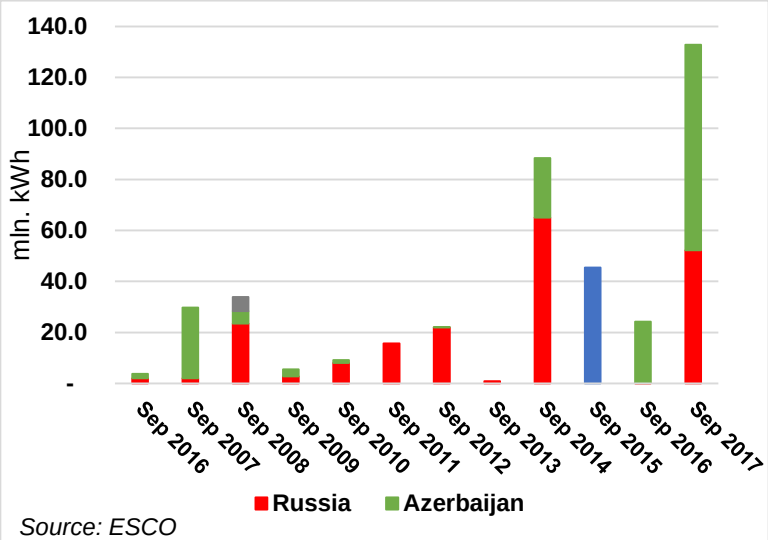
Figure 7. Electricity consumption growth (%, y/y)



Source: ESCO

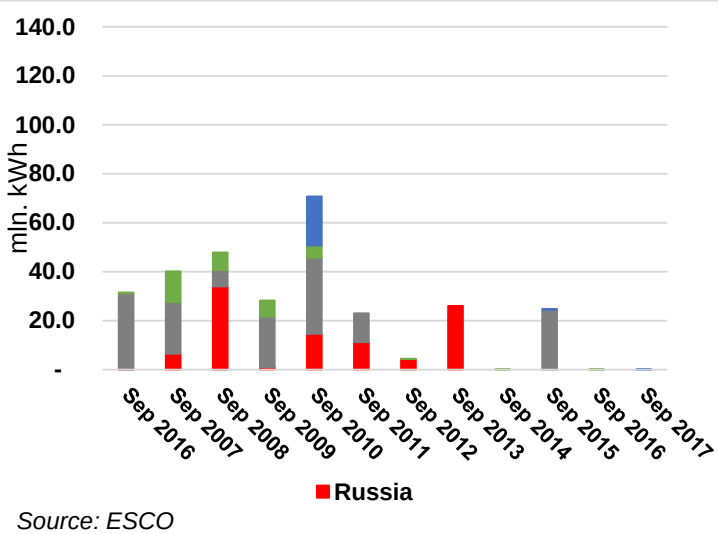
In September 2017, Georgia imported 133 mln. kWh of electricity. 61% of this electricity was imported from Azerbaijan, and 39% from Russia (Figure 8). Unlike last month, September 2017 has not shown a large increase in exports, primarily due to the seasonal pattern of electricity generation in the country. Export from Georgia was below 1 mln. kWh to Turkey and Russia (Figure 9).

Figure 8. **Import (mln. kWh)**



Source: ESCO

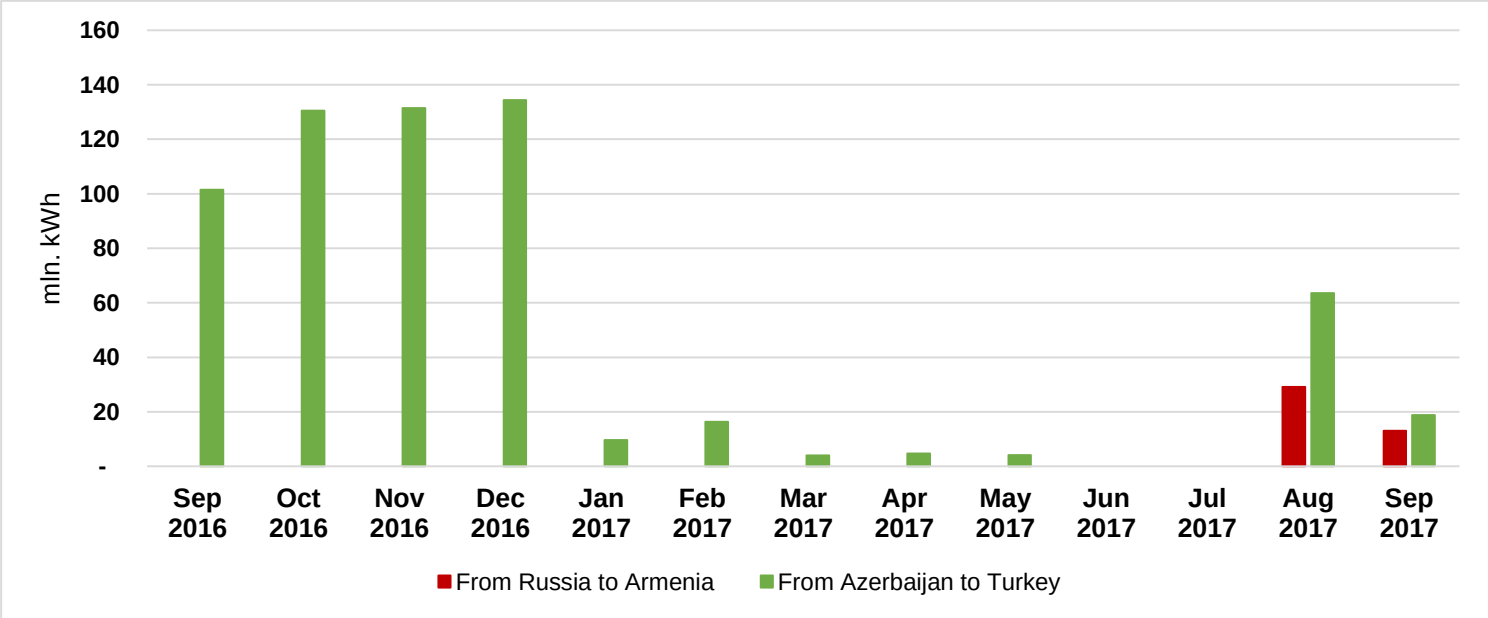
Figure 9. **Export (mln. kWh)**



Source: ESCO

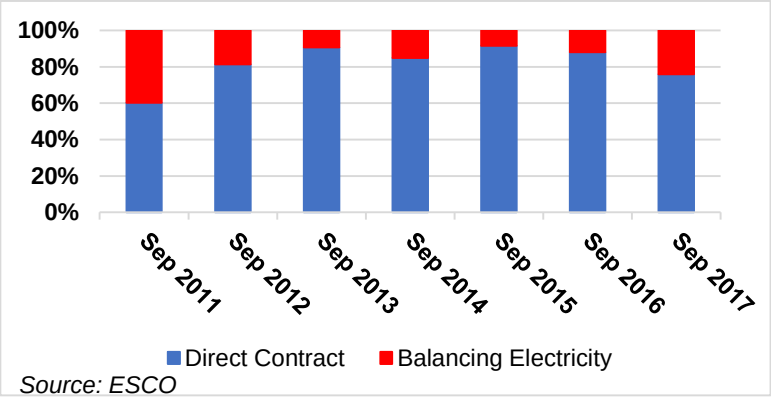
Transit in September 2017 amounted to 34 mln. kWh. Around 59% of this electricity was transited from Azerbaijan to Turkey, and 41% was transited from Russia to Armenia (Figure 10). Georgia seems to be on its way to becoming a trading hub between neighbouring electricity markets.

Figure 10. **Electricity transit through Georgia (mln. kWh)**



2. Marketing Operations

Figure 11. Electricity purchased / sold shares of direct contracts and balancing electricity



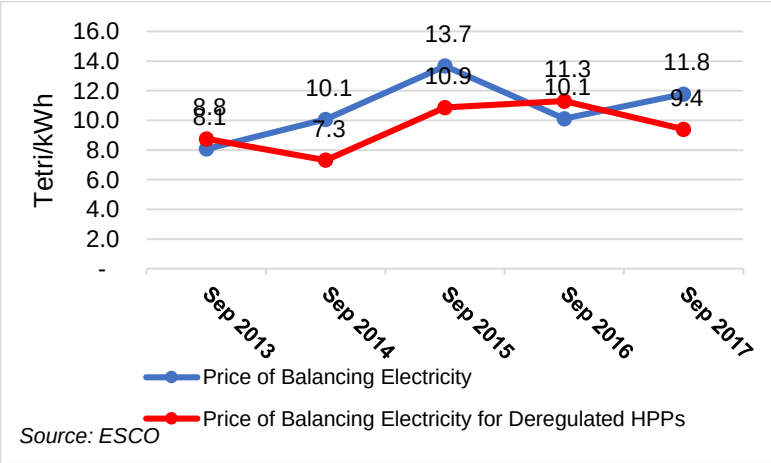
Source: ESCO

In September 2017, 76% (714 mln. kWh) of electricity sold on/from the local market was through direct contracts. The rest, 24% (226 mln. kWh), was sold as balancing electricity. The share of balancing electricity has increased compared to the past two years, because of increased consumption over the month, leading to a significant need for imports (Figure 11).

From the total electricity sold on the balancing market, 56% was imports, 9% was supplied by TPPs, 3% by WPP, and 32% by HPPs. Furthermore, from electricity sold with direct contracts, only 1% was imported, 11% was supplied by TPPs, and 88% by HPPs.

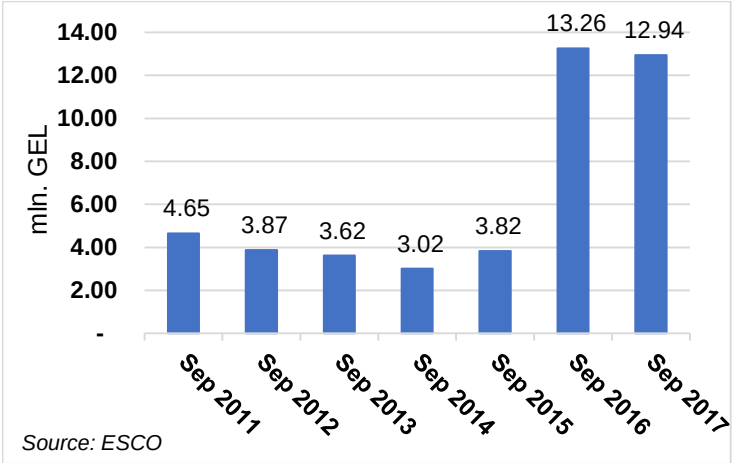
The weighted average price of balancing electricity was 11.8 tetri/kWh in September 2017, which is an annual increase of 16%, with respect to September 2016. As for the weighted average price for deregulated (small) HPPs, it reached 9.4 tetri/kWh (Figure 11). The difference between the overall balancing electricity price, and that for deregulated HPPs, is coming from the regulatory structure of the balancing electricity market (see July 2017 report). Guaranteed capacity payments in August 2017 were roughly 12.94 mil. GEL, a decrease of 2% compared to August 2016 (Figure 12). This reduction is due to smaller guranteed capacity fees (set by the national regulator) paid to several TPPs (see July 2017 Report). The higher cost of guaranteed capacity, compared to earlier years (2011-2015), is primarily caused by payments to the newly built Gardabani TPP, which became operational in November 2015.

Figure 11. Balancing electricity prices Weighted Average and Weighted Average price for deregulated HPPs (tetra / kWh)



Source: ESCO

Figure 12. Cost of Guaranteed Capacity (mln. GEL)



Source: ESCO

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