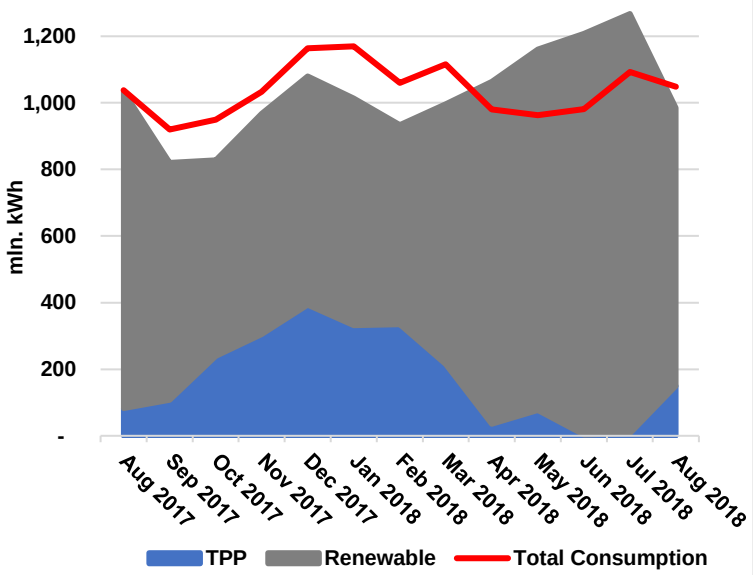
1. Electricity Generation – Consumption – Trade

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



Source: Electricity System Commercial Operator (ESCO)

In August 2018, Georgian power plants generated 985 mln. KWh of electricity. This represents a 5% decrease in total generation, compared to the previous year (in 2017, total generation in August was 1,034 mln. kWh). The decrease in generation on a yearly basis mainly comes from a decrease in hydropower and wind power generation (more details below).

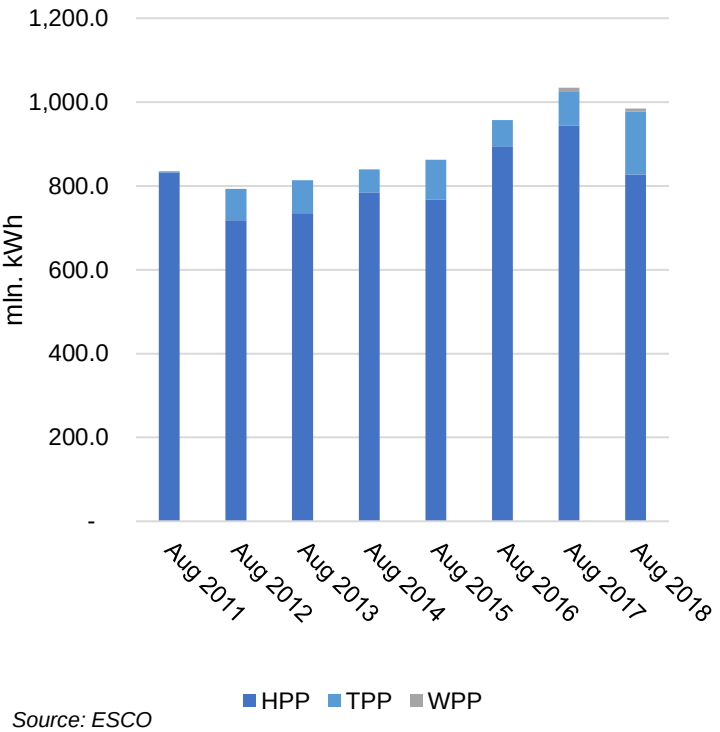
On a monthly basis, generation decreased by 22% (in July 2018, total generation was 1,268 mln. kWh).

The share of electricity produced by renewable sources decreased to 85% of total generation (835 mln kWh), while thermal power generation increased in comparison to July 2018, accounting for 15% of total generation (150 mln. kWh).

Consumption of electricity on the local market was 1,049 mln. kWh (+1% compared to August 2017, and -4% with respect to July 2018). In August 2018, total consumption exceeded generation by 64 mln, which is 6% of total consumption and 7% of the amount generated (compared to 175 mln kWh and 14% excess in total generation for July 2018).

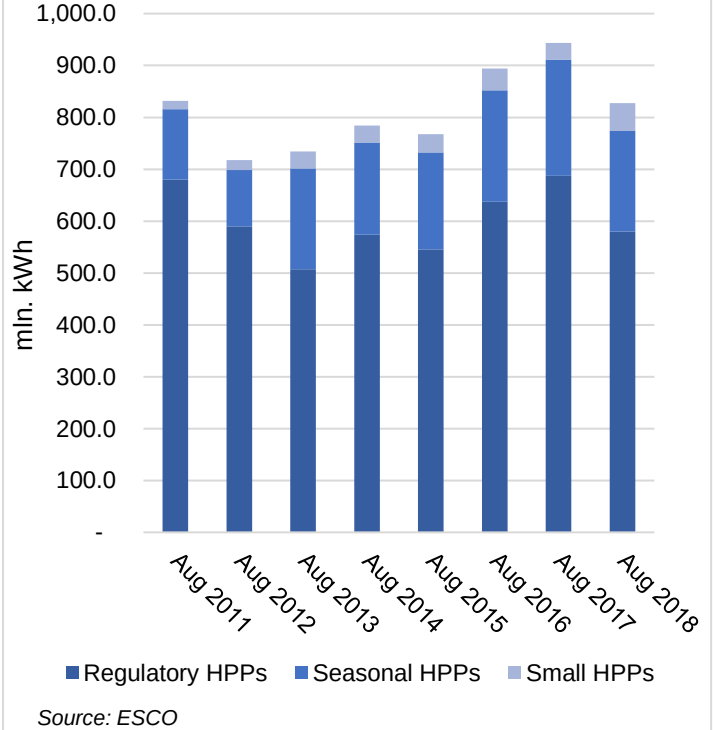
Among the different sources of electricity, hydropower still remains dominant, however, the share of thermal power plans has increased. Specifically, in August 2018, hydropower (HPP) generation amounted to 827 mln. kWh (84% of total); wind power (WPP) was 8 mln. kWh (0.8% of total), and thermal power (TPP) was 150 mln. kWh (15.2% of total) (Figure 2). Among hydropower generators, large (regulatory) HPPs produced 70% (580 mln. kWh) of electricity, while seasonal and small HPPs produced 23,5% (194 mln. kWh) and 6,5% (53 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 439 mln. kWh and 76 mln. kWh, respectively - 62% of total generation (Figure 4). They also represent around 89% of generation for regulatory HPPs. Overall, compared to August 2017, power generation decreased by 5% (Figure 5), due to a 12% decrease in HPP generation, and a 10% decrease in WPP generation.

Figure 4. Share of Enguri and Vardnili in Total Generation (mln. kWh)

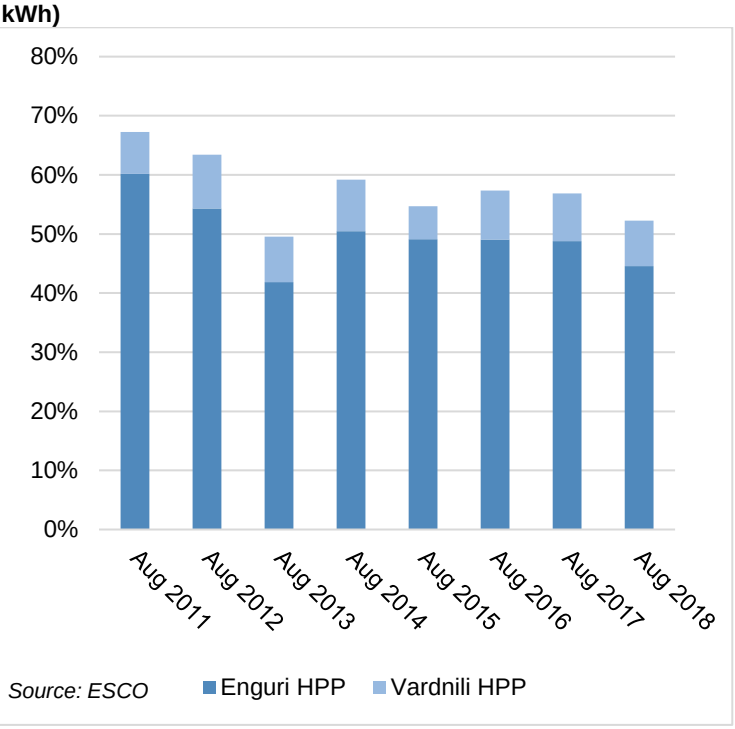
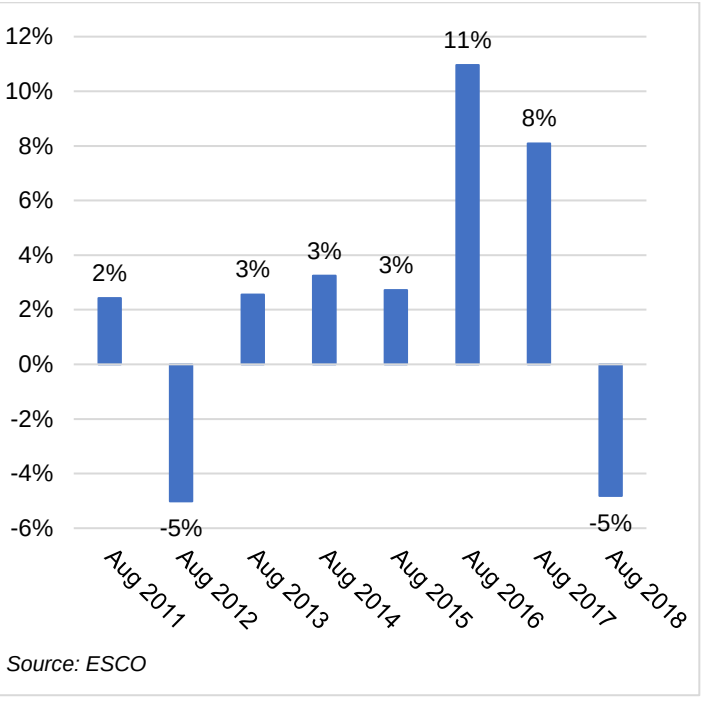


Figure 5. Growth of Generation (%, y/y)



Total electricity consumption in Georgia came from: **Energo-Pro Georgia** (50% - 521 mln. kWh), **Telasi** (22% - 234,9 mln. kWh), **Abkhazia** (12% - 120 mln. kWh), and **direct customer**s (16% - 171 mln. kWh) (Figure 6). Overall, the annual increase in electricity consumption was 1% in August 2018, compared to August 2017 (Figure 7). Annual demand increased from Energo-Pro Georgia by 0.3%, from direct consumers by 24%, and from Abkhazia by 1%; it decreased from Telasi by 10%.

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

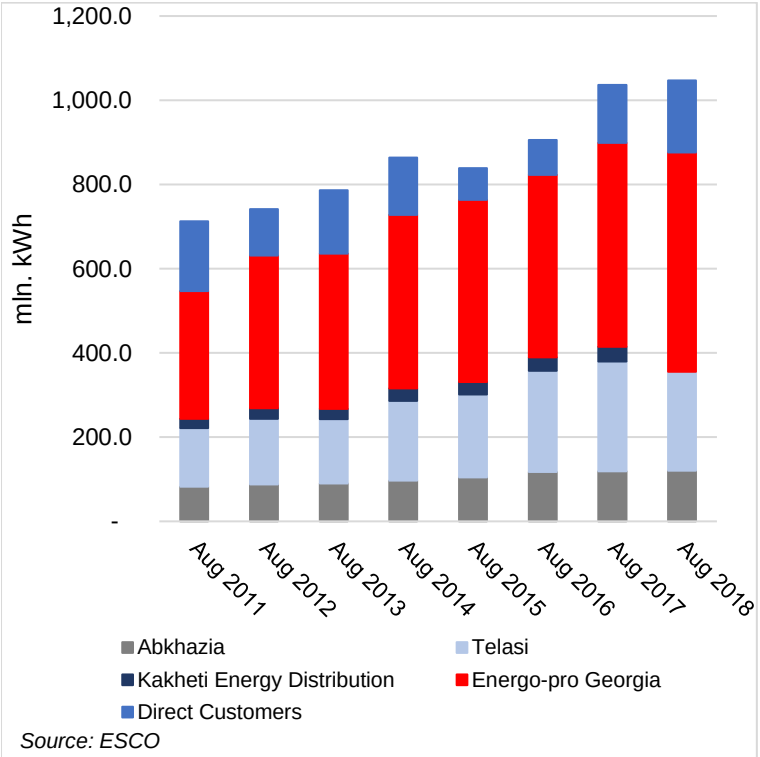
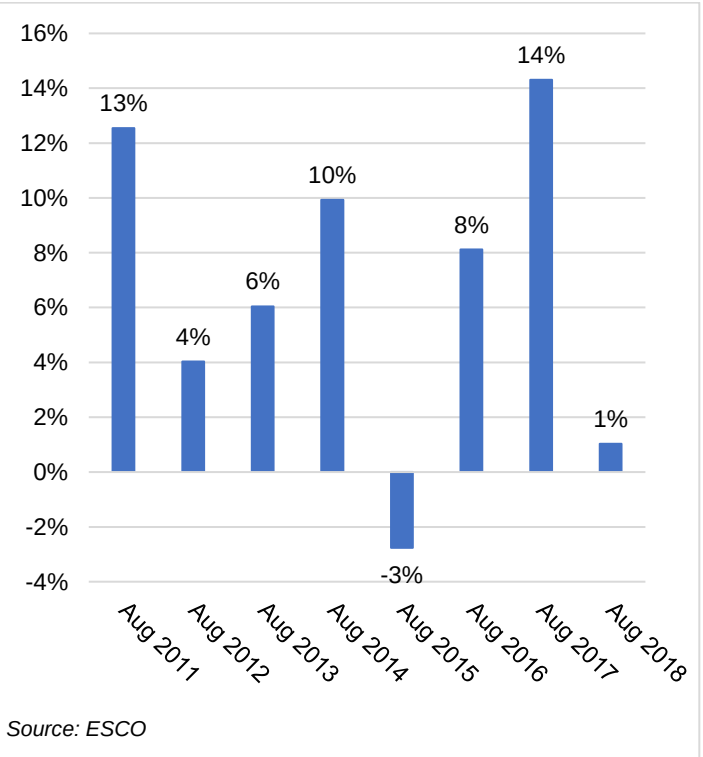
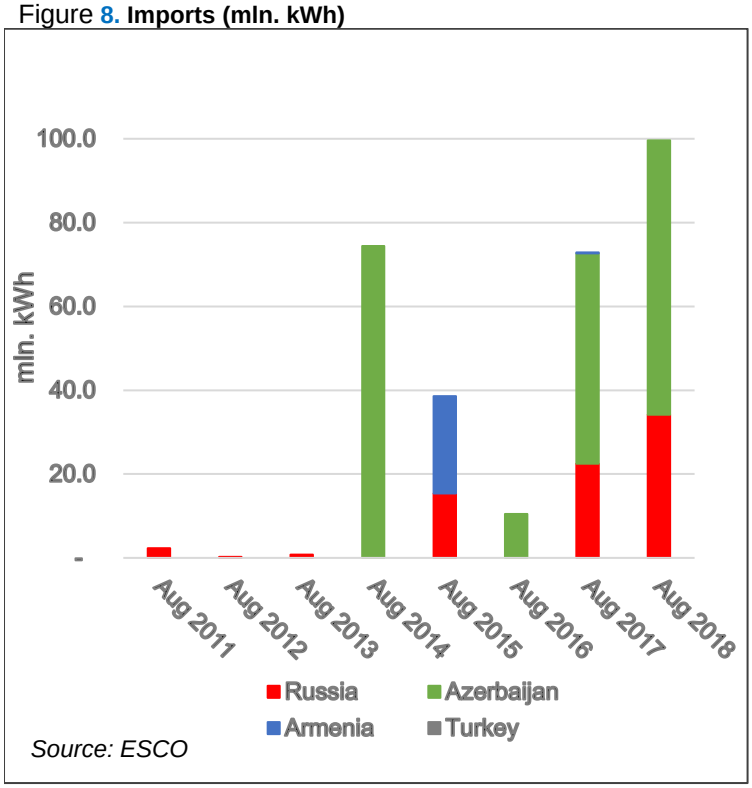


Figure 7. Electricity Consumption Growth (%, y/y)



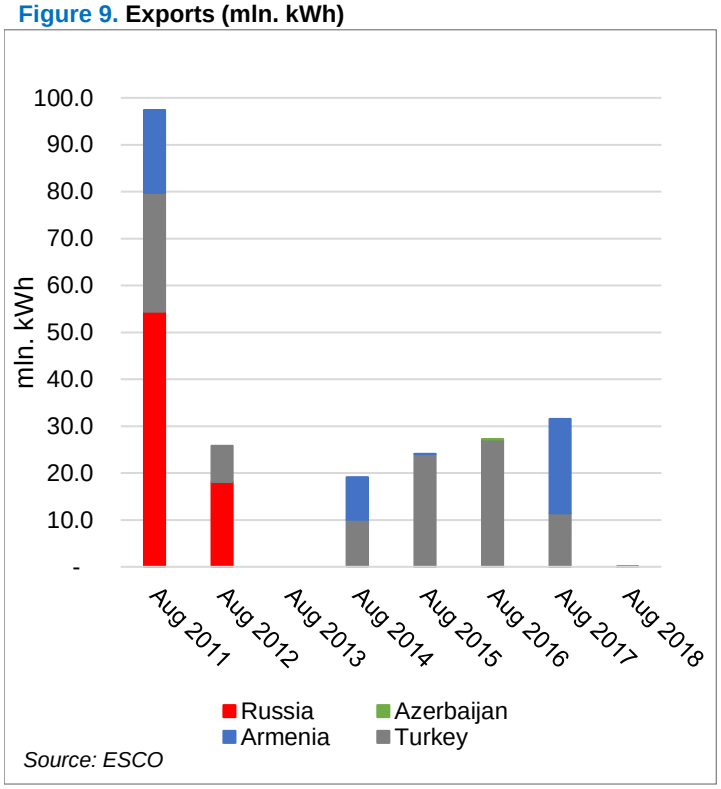
In August 2018, Georgia imported 99.6 mln. kWh of electricity (4.6¢ - 11.7 tetri). 66% of this electricity was imported from Azerbaijan, and 34% was imported from Russia (Figure 8). In August 2018, Georgia exported 0.017 mln kWh of electricity (5.9¢ - 14.98 tetri). 12% of exports were exported to Russia (0.002 mln kWh) and 88% to Azerbaijan (0.015 mln kWh) (see Figure 9).

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



Source: ESCO

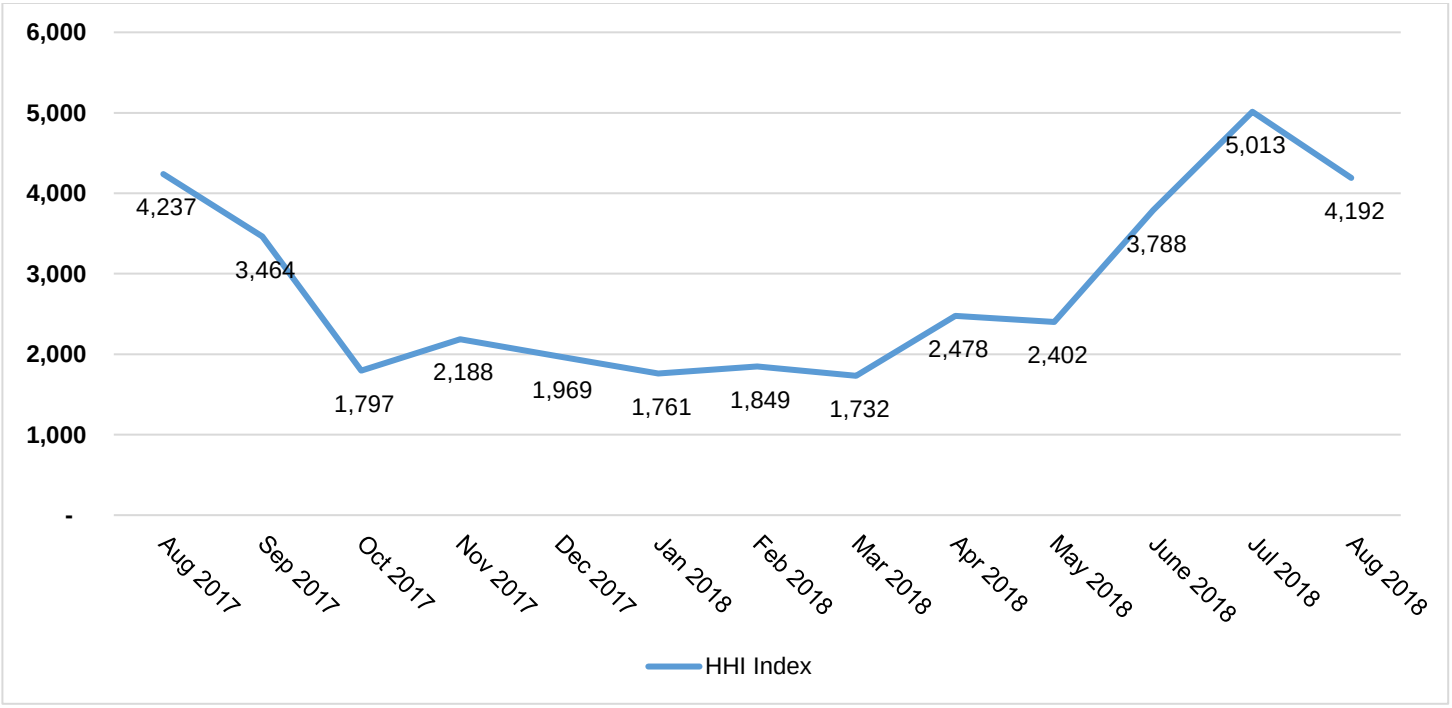
Figure 9. Exports (mln. kWh)



Source: ESCO

In conclusion, we utilize the Hirschmann-Herfindahl (HHI) market concentration index to evaluate how competitive the market was over the past few months. In August 2018, the Georgian electricity **market** was highly concentrated, with an HHI value of 4,192 (which is substantially higher than the threshold value for a highly concentrated market - 2,500). However, the level of concentration decreased compared to the prior year (from an HHI value of 4,237 in August 2017).

Figure 10. Hirschman-Herfindahl Index for Power Generation

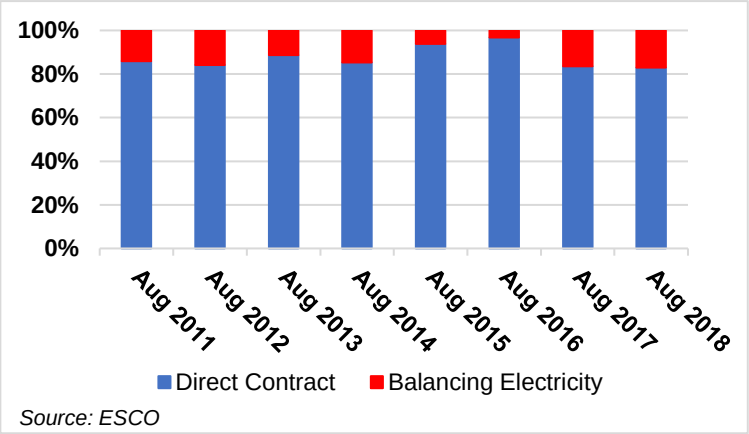


2. Market Operations

In August 2018, 83% (870 mln. kWh) of electricity sold on/from the local market was through direct contracts. The remaining 17% (178 mln. kWh) was sold as balancing electricity (Figure 11).

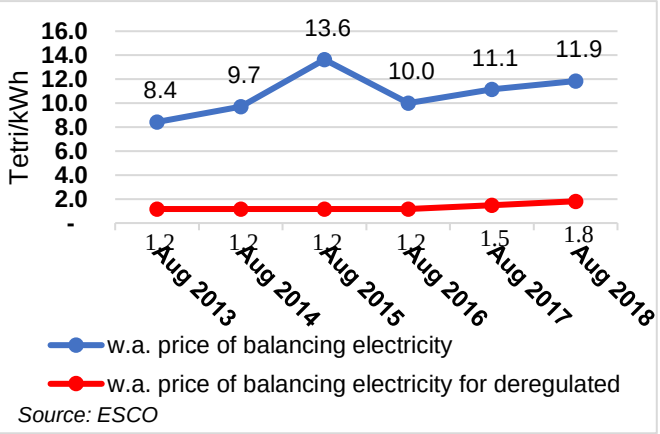
The weighted average price of balancing electricity was 11.9 tetri/kWh in August 2018, which is an annual increase of 6% compared to August 2017. As for the weighted average price for deregulated (small) HPPs, it reached 1.8 tetri/kWh (Figure 12).

Figure 11. Electricity Purchased / Sold Shares of Direct Contracts and Balancing Electricity



Source: ESCO

Figure 12. Balancing Electricity Prices Weighted Average and Weighted Average Price for Deregulated HPPs (Tetri/Kwh)

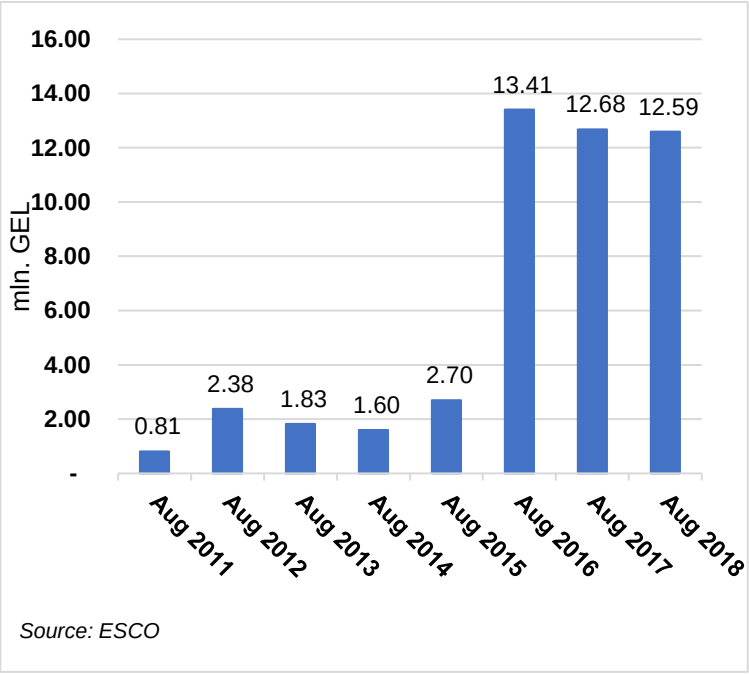


Source: ESCO

Guaranteed capacity payments in August 2018 were roughly 12.59 mln. GEL, a decrease of 1% compared to August 2017 (Figure 13).

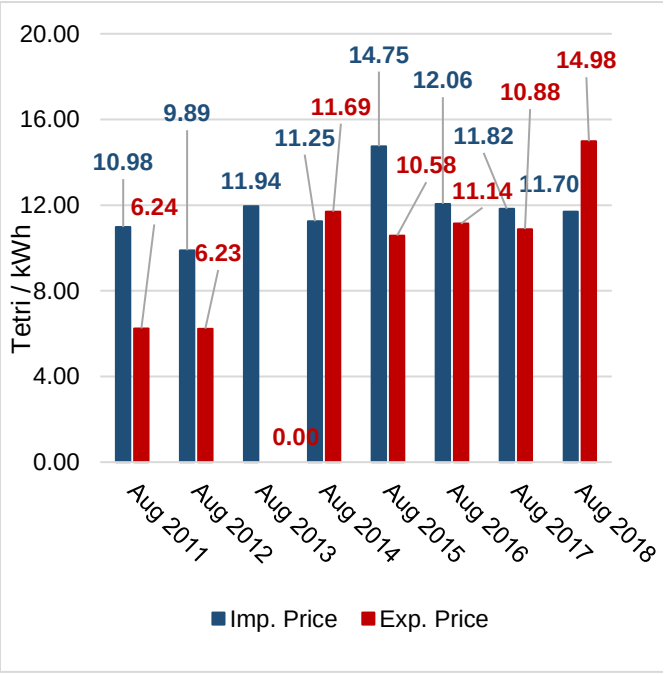
The average electricity import price in August 2018 decreased to 4.6¢ (11.7 tetri) per kWh (a decrease of 1%) compared to August 2017, and the export price increased to 5.9¢ (14.98 tetri) per kWh (an increase of 38%) compared to August 2017.

Figure 13. Cost of Guaranteed Capacity (mln. GEL)



Source: ESCO

Figure 14. Prices Import/Export (tetri/kWh)[1]



[1] Data is provided in US dollars and is converted to GEL using the average monthly exchange rate as reported by National Bank of Georgia.

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