

Sebastian Staske

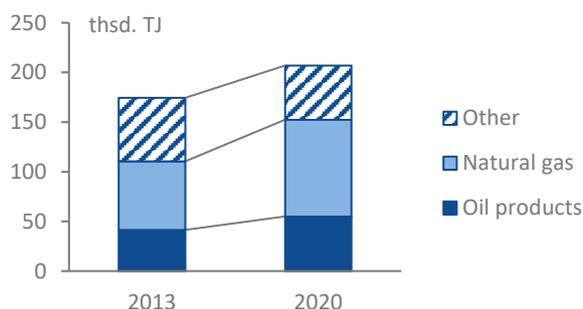
Energy issues in the context of the war in Ukraine

The war in Ukraine and its impact on global energy markets also affect Georgia as a net importer with growing energy needs. Among the main implications is the strong increase in oil and gas prices, which has caused an increase in imports of around 3% of GDP. Energy security is not at risk. However, Russia's share in oil imports has increased strongly, reaching 44% in 9M2022. Gas continues to be supplied through a long-term contract with Azerbaijan. The electricity market has also been affected, as the war has indirectly contributed to the decline in the price of bitcoin. The resulting fall in electricity consumption by cryptominers has highlighted demand volatility and in the summer contributed to the highest electricity exports since 2010.

Overview: increasing energy consumption and imports

From 2013 to 2020 (the last year for which this data is available), Georgia's energy consumption increased by 19%. About 80% of the energy is covered by oil products and natural gas, which are almost entirely imported. Oil (8%) and natural gas (3%) account for a significant share of total imports, so price changes also affect the current account balance. Against this backdrop, the war in Ukraine and its impact on global energy markets also affect Georgia to a large extent.

Energy balance of Georgia 2013 vs. 2020



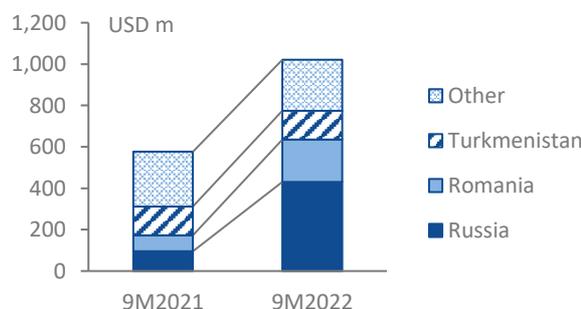
Source: Geostat; Note: oil products includes crude oil

Oil: price increase and higher share of Russian imports

Regarding oil, two implications of the war in Ukraine must be considered: 1) the price increase and 2) a change in the import structure. The strong rise in prices (67% yoy in 9M2022) was the key driver for the sizeable increase in oil imports. Overall, they reached around USD 1.0 bn in 9M2022 (77% yoy). Before the start of the war, oil imports were well diversified, with

Russia accounting for 18% of the total volume in 9M2021. The total import volume remained relatively stable (6% yoy). However, supply from other countries, especially Azerbaijan, dropped significantly in the course of 2022. Additional imports from Russia filled this gap, also due to the cheaper price. As a result, the Russian share in oil imports increased markedly to 44% in 9M2022. Part of the gap was also filled by additional imports from Romania (with the share increasing from 14% to 20%).

Change in oil imports 9M2021 vs. 9M2022



Source: Geostat

Gas: price increase, but long-term contract

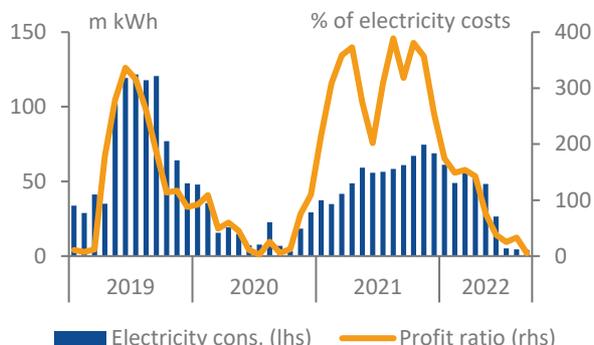
In recent years, the importance of natural gas in energy supply has increased as a result of the government's gasification programme which has gradually replaced firewood in rural areas. Natural gas is mainly supplied through a long-term contract with Azerbaijan, with the remainder coming from Russia. In 2021, despite temporary disruptions in gas supply, Azerbaijan accounted for 85% of imports. Overall, security of supply is therefore not affected by the war in Ukraine. The war mainly has an impact in the form of price increases: Overall, natural gas imports increased by 45% in 9M2022 relative to 9M2021.

Electricity: strong decline in cryptomining

Attracted by low electricity prices and a business-friendly environment, Georgia has become a centre for cryptomining in recent years. In 2021, the sector consumed an average of just over 6% of all electricity in Georgia (excluding Abkhazia). From a cryptominer's perspective, there were two negative developments during this year. First, the bitcoin price fell by around 60% from around USD 46,000 at the start of the year to below USD 20,000 by the end of September. Russia's war against Ukraine indirectly contributed to this development: it not only created uncertainty and unfavourable market sentiment, but also (further) exacerbated global inflation, leading to interest rate hikes by central banks.

At the same time, computing power on the Bitcoin network (which is a measure of competition in the market) has nevertheless increased by around 32%. Both developments are weighing on profits.

Electricity consumption due to cryptomining by month



Sources: German Economic Team, ESCO, CBECI

Against this backdrop, electricity consumption by cryptomining in Georgia declined significantly over the summer, from around 6% of total consumption in January to a low of 0.5% in August. Overall, consumption averaged 3.6% in 9M2022. Comparable values were last reached in 2020.

Summarized electricity consumption of cryptomining

	2019	2020	2021	9M2022
% of total	8.5	2.4	6.1	3.6
Min / Max	3.5 / 14.1	0.4 / 5.2	4.3 / 7.9	0.5 / 6.0
m kWh	910	228	665	309

Sources: German Economic Team, ESCO, CBECI

Note: values exclude Abkhazia

Electricity: highest exports in summer since 2010

These developments have also had implications for Georgia's electricity trade. While Georgia is a net importer on average throughout the year, it usually becomes a net exporter of electricity in late spring and summer, when hydropower plants can best be utilized. This year, net exports reached their highest level since 2010, totalling 958 m kWh (177% yoy). The increase in exports is mainly the result of an increase in generation. However, a thought experiment illustrates the role of the decline in cryptomining: if the sector had consumed a similar amount as last year, the electricity surplus would have only allowed for additional exports of around 410 m kWh under otherwise identical conditions. Instead, the cryptomining sector used around 200 m kWh less electricity during this period, which could also be exported. This implies that around one third of the increase in exports was driven by the de-

cline in cryptomining. Almost all of the electricity is exported to Turkey. It is noteworthy that export prices increased significantly to around USD 87 per MWh (+124% yoy). Overall, net exports between May and September amounted to USD 84 m.

Outlook

The war in Ukraine has highlighted Georgia's import dependency. Oil and natural gas imports increased by around USD 530 m (3.1% of GDP). This adversely affects Georgia's current account balance and has been a key driver for inflation. On the positive side, energy security is not at risk. The strong increase in oil imports from Russia should be closely monitored. However, this is a reaction to price developments and Georgia could likely (re-)diversify if necessary. The long-term contract with Azerbaijan limits the effects on natural gas. With Europe looking to import more gas from Azerbaijan, Georgia as a transit country could even benefit in the medium term. The unpredictability of the bitcoin price will remain a potential source of demand volatility for electricity. The stability of the electricity grid is currently not at risk. However, reports from other countries with strong cryptomining sectors, where a sudden surge in demand has likely contributed to power outages, should serve as a cautionary tale. The positive effects on electricity trade could also be short-lived: a price increase of Bitcoin in winter and subsequent surge in demand from the sector would quickly lead to an increase in imports. As a net importer of energy, Georgia will remain vulnerable to unfavourable developments on world markets. However, energy consumption is relatively high in relation to GDP, so there is still untapped potential for savings. Further support for energy efficiency measures could therefore go a long way towards strengthening energy resilience.

More information on the importance of cryptomining for Georgia is provided in our Policy Study "[Development of cryptomining in Georgia 2018-2021](#)".

Financed by the Federal Ministry for Economic Affairs and Climate Action, the German Economic Team (GET) advises the governments of Ukraine, Belarus*, Moldova, Kosovo, Armenia, Georgia and Uzbekistan on economic policy matters. Berlin Economics has been commissioned with the implementation of the consultancy.

*Advisory activities in Belarus are currently suspended.

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