

Improving business access to electricity

Despite large investments in energy transmission and a vast number of hydro power plants in operation, construction and planned, access to a reliable power supply for businesses remains a relative weakness of Georgia. Analysis of the Doing Business ranking by the World Bank and reports from the private sector reveal that the quality of the electricity supply, specifically the final miles in the low-voltage distribution grid, remain problematic. Deficient power supply reliability may deter potential investors and forces other firms to invest in relatively expensive equipment in order to protect sensitive machinery.

Investment in the distribution grid is required in order to improve the situation. However, Georgia's regulated tariffs for the transmission component of electricity prices are very low in international comparison, despite large investment needs. As raising electricity tariffs across the board is politically highly problematic due to social effects, a differential tariff system could be a way forward. Companies which require more reliable power supply would pay more for better service, leading to more and better targeted investment in the distribution grid.

A big dent in the business environment

Georgia has acquired a reputation for ranking highly in international comparisons of business environments. In the World Bank's 2016 "Doing Business" ranking, Georgia ranked 24th of 189 countries. Nevertheless, some persistent weaknesses remain among the constituent indicators.

One crucial weakness is "getting electricity", in which Georgia ranks 62nd of 189 nations, well behind comparable countries such as Poland and Estonia or its neighbour, Turkey. Hence, GET Georgia had been requested by the Georgian government to look into possible avenues of improving business access to electricity.

Crucial for investment in the manufacturing sector

A high-quality electricity supply is of special significance for companies in the manufacturing sector and other highly electricity-dependent companies. Power outages will interrupt production processes, which in some cases are difficult to start and restart, leading to losses in time and in revenues. Furthermore, some equipment is highly sensitive to fluctuations in the power supply. Power outages and fluctuations in voltage, so-called brownouts, can damage or destroy equipment, necessitating investment by companies in

additional and expensive equipment to maintain a constant power supply.

Georgia's manufacturing sector may be relatively small at present but, as analysed in previous papers by GET Georgia, it has growth potential. If this potential is to be used, a high-quality, low-cost energy supply should be an important ingredient in Georgia's offer, particularly when considering the country's massive potential for cost-effective and clean hydro power.

Reliability of supply is the main weakness

The World Bank's "Doing Business" ranking clearly indicates that the principal weakness in business access to electricity is indeed the quality and reliability of the electricity. In this indicator, Georgia only achieved 50% of the maximum possible score.

Getting electricity: Georgia's score by sub-indicator

Indicator	% of maximum score
Number of procedures	83
Time to get connected	77
Cost	94
Reliability of supply and transparency of tariffs index (0-8)	50
Average	76

Source: Doing Business 2016, World Bank Group

Other analyses, such as the EBRD's Business Environment and Enterprise Performance Survey (BEEPS) and feedback from individual companies, confirm that the main concern of businesses is indeed the reliability of the power supply.

Distribution grid in need of investment

Georgia's high-voltage transmission grid has been the target of significant investments in recent years and is functioning well. However, the reason for companies' difficulties with the electricity supply lies in the lower-voltage distribution grid, where large investment needs remain. Sub-stations are in need of upgrading in order to handle larger electricity loads at peak hours and should eventually be equipped with Supervisory Control and Data Acquisition (SCADA) systems in order to remotely monitor and restore electricity supply in case of outages.

Indeed, as service levels by the energy provider to the final customer cannot be properly monitored at present, electricity supply contracts in Georgia neither specify levels of service to be guaranteed by the electricity supplier nor acceptable behaviour (such as maximum electricity consumption) by the clients.

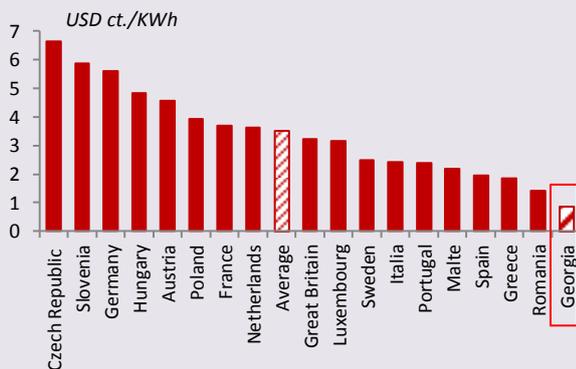
Although the distribution grid in and around Tbilisi has seen most investments in the recent past, power out-

ages are still being reported by companies in Tbilisi, indicating that even in Tbilisi significant investment needs remain. For the rural distribution grid, large, multi-million US dollar investment needs are being attested by experts.

Financing investments

Such investments must be funded. The income of distribution grid operators stems from the network charge in the electricity price, regulated by the Georgian National Energy and Water Supply Regulatory Commission (GNERC).

Network charges for small industrial consumers 2013



Source: AF-Mercados, REF-E and Indra; GNERC

Network charges in Georgia are very low in international comparison, indicating that not much investment is taking place at present. In the “cost-plus” regulation employed in Georgia, companies’ investment plans enter the calculation of network charges and final electricity tariffs, yet such tariffs remain a highly sensitive matter due to their social impact.

“Reliable power” as a tariff option

If an across-the-board increase in network charges is not feasible, a more targeted alternative may help solving the most pressing concerns of businesses. GNERC, the energy regulator, could require distribution grid operators to offer a new tariff option, called “reliable power”. Under this tariff, customers would subscribe to the tariff for a period of at least 5 years and pay more, but they would be guaranteed a specific service level, receive preferential treatment in case of network problems and be compensated financially by the grid operator if this service level is not achieved. In order to operate such a tariff, monitoring equipment is required. The necessary smart metering technology can now be purchased for modest prices and uses mobile phone networks to transmit the infor-

mation. Furthermore, the tariff surcharge would need to be sufficient to allow for targeted investments by the grid operator in the respective infrastructure, leading to the acquisition of such “reliable power” customers.

Politically feasible and economically useful

Introducing a “reliable power” tariff option would not only circumvent highly problematic social effects of an across-the-board electricity tariff increase, it would also have a clear economic advantage. Financial incentives due to larger revenues from “reliable power” customers and potential compensation payments would lead to better targeted investments into those sectors of the distribution grid where the economic need is most pressing. This would be a substantial advantage for the multi-million dollar, multi-year project that is the full rehabilitation of Georgia’s distribution grid.

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Note: A more comprehensive analysis of the topic is provided in the Policy Briefing PB/02/2016 – “Improving business access to electricity in Georgia”, available at www.get-georgia.de

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