

ENERGY SECTOR OF GEORGIA 2000-2005

The country of Georgia, in the geopolitical center of the Caucasus, is on the way to restoration of its energy sector. Formerly a Republic of Soviet Union, Georgia has large hydropower resources and relatively smaller thermal power capacity.

In the Soviet period Georgian energy system was just a small part of the unified Soviet energy system and accordingly was not designed for independent operation. It was built to serve the integrated economy of the Soviet Union and thus dependent on the power systems of neighboring republics-exporting electricity in peak hours and importing energy to cover base load demand. More precisely it was part of South Caucasus integrated grid which had base load generation in Armenia (nuclear & thermal, and some hydro) and Azerbaijan (thermal and some hydro) while peak loads were covered mostly by Georgian hydro power plants.

70% of the supplied energy was distributed within the industrial. Utilization of the remaining 30% was by the by the population.

With the dissolution of the Soviet Union the structure of the energy consumption changed and of the structure of the energy sector was severely deformed. This in turn triggered escalation of systemic and political problems. The non-civic mentality of consumers was clearly reflected in nonpayment for energy and in many corrupt deals.

Due to non-payment and lack of funds the energy system of the country experienced significant deterioration. Production of primary energy resources decreased drastically. Economic and professional relations with the neighboring countries were shattered, and a substantial part of the assets were destroyed. Deterioration of the energy infrastructure resulted in a deficit of domestic generation, which in turn made the Georgian energy system dependent on the import of energy resources from the neighboring countries. The political processes in Abkhazia, complicated use of the major HPP Enguri and thus escalated the energy crisis.

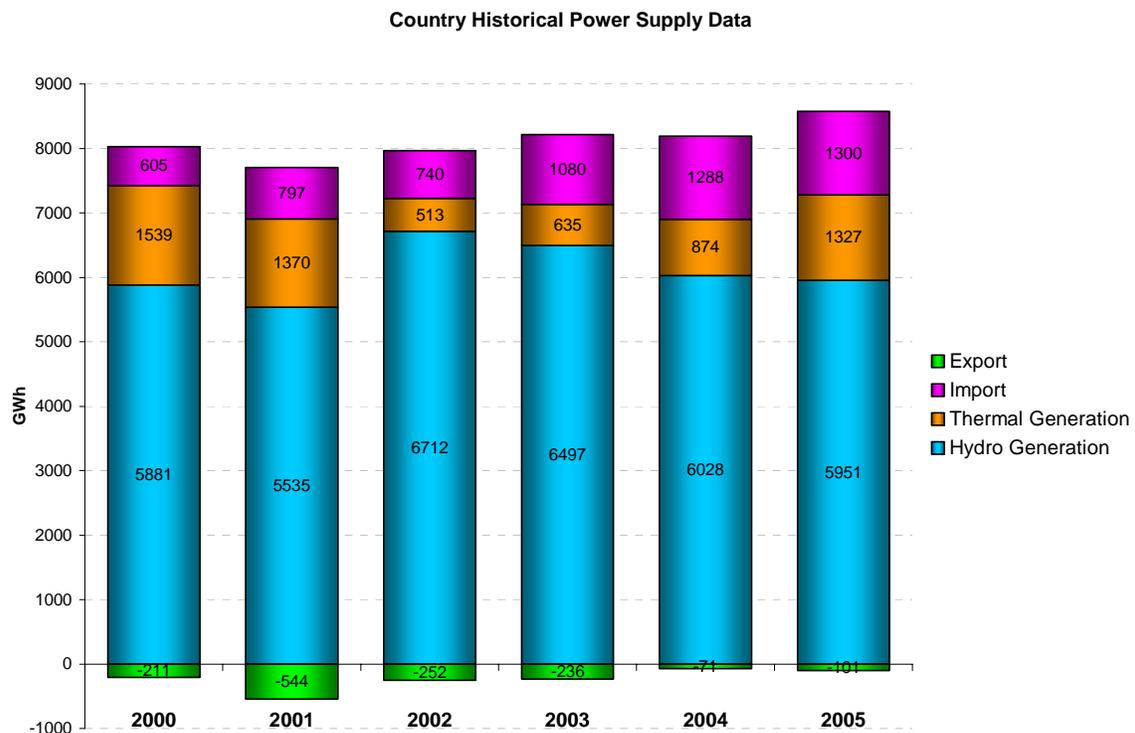
In 2000-through 2003 the financial limitations in the sector made imports of fuel and power increasingly difficult, and so the Georgian electricity sector had to rely primarily on its own hydropower, complemented by limited local thermal capacity. The imbalance between supply (concentrated in Western Georgia) and demand (concentrated in Eastern Georgia), compounded by non-maintained transmission lines connecting East and West, created problems of system stability and supply reliability. All regions of Georgia experienced severe shortages in electricity supply. The only comparatively privileged supply was provided to Tbilisi, the Capital of the Country.

Distribution Companies in Georgia experienced low collection rates, and as a result were limited in the amount of import power they were able to contract. In the 2000-2003 the power supply of Georgia was selectively restricted. The regions of Ajara, Kakheti and the West Georgia distribution companies, later formed as United Energy Distribution Company (UEDC), constantly experienced restricted power supplies due to a lack of generation and/or import capabilities, with the exception of Abkhazia, which received power without restrictions.

With the reduced levels of payments for the distribution companies, the total revenues to the system were below that required just to pay basic generation and transmission expenses, much less for necessary renovation. The only alternative was to depend upon supplemental revenues, investment funds, or subsidies, or the Donor Community. Unfortunately any supplemental revenues that may have been available were used to purchase import power and did not contribute to any improvements to the power system.

The decision to provide full supply of power to the regions despite the lack of sufficient revenues generated by the sector was made by the highest levels of the GoG.

The chart below describes the energy supply of Georgia from 2000 through 2005.



Before the New Government came to power, power plants were not maintained and all funds intended for system maintenance were dissipated. In 2003, three out of 12 main hydro power plants were out of service, others did not operate at full capacity, the Enguri HPP was in emergency condition, and the Thermal Power Plants were out of service. There were enormous state debts to the electricity distribution companies, while neighboring countries claimed for liabilities for earlier power deliveries to Georgia. The major part of consumers, particularly in the regions, were not metered and accordingly, it was not possible to control the amount of electricity consumed and calculate electricity bills for each consumer accurately, and therefore it was not possible to carry out individual disconnections of non payers. All the above has driven the sector into near bankruptcy. Commercial losses (theft) deteriorated the technical and financial condition of the generation, transmission and distributions sectors.

In 2003, after the Rose Revolution the new Government initiated a number of reforms in the energy sector, implementation of which bear vital importance for the improvement and development of Country economy.

Since then the Government of Georgia through the Ministry of Energy has taken significant steps to improve the Power Sector Infrastructure through funding of specific rehabilitation projects where funds can produce the most increase in supply or in collections, or where the funds can assist in reducing losses in the system. The GoG started payment of old debts (State Social Subsidy Program). The New Government is supporting Management Contracts which have been put in place at:

- UDC (PA Consulting, sponsored by USAID)
- GSE Transmission & Dispatch (ESBI, sponsored by the World Bank and KfW),
- Georgia Wholesale Electricity Market (IBERDROLA, sponsored by EBRD)

In 2004 the State Budget allocated 77.5 Million GEL for the Energy Sector and Infrastructure development. At the urging of the Ministry of Energy, and for the first time in many years, the Georgian State Budget provided funds for renovation at many of the Hydro-power stations, with a resulting increase in generation capacity for the country. Along with rehabilitation works at the HPPs and the TPPs rehabilitation of the transmission lines was also conducted. In areas requiring emergency rehabilitation due to risks for potential accidents, the lines were fixed and maintained. For the first time in the last decade the GoG has financially addressed the issue of the natural gas trunk pipeline and NG distribution network rehabilitation.

The Government of Georgia is committed to continue energy sector rehabilitation and development activities. Approximately 200 million GEL has been allocated from 2005 State Budget for the energy sector. The GoG is subsidizing the generation of thermal power, partially financing the rehabilitation of thermal and

hydro power plants, transmission and distribution grids, that will result in the improvement of the technical condition of the sector. Through rehabilitation the GoG plans to guarantee additional capacity in local generation and minimize imports of electricity from neighboring countries.

Current Structure of the Sector

According to the Law on Electricity and Natural Gas of Georgia, the Ministry of Energy proposes policy for the energy sector, while regulation of the sector is undertaken by the Georgian National Energy Regulatory Commission (GNERC). GNERC is an independent regulator that sets tariffs, issues licenses and serves as a dispute resolution agency. The power sector is structured around the Georgian Wholesale Electricity Market (GWEM). Currently GWEM is under the Management Contract with Iberdrola Consortium. On one side of GWEM, there are electricity suppliers (mainly hydropower plants and two thermal power plants) and on the other there are several distribution companies. Transmission and dispatch are combined into one company, Georgian State Electrosystem (GSE), under management contract with ESBI. Distribution is divided into Tbilisi (Telasi - 75% owned by RAO UES), Ajara, Apkhazeti, Kakheti and the United Energy Distribution Company (UEDC). UEDC covers the rest of Georgia and is managed by PA Government Services.

In the Gas sector, high-pressure gas transmission pipelines are owned and operated by the state-owned company JSC Georgian Gas International Corporation. There is no “single buyer” model for imported gas. Distribution companies and other industrial customers have direct contracts with Russian gas suppliers. The gas pipeline system of Georgia also transits gas to Armenia and is currently the only gas supply route to that country.

Improvements in Distribution Sector

Electricity Distribution companies receive strong support from the GoG to improve the technical and financial conditions of the grids. The Government of Georgia allocated 20 million GEL in 2005 for the largest energy distribution company, operating in Western Georgia, UEDC, for re-metering of retail customers of the company. Individual, communal and master meters were installed. The German Development Bank is financing, through a credit line of 25 million Euros, the second stage of the re-metering process. Due to the conducted works the UEDC average annual collections have increased from 20-23% up to 66% in 2005. UEDC is able to pay due taxes and uses own funds for electricity imports.

TELASI is the electricity distribution utility of the city of Tbilisi, the country's Capital. TELASI serves approximately 370,000 customers in an area of 121 km² and is by far the largest electricity distribution company in Georgia. Telasi was originally sold to the American Company AES, which provided an injection of

outside funds of approximately US\$ 200 million into the company to improve its infrastructure, management and overall condition. AES improved the situation by metering the customers, and collections of billed electricity have increased. AES has guaranteed payments for electricity to suppliers while they instituted metering and collection reforms. Later AES sold Telasi to RAO UES. Telasi holds a major advantage since it owns the thermal power plant Mtkvari. Both UDC and Telasi at various times of the year imported electricity to meet demand.

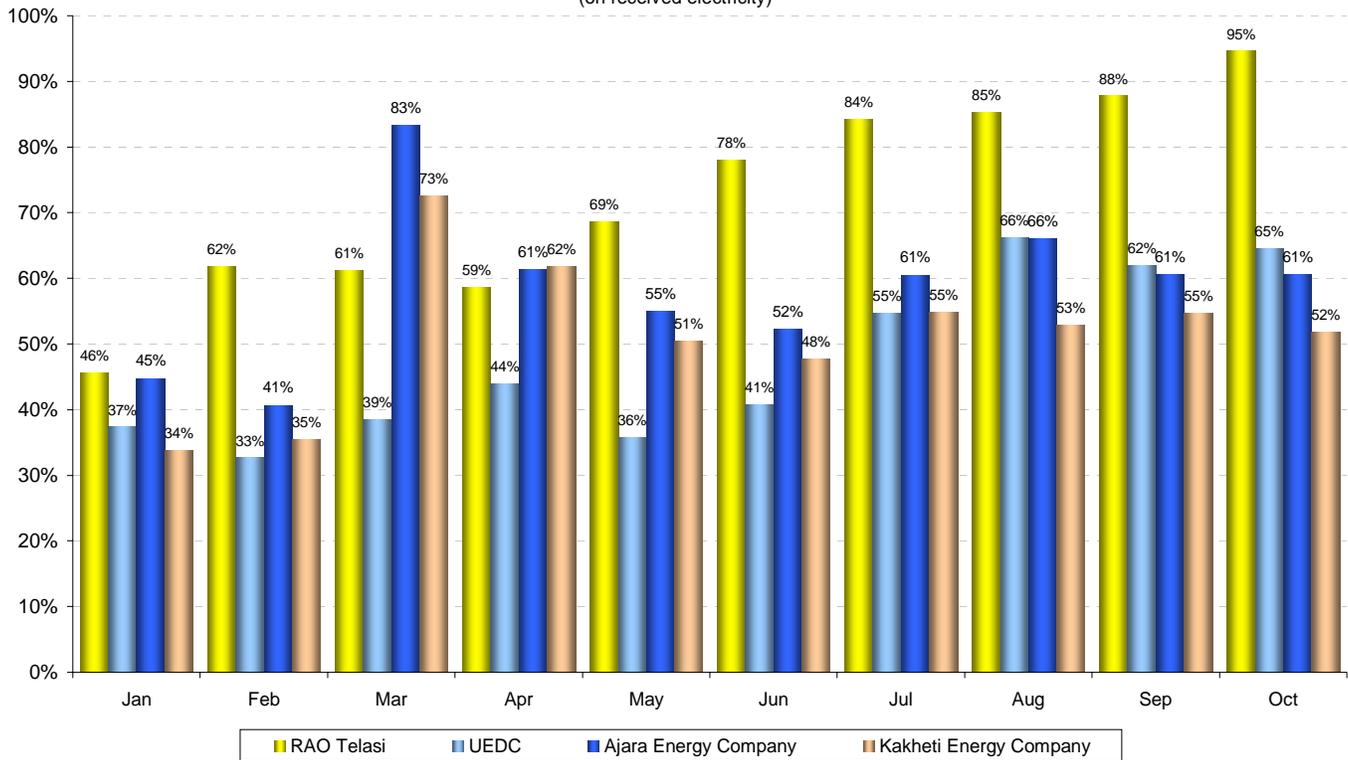
The GoG in the framework of its authority closely cooperates with Telasi, since it is the largest electricity distribution company that serves the Capital. Unlike other regional electricity distribution companies Telasi provides continuous power supply to its paying customers. The company has introduced payment discipline and collections currently reach 95% (calculated against electricity received by Telasi after allowable tech losses).

Current retail collections of four large distribution companies (UEDC, RAO Telasi, Ajara, Kakheti) are given in the charts below. As Direct Customers to the Georgian Wholesale Electricity Market are almost 100% payers of their electricity consumption, and the major share of power consumption in the country falls on four large distribution companies, their performance is of most interest. The top red parts of the columns in the second graph below represent total combined commercial losses (lost/stolen cash) of those distribution companies. Although consumption is much higher in winter and thus commercial losses are also higher than in summer months, still there is a noticeable trend in increasing retail collections and reducing commercial losses by these companies

In accordance with the Ministry of Energy's Action Plan for energy sector rehabilitation, particularly important State efforts and financial resources will be directed to support ongoing activities to assure sustainability of the result. In order to make the energy sector a self-sustainable structure operating in compliance with market principles in the shortest possible time and achieve adequate economic effect, the State strongly seeks to restrict the precedent of free electricity supply, resulting in huge losses.

Efforts undertaken by the Ministry of Energy of Georgia over the last several months to improve the Winter Outlook have been significant and have resulted in a much improved power supply situation compared to what would have otherwise been possible.

Retail Collections of Large Distribution Companies in 2005 (on received electricity)



Retail Collections of Large Distribution Companies in 2005

