

# Energy Investment Projects in Georgia

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Georgia has one of the highest levels of hydro resources per capita in the world. There are more than 26,000 rivers in Georgia. It is estimated that the total hydropower potential of Georgia is 80 terawatt hours (TWh), with the economically viable potential estimated at 27 TWh. Presently, only about 11.1% of the technically feasible potential has been developed.

Georgia's installed power generating capacity is about 3,000 MW, producing 6.8 TWh in 2008. Over 80% of Georgia's electricity is generated by hydro plants and 19.7% by thermal ones.

Georgia is facing a rapidly increasing demand for electricity; therefore, the country is re-evaluating its power generation expansion options. Georgia is in need of significant new winter hydropower generation resources, if it is to eliminate its dependency on foreign sources of fossil

Due to rain and snowmelt patterns, Georgia's summer power production capacity far exceeds winter, during which Georgia has a deficit of over 400 MW that it meets through thermal (natural gas) generation and imports. Despite 2008 summer exports of over 400 MW, Georgia cannot reach its summer hydro production potential because it has no outlet for it. As a result, Georgian authorities estimate that over one terawatt hour (one billion kilowatt hours) – at a local retail value of approximately \$85,000,000 – is lost in spilled water each year. New transmission lines are being constructed that will interconnect Azerbaijan, Georgia and Turkey by 2012, allowing Georgia to export these summer surpluses, generating revenues almost twice what the local market would pay.

Small and medium size hydropower plants ("HPPs") based on run-of-river diversion designs can quickly tap Georgia's tremendous hydropower potential, offset winter imports of electricity and gas, contribute greatly to Georgia's energy independence, and offset the adverse impacts of global climate change.

Hydropower plants in the range of 10-70 MW will be able to take advantage of new transmission lines, as they can be built in as few as 24-36 months due to their size and they are less environmentally problematic than larger projects, especially dams that inundate large areas and can take seven (7) or more years to design and construct. Small to medium HPPs have

the potential to provide 1,000 MW or more of hydropower for Georgia, and constitute the principal near-term investment objective of the country. Due largely to the global financial situation, investors are not interested in huge, capital-intensive projects, but they have expressed interest in projects in the USD 20 to 70 million range.

The electricity sector in Georgia is mostly privately owned and nearly fully liberalized. Only transmission, dispatch, and the largest hydropower plant and thermal power plant (TPP) are owned by the state, whereas all the other generation and distribution assets are privately owned. Bundled ownership of generation and distribution assets is allowed. The Ministry of Energy and Natural Resources of Georgia ("Ministry of Energy") expects that the electricity sector will be fully liberalized by 2017-2020.

Wholesale generation tariffs are fully liberalized and any generation company is permitted to sell electricity to any wholesale customer at a directly negotiated tariff. Retail tariffs are regulated by the Georgian National Electricity and Water Regulatory Commission (GNEWRC). However, small HPPs (less than 13 MW capacity) can sell electricity at unregulated tariffs to any wholesale or retail customer.

The government of Georgia has created the most investor-friendly circumstances by offering greenfield projects based on a Build-Own-Operate (BOO) prin-

principle, without involvement in any of the new projects in equity shares or with the condition to take over the plant afterward. By signing a memorandum of understanding with the government of Georgia, an investor gains its full support at all the stages of the investment.

All new constructions have been totally deregulated and there is no tariff set for the newly built HPPs. In general, an investor is free to choose the market and the price to sell the power generated at the new plant. Export of electricity is totally deregulated. No license is required to export the electricity and there is no tariff set. The investor needs just to find a buyer and conclude a direct power purchase agreement (PPA).

At the investor's request, the government of Georgia can offer a guaranteed purchase of electricity, but only for the three months of the winter period. The guaranteed purchase price will be negotiated between the investor, the commercial operator of the electricity system and the government of Georgia, which will guarantee to purchase electricity for the next ten (10) years (three (3) months of each year).

A list of prospective greenfield HPP sites is published by the Ministry of Energy on its website ([www.minenergy.gov.ge](http://www.minenergy.gov.ge)). Investors interested in investing in greenfield HPPs from the list are required to submit a standard application form to the Ministry of Energy, available on its website. Once an application is received for a particular greenfield site, the site will be marked as "Under Offer" on the website, and will remain available for other investors to submit competing applications for a thirty (30) day period. If no competing application is submitted during this period, the initial prospective investor is automatically declared the winner upon submitting a bank guarantee in the amount of USD 170,000 per MW of prospective capacity, and is invited to sign a standard memorandum of understanding with the Ministry of Energy, as well as other standard documents. If more than one prospective investors applies for the same greenfield site, the winner will be declared in accordance with a transparent formula assigning equal weight to the size of the bank guarantee (per MW of prospective capacity) and declared time for completion of the project.

The winner will be able to purchase the land of the greenfield HPP site at a nominal price following the execution of a land sale and purchase agreement with the Ministry of Economy and Sustainable Development of Georgia.

The government of Georgia anticipates the construction (including by the private sector) of additional high voltage transmission lines as more generation capacity is built in the country, with a view to turning renewable energy into a significant export industry and a significant contributor to improvement of the current account balance.

In the following part of the article, we will briefly overview the main players in the energy sector in Georgia; GNEWRC and the Ministry of Energy.

GNEWRC was established in 1996. It has five (5) commissioners and is located in Kutaisi, the second largest city in Georgia. GNEWRC is an independent body which is not accountable to any other state authority. GNEWRC regulates the energy, natural gas, and water supply sectors.

GNEWRC issues licenses regarding the following activities:

- 1) generation of electricity (currently forty-six (46) licenses have been issued);
- 2) transmission of electricity (currently two (2) licenses have been issued);
- 3) dispatching of the electricity network (currently one (1) license has been issued); and
- 4) distribution of electricity (currently three (3) licenses have been issued).

The license for generation of electricity is mandatory for all power generation plants (except for small power plants the project capacity of which does not exceed 13 MW). The generation license shall be obtained prior to the start of operation of the power plant. The electricity generation license is issued for an indefinite period, without any time limitation (as are the other licenses issued by GNEWRC). However, the license may be revoked in case of violation of license terms, after a certain procedure: the holder of the license is fined three times and only after this may the license be revoked. Georgian legislation does not recognize the suspension of a license: the license holder either has the license or does not have it. This means that after the issuance of the license it can only be revoked, but not suspended. The holder of the electricity generation license does not have the right to stop, postpone or limit the licensed activity (i.e. generation of electricity), unless this happens due to technical issues, safety measures, or nonpayment by customers.

Tariffs for power generation plants are calculated by GNEWRC on the basis of the information and documents submitted by applicants. GNEWRC calculates the tariffs in order to allow the applicant to cover its expenses, economically reasonable costs, money spent on repair work, bank loan interest, and certain other expenses. The tariff usually includes a reasonable margin of profit. This margin is determined by GNEWRC on case-by-case basis and there is no generally accepted rate.

According to Georgian legislation, export/import of electricity does not require a license or any kind of permit from GNEWRC; however, certain activities of exporters/importers still depend on GNEWRC and they have to submit reports regarding their actual or planned activity to GNEWRC.

Any person/company can export/import electricity. There is no tariff regulation for export/import. Agreements regarding the export/import of electricity require mandatory advance registration with the Dispatching Company of Georgia ("Dispatching Company"). In order to ensure stability of the network, the Dispatching Company has the right to reserve a certain amount of capacity of the network, meaning that the Dispatching Company may not be able to register and provide service to all export/import agreements.

The Ministry of Energy regulates state policy in the energy sector, forms the strategy of its development, and drafts major rules/regulations. We indicated above that the generation of electricity requires a generation license which is issued by GNEWRC. At the same time, Georgian legislation provides for so-called deregulation, which is a special authorization of the Minister of Energy for power plants:

- 1) To operate without the regulation of their tariffs by GNEWRC; or
- 2) To operate without a license for generation of electricity and without the regulation of their tariffs by GNEWRC (this condition applies only to small-capacity power plants having 13 MW or lower project capacity).

Small capacity power plants (of 13 MW and lower project capacity) are deregulated on the basis of Order of the Minister of Energy no. 30 dated April 25, 2007. Moreover, all power generation plants constructed after August 1, 2008 are also deregulated (regardless of their project capacity) by the direct indication of the Georgian Law on Electricity and Natu-

ral Gas (section 49, prima 3).

Apart from deregulation, Georgian legislation provides for so-called partial deregulation, which is again a special authorization of the Minister of Energy. The decision regarding partial deregulation is made by the Minister of Energy and a partially deregulated power plant is allowed:

- 1) To operate only with partial regulation of its tariff by GNEWRC (which establishes only the maximum tariff, i.e. a "cap of the tariff"); or
- 2) To operate without a license for generation of electricity and with only partial regulation of the tariff by GNEWRC (which establishes only the maximum tariff, i.e. a "cap of the tariff") (this condition applies only to small-capacity power plants having 13 MW or lower project capacity).

Construction of hydro power plants requires a construction permit. Its issuance is regulated by the Rules and Terms of Issuance of Construction Permits, approved by Resolution of the Government of Georgia no. 57, dated March 29, 2009 ("Resolution"). According to this Resolution, all constructions are classified into five (5) different classes, from class I to V. Hydropower plants having project capacity of 1-10 MW belong to class III (middle risk), 10-50 MW to class IV (high risk), and higher than 50 MW to class V (very high risk).

The Resolution contains quite complex rules regarding the issuance of construction permits for hydro-power plants. In general, permits for III-IV classes are issued by the local authorities (city municipalities). For class V, the permit shall be issued by the Ministry of Economy and Sustainable Development of Georgia. Local authorities may also be involved in the issuance of construction permits.

Electricity distribution and transmission lines in Georgia are in the possession of different private owners; therefore, a new power plant will have to contact the owner of such a network. Fees for the connection and use of the network are regulated by GNEWRC.

In general, sale of all electricity imported or produced locally shall be made through direct agreements between power generation plants/importers and customers or through a special company: "Commercial Operator of the Electricity System" ("ESCO"). ESCO is a limited liability company owned by the state of Georgia. ESCO's main purpose is to serve as a wholesale market of electricity. Both locally produced

and imported electricity may be sold and purchased through ESCO. It participates in the reservation of the system capacity for emergencies and keeps a database of all transactions regarding sale and purchase of electricity. If parties cannot perform a direct agreement for supply of electricity, ESCO may cover the difference through the reserved capacity.

In order to promote construction of new power plants in Georgia, ESCO may sign an agreement regarding purchase of electricity to be generated by a new power plant. The terms of such an advance agreement shall be agreed between the government of Georgia, ESCO, and the new electricity generation plant. The tariff for such electricity may be determined only by the parties if the power generation

plant is deregulated (i.e. its project capacity is lower than 13 MW).

All direct agreements regarding the sale and purchase of electricity shall be registered with the dispatching company. Such agreements come into force only from the moment of their registration. The dispatching company has to register the agreement unless the agreement violates the requirements of Georgian legislation. Direct agreements, in addition to general provisions, shall contain annual, monthly, daily, or hourly schedules of the supply of electricity, points of receipt and supply of electricity, and the term of the direct agreement. The term of the direct agreement shall be no less than one (1) month and no more than one (1) year.