



GEORGIA'S POWER SECTOR: ENERGY CROSSROADS IN UNCERTAIN TRANSITION

Georgia's geo-strategic location as an east-west energy corridor is frequently cited by western policymakers as justification for large-scale financial investment, technical and economic aid, and political support for the incumbent government. According to one estimate, Georgia received nearly 3 billion USD in combined international assistance, private investment, and gas and electricity loans between 1995 and 2003.¹ The EU/Georgia European Neighborhood Policy (ENP) Action Plan identifies "Enhancing cooperation in the fields of energy, transport and environment contributing to energy security and supply diversification needs for the EU" as a fundamental partnership goal (p. 2).²

Despite its location on a lucrative energy corridor, however, Georgia has struggled to secure a basic energy supply for its citizens since it declared independence from the USSR some eighteen years ago. Civil war and economic crisis in the early years of independence destroyed many state-owned energy assets, while the resources that remained were severely damaged or abandoned in disrepair.

In the recent years, the urgency of Georgia's energy supply crisis peaked in the last year as a result of increased political tensions with Russia—Georgia's primary energy supplier. On 1 May 2007 Georgia's independent National Energy Regulatory Commission (GNERC) hiked consumer gas tariffs in response to the more than doubling of the price of Russian gas at the beginning of the year. This year alone Tbilisi consumers have faced electricity cost increases of up to five cents (approximately eight Georgian *tetri*) per kilowatt hour. According to one account, some rural residents have seen electricity costs more than double.³ The Ministry of Energy estimates average annual per capita electricity consumption at 1,900 kilowatt hours.

The following report addresses the Georgian government's handling of the ongoing energy crisis. Taking the State Energy Policy as the government's central strategy document, the report assesses the goals set forth therein and the extent to which these goals have been met to date.⁴ Three principle objectives are set forth in the document: diversification of supply sources (to include harnessing of the full potential of domestic hydropower resources), liberalization and de-regulation of the market (to attract competitive private investment), and maximization of Georgia's benefits as an energy transit corridor.

ENERGY SECURITY PART 1: DIVERSIFICATION OF SUPPLY

Local and international experts agree that a secure energy sector derives from two essential components: a diversified supply and an effective system of internal regulation. First, an appropriate balance of imported and domestically-generated energy sources can help to reduce Georgia's vulnerability to political manipulation by foreign energy suppliers. Second, an effective, independent regulatory framework can encourage investment and facilitate the development of a competitive energy market.

The Georgian government, which came to power after the November 2003 revolution, has embraced the goal of maximum energy independence. Maximization of domestic generation potential, development of

¹ Closson, Stacy Renee. 2007. *State Weakness in Perspective: Trans-territorial Energy Networks in Georgia, 1993-2003*. Unpublished thesis submitted for doctoral degree in International Relations, London School of Economics. p. 16.

² Georgia's ENP AP is available on the State Minister's office website at: www.eu-integration.gov.ge.

³ <http://www.kvali.com/kvali/index.asp?obiectivi=show&n=172>. Accessed 2 July 2007.

⁴ The State Energy Policy is available in English and Georgian on the Ministry of Energy's website at: www.mineenergy.gov.ge. Last accessed 11 June 2007.



reserve capacity, and improvements in existing transmission infrastructure are pillars of the independence strategy.

Energy independence in this case is not the same as energy system isolation. Obviously, no country can be entirely self-sufficient when it comes to securing its own energy supply. Thus, for example, planned improvements in electricity transmission infrastructure will actually facilitate Georgia's reconnection with regional power networks (including direct links to Russian, Armenian, Azeri, and Turkish grids.) Ensuring continuous regional connection for electricity import, export, and transit is an important means of diversification and security in case of supply or transmission failure.

The actions the Georgian government has started or intends to implement in the future in order to improve its electricity transmission infrastructure and its energy system in general are as follows: constructing an underground gas storage facility, harnessing Georgia's hydropower potential by rehabilitating existing assets and constructing new hydropower stations, and developing domestic oil and gas fields.

Georgia's first underground gas storage facility

Experts have remarked that the absence of a natural gas storage facility in Georgia is a major risk to the country's energy supply security. Currently the Russian monopolist Gazprom is able to cripple Georgia's gas supply by cutting it off not only from Russia, but from within Georgia's own territory as well. A dedicated gas storage facility would maintain a supply of Azeri gas from the South Caucasus Pipeline⁵(SCP) and help to reduce Georgia's dependence on Russian gas. The gas storage facility will not be dedicated to SCP gas only, but it will store any gas received from diverse sources.

While local and international energy experts have been recommending construction of an underground gas storage facility for several years now, it is only recently that the Georgian government has acknowledged such a facility as a fundamental energy security priority. According to the Ministry of Energy, gas storage facility construction could not be started earlier for technical and financial reasons. The government needed to thoroughly analyze the possibility and consider diversification of the country's gas supply before considering gas storage.

Several gas storage facility feasibility studies were conducted in the past, most recently in 2003. In 2006, when the government launched discussions on the planned facility, the Millennium Challenge Georgia Fund (MCG) offered 5 million USD to finance an updated study within the framework of its support for energy sector development programming. Then, early in 2007, the Kuwait Fund for Arab Economic Development⁶ expressed an interest in financing the feasibility study. In the end, according to the Minister of Energy, the government chose to use the state budget funds for the gas storage feasibility study. It is expected to announce a tender for conducting this study in October of 2007. Government representatives are hopeful that the Kuwait Fund will invest in construction of the storage facility after the feasibility study is completed.

How will the gas storage facility function in practice? Georgia lies along the Shah-Deniz transit route and currently purchases a limited volume of Shah-Deniz supplemental gas⁷ from that which is transported along this pipeline. While Georgia currently pays 235 USD per thousand cubic meters for Gazprom gas, it pays just 120 USD for the same amount of gas Azeri-Chirag-Guneshli (ACG) oil fields. Indeed, Georgia pays more

⁵ Also known as Baku-Tbilisi-Erzurum pipeline

⁶ The Kuwait Fund for Arab Economic Development, a donor organization, currently has two loans out to Georgia. The loans are earmarked for highway rehabilitation projects and total 34.5 million USD. http://www.caucas.com/home_eng/depeches.php?idp=1537&PHPSESSID=1dd54a444570de98a09a8ad2b67c9e13. Accessed 5 July 2007] Also within the power sector, the Kuwait Fund plans to invest in the construction of three cascading hydropower stations on western Georgia's Rioni River.

⁷ Supplemental gas from Shah-Deniz gas field costs 55 USD per cubic meter. Georgia purchased 250 million cubic meters of it in 2007, as set forth in SCP Host Government Agreement.



for Gazprom gas than any other post-Soviet republic (Armenia currently pays 110 USD; Ukraine pays 150 USD). EU member states pay slightly more than Georgia, on average between 240 and 280 USD.⁸

The current supply strain Shah-Deniz faces has prevented Georgia from increasing the amount of Caspian gas it purchases and reducing the volume of Russian gas it currently consumes. Plans to increase the output capacity from Shah-Deniz are currently underway, however. After Shah-Deniz gas begins to be transported westward in greater volumes, Georgia will receive more of this gas as payment in kind for its transit services. The Georgian Oil and Gas Corporation (GOGC) explains that according to the current gas sales agreement, Georgia is entitled to receive option gas (in lieu of tariff), maximum of 5% of the volume of gas transported from Shah-Deniz through Georgia to Turkey in the previous year, plus Georgia has the opportunity to purchase supplemental gas, maximum of 0.5 billion cubic meters per year at a prearranged low price, after the SCP pipeline throughput is increased and tariffs stabilized (maximum of 0.5 billion will be available only from year 6 through 20 of SCP operations. This year Georgia is entitled to 250 million cubic meters of supplemental gas).

The planned facility will store gas acquired as payment in kind for Georgia's energy host country status. The facility will be filled during the summer months, when gas is in lower demand. The experts suggest that for some time a combination of Shah-Deniz and Russian gas will fill Georgia's needs, and propose that in time Russian gas could be eliminated from the equation altogether. However, Minister of Energy Alexander Khetaguri asserts that Georgia's goal is to diversify its energy resources and it does not want to be dependent either on Azerbaijani, Russian, or any other country's gas solely. The government will seek the best options for the gas supply regardless of the supplier's nationality and will continue to put substantial efforts into ensuring that Georgia is not dependent upon one supplier.

Returning to the gas storage facility, according to independent expert Giorgi Vashakmadze, a gas storage facility would make it possible for Georgia to reserve much less of its hydropower resources for emergency needs. He estimates that the planned facility could be constructed in three years.

Harnessing Georgia's hydropower potential

The second major aspect of Georgia's energy diversification strategy is to maximize its own potential for generating hydropower. According to the State Energy Policy, Georgia's foremost long-term energy objective is to meet its own electricity demand with domestically-generated hydropower alone. This is not to say that its network will be closed to imports; as stated above, development of transmission infrastructure and synchronization with regional networks will help to ensure Georgia's capacity to import (export, transport, etc.) electricity at any given moment should the need arise.

Experts claim that Georgia's many rivers can potentially supply not only domestic needs, but generate power for export at five times the current volume. That is, at present Georgia is exporting hydropower at just twenty percent of its potential.⁹ Much more power is being generated than Georgia currently has the capacity to store. (A little-known fact is that the Enguri hydro plant in southeastern Abkhazia, Georgia's primary electricity generator, is home to the tallest arch dam in the world.)

The government's most recent energy tender, and the largest in scale, that aimed to foster the rehabilitation of the existing assets, involved *the sale of six hydropower stations and three distribution companies to a Czech company* called Energo-Pro in 2006. (The largest of the three privatized distributors, United Distribution Company (UDC), supplies some 70 percent of Georgia's electricity.) While the tender was officially closed in June 2006, the terms of the sale changed significantly before a contract was finally signed in February 2007. According to the terms of the June agreement, Energo-Pro was to purchase the hydro stations and

⁸ Figures provided by GOGC.

⁹ Georgia started exporting only one year ago.



distribution companies for 312 million USD; according to the contract signed in February, however, it would pay just 132 million USD. The government accounted for the 180 million USD difference by explaining that in the contract Energo-Pro also committed to invest an additional 285 million USD in infrastructure and asset rehabilitation. According to Marika Valishvili, in addition to technical rehabilitation of the hydropower stations, Energo-Pro assumed responsibility for supplying the Georgian electricity network with an additional 100 MW (in the form of one or more new hydropower stations). These conditions may help to account for the 285 million USD investment the government expects from Energo-Pro. While the total amount committed to by Energo-Pro exceeds its winning bid, the amount it is paying the government in exchange for existing assets is still less than that to which it committed last June.¹⁰ The Minister of Energy stressed that if the Czech company had paid 312 million USD to the Georgian government, as agreed earlier, the government would re-invest this money back into the energy sector rehabilitation. Thus, instead of having Energy-Pro pay the full amount to the state budget and then relocate it back to the sector, Energy-Pro will do this directly.

In addition to this, in general, experts have expressed concerns over the lack of information available about Energo-Pro,¹¹ including about its experience with distribution. Given that UDC succeeded in bringing collection rates up from 12 to 90 percent between 2003 and December 2006, experts worry that the transfer of distribution functions to the relatively unknown Energo-Pro may turn out to be a step backwards. The Ministry of Energy, however, has no doubts about the experience and the professionalism of Energy-Pro and is not worried about its potential slip-ups. Besides, according to the Ministry, UDC used to be administered by PA Consulting with financial assistance from USAID, a system of management that could not be maintained forever.

According to Giorgi Vashakmadze, the government's bundling of generation and distribution functions in the tender package is also at odds with current EU trends. While the bundling of energy management and generation and distribution functions is currently illegal in the European Union (which is gradually unbundling), the Georgian government decided to privatize both as a package. Given the government's commitment to increasing political and economic integration with Europe in the long term, Vashakmadze finds this decision somewhat surprising. Indeed, the ENP Action Plan establishes as an explicit goal Georgia's gradual legal and regulatory convergence with the principles of the EU internal electricity and gas markets (p. 26). The Minister of Energy, however, stated that the EU requirement is to maintain separate accounting for generation and distribution, not to have them function separately, and that Energy-Pro will fulfill this requirement.

In addition to rehabilitating existing assets, the government plans to increase the overall capacity for domestic electricity generation by *constructing new hydropower stations*. One project, mentioned above as part of the government's agreement with Energo-Pro, will supply Georgia with an additional 100 MW per year. A second major project is the planned hydro station in Khudoni in western Georgia. According to Marika Valishvili, the Khudoni plant will generate 650 MW for distribution within the Georgian power network. The World Bank is currently preparing a full-fledged (technical, economic, and financial) feasibility study and an assessment of potential environmental and social impact for the planned Khudoni power station. The government expects to receive the World Bank's report on the study within the next year and a half.¹² According to independent expert Stacy Closson, Georgia's Ministry of Energy is also finalizing agreements with Chinese, European, Turkish, and Kuwaiti contractors for the construction of some 30 new hydropower

¹⁰ Corso, Molly. 12 February 2007. "Georgia: opposition leaders complain about lack of transparency in privatization." From EurasiaNet.org: <http://www.eurasianet.org/departments/insight/articles/eav021207b.shtml>. Accessed 27 July 2007.

¹¹ Members of the political opposition suspect that the Czech company is in fact backed by Russian money. In response to these allegations Levan Ramishvili of Liberty Institute highlighted that the Czech prime minister was in Georgia when the agreement was being signed between the Czech company and the Georgian government and that he attended the signing ceremony.

¹² This document will include all the technical details that will allow the government to start constructing the power station shortly after the completion of the study.



stations in the next three to four years.¹³ According to the Minister of Energy, Israeli, Indian, and US investors have expressed their interest in Georgia's hydropower system as well, attesting to the current investment boom in the sector.

The government has also deregulated construction of small hydropower stations. In the government's assessment, this has boosted construction of such stations, as currently a number of construction works are underway.

Developing domestic oil and gas fields

While current energy diversification efforts focus on the development of Georgia's hydropower generation potential, the government has also expressed an interest in the development of domestic oil and gas fields. According to a Ministry of Energy representative, the GOGC is currently exploring the potential of Georgia's oil and gas reserves.¹⁴

Georgia is also considering utilizing its wind resources for electricity generating purposes,¹⁵ as well as constructing a nuclear power station. The latter is still being discussed.

ENERGY SECURITY PART II: ATTRACTING LEGITIMATE, SUSTAINABLE INVESTMENT

Given that sector-wide privatization is a fundamental component of the government's energy self-reliance strategy, an effective regulatory mechanism is necessary to guide developing energy market forces. For nearly a decade beginning in the mid-1990s, USAID and the World Bank offered consistent support for the strengthening of Georgia's energy regulatory mechanisms. The post-revolution government, however, asserted that regulatory institutions yielded more potential risk for corruption than benefit for market development, and thus decided to change this pattern of support for regulatory development, taking a strict laissez-faire stance towards free-market energy industry development.

While Georgia's independent regulatory body, the National Energy Regulatory Commission (GNERC), has continued to exist, it lacks the real power, resources, and transparency necessary to ensure a healthy climate for market-based sectoral growth. Notably, under the subheading on energy cooperation (p. 26), Georgia's ENP Action Plan stipulates that the GNERC is to be "further developed in line with the principles of EU Electricity and Gas Directives 2003/54 and 2003/55," a set of documents which aim to facilitate increased sectoral efficiency, service standards and competition. At present, however, it seems as though GNERC's ability to fulfill regulatory functions is considerably limited. According to the Georgian government's strategy, the Ministry of Energy alone will regulate the industry, albeit minimally. The Deputy Minister interviewed for this report denied the Ministry's responsibility for regulation. In his own words, Ministry personnel are engineers without professional training or interest in policymaking, let alone in business affairs. The Minister, on the other hand, said that the goal of the Ministry is to eventually minimize the Ministry's role in the energy sector regulation and to set up a system in which the necessary regulation is carried out by GNERC.

Some experts are still skeptical about Georgia's preparedness for deregulation. Until a strong market is in place, they maintain, attempts to liberalize the industry are unlikely to meet with real success. Critics of the government's approach argue that a young, unregulated market will actually tend toward "natural monopoly,"

¹³ Full citation in footnote 1, p. 249.

¹⁴ Georgia currently produces a limited amount of oil, all of which is exported. It imports gasoline and other oil products from Azerbaijan, Russia, and Europe via rail and the Black Sea.

¹⁵ According to the Ministry of Energy, there are at least three locations in Georgia where wind power could be used for power production.



or the sustaining of barriers to truly open competition. The government and its supporters claim that the critics' fears are groundless. In their opinion, the government's task should be putting in place a regulatory framework that will guarantee equal, non-discriminatory operating conditions for all players in the field (not to be the owner and the administrator of the energy sphere) and then placing an independent body, such as GNERC, in charge of overseeing that the set regulatory framework is adhered to. The primary role of GNERC will be to prevent monopolization and to redress its risks, if and when they arise. The Minister asserts that the Ministry has a detailed action plan for deregulation and that it will be carried out efficiently.

ENERGY SECURITY PART III: MAXIMIZING THE BENEFITS OF GEO-STRATEGIC LOCATION

A third component of the government's energy strategy is maximization of the benefits of Georgia's energy transit corridor status. The commitment of an international consortium led by BP to construct the BTC oil pipeline, and parallel SCP gas pipeline, at the turn of the 21st century was a landmark event in independent Georgia's history.

What benefits has the SCP gas pipeline project yielded for Georgian consumers? According to Deputy Energy Minister Archil Nikolaishvili, Georgia currently receives 250 million cubic meters of supplemental gas annually from the SCP pipeline, which can increase up to 500 million cubic meters of supplemental gas from the sixth year of the pipeline operation.

Still, Georgia's dependence on Russia for natural gas is perhaps a greater threat to its energy supply security than its dependence on Caspian gas. As described above, owing to its host country status, Georgia is currently able to purchase a supplemental volume of SCP gas at a prearranged fixed price. The government hopes to ultimately meet all of its gas needs with a combination of in-kind and purchased supplies from SCP.

For now, the North-South Pipeline (NSP), which transports gas from the Russian to the Armenian and Azeri borders, remains Georgia's principle supply source. According to a representative of the MCG, the NSP currently supplies gas to 100 percent of Georgia's population and many of its industries, including the thermal plants that generate one-third of the country's electricity. Georgia also collects a transit fee from Armenia as a host country for Russia gas. Maintenance of the NSP is thus critical to ensuring not only the continued supply of gas and electricity to Georgia's population, but the continued revenues from pipeline operation. Accordingly, MCG is investing 49.5 million USD in rehabilitation of the NSP as part of its Energy Infrastructure Rehabilitation program.¹⁶ The NSP was constructed in the 1960s and last rehabilitated in the 1980s. The first phase of the rehabilitation program is expected to conclude in August or September of this year; the second phase will begin in the spring of 2008.

Other planned energy transport projects to involve Georgia in a host country capacity include the "Nabucco" and the Georgia-Ukraine-European Union (GUEU) pipelines. The Nabucco pipeline, designed to reduce international dependency on gas imported from Russia, will carry gas from Turkey (via the SCP pipeline) to Austria. Nabucco construction is expected to begin in 2008 and conclude in 2011. The GUEU pipeline, still in a preliminary planning stage, would transport Caspian gas under the Black Sea from Georgia to Ukraine, Eastern Europe, and eventually the EU. Like the Nabucco project, the GUEU is designed to bypass Russia entirely and to reduce large-scale dependence on Russian energy imports.

¹⁶ BP and EBRD contributed financial and technical support for the NSP rehabilitation feasibility study.



CONCLUSION AND RECOMMENDATIONS

The government's actions in the energy sector and international donor and private investment in this industry will prove most effective when it enjoys the informed consent and support of the Georgian citizenry. As in other areas, in order for the sector to develop, a high level of trust must be established and maintained between the Georgian state and citizens pertaining to questions of energy supply, distribution, and consumer cost, existing problems in the energy sector, and the government's plans to resolve them. At the most basic level, the state must assume accountability to citizens for the rising cost of energy resources.

To begin, systematization and increased transparency of privatization procedures could help to encourage competitive business practices, and to encourage public confidence in the future security of Georgia's energy supply. Increased communication and cooperation between the Ministry of Economic Development (as privatization administrator) and the Ministry of Energy (as technical advisor) could help to improve energy-specific privatization and business practices and to establish the legitimacy of potential energy investors. As Levan Ramishvili suggests, the two ministries' top-level officials communicate quite effectively, but the problem lays in a lack of communication and cooperation at lower levels.

The final section of the government's State Energy Policy pertains to bilateral and regional cooperation, a key strategy issue which to date has been given rather little attention. Georgia's invitation to join the European Energy Community (EEC), for example, is rarely discussed in public. In 2006 the multilateral EEC invited Georgia and Ukraine to apply for membership. Ukraine quickly moved forward with application procedures, whereas Georgia just submitted an official letter of interest in July of this year. While the government awaits the EEC's response, it would do well to begin advising the public on the benefits and responsibilities of EEC membership. Just as membership in the ENP and recognition as a NATO aspirant country have provided an incentive for Georgian policymakers to move forward with reform planning and implementation, EEC membership can provide support for the development and increased security of Georgia's energy sector.

Increased public involvement in energy policy planning can begin immediately with input into the use of the remaining 5 million USD the MCG has targeted for Georgian energy sector development. According to an MCG representative, the Fund is currently working with the government to identify remaining energy sector priorities. Thus far discussions have focused on the exploration of alternative energy sources (wind, thermal, solar, etc.), but the MCG underscores that it is ultimately up to the government to decide how the money will be spent.

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