







# **ENERGY GOVERNANCE IN GEORGIA**

**Report on Compliance with the Energy Community Acquis**

**ENERGY COMMUNITY SECRETARIAT**

**JULY 2017**

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Layout: Medium d.o.o.  
Pictures: Ministry of Energy of Georgia, Energy Community photo contest participants, [www.fotolia.com](http://www.fotolia.com), [www.istockphoto.com](http://www.istockphoto.com)

# Energy Community *acquis*



## Acquis on Electricity

Title of Document	Implementation Deadline for Georgia
Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC	31 Dec 2018 <sup>1</sup>
Regulation (EC) 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) 1228/2003	31 Dec 2018
Directive 2005/89/EC concerning measures to safeguard security of electricity supply and infrastructure investment	31 Dec 2019
Regulation (EU) 543/2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) 714/2009	1 Jul 2017

- 1 Georgia must ensure that the eligible customers within the meaning of Directives 2009/72/EC and 2009/73/EC are:
- From 31 December 2018, all non-household customers; and
  - From 31 December 2019, all customers.



## Acquis on Gas

Title of Document	Implementation Deadline for Georgia
Directive 2009/73/EC concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC	31 Dec 2020 <sup>1,2</sup>
Regulation (EC) 715/2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) 1775/2005	31 Dec 2020 <sup>2</sup>
Directive 2004/67/EC concerning measures to safeguard security of natural gas supply	31 Dec 2020

- 1 Georgia must ensure that the eligible customers within the meaning of Directives 2009/72/EC and 2009/73/EC are:
- From 31 December 2018, all non-household customers; and
  - From 31 December 2019, all customers.

- 2 The South Caucasus Pipeline and the North South Gas Pipeline are exempted from the implementation of Directive 2009/73/EC and Regulation (EC) No 715/2009 until 31 August 2026, the date of expiration of the Energy Community Treaty.



## Acquis on Environment

Title of Document	Implementation Deadline for Georgia
Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended by Directives 97/11/EC and 2003/35/EC <sup>3</sup>	1 Sep 2021
Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels <sup>4</sup>	1 Sep 2021
Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants	31 Dec 2018
Chapter III, Annex V and Article 72(3)-(4) of Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) - for new plants	1 Sep 2018
Chapter III, Annex V and Article 72(3)-(4) of Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) - for existing plants	1 Sep 2026
Directive 79/409/EC, Article 4(2), on the conservation of wild birds	1 Sep 2019

- 3 Directive 85/337/EEC was repealed by Decision 2016/12/MC-EnC adapting and implementing Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment. However, as the Accession Protocol of Georgia to the Energy Community Treaty refers to Directive 85/337/EEC and sets deadlines thereto, this report uses this directive as a reference.

- 4 Directive 1999/32/EC was repealed by Decision 2016/15/MC-EnC adapting and implementing Directive (EU) 2016/802 relating to a reduction in the sulphur content of certain liquid fuels. However, as the Accession Protocol of Georgia to the Energy Community Treaty refers to Directive 1999/32/EC and sets deadlines thereto, this report uses this directive as a reference.



## Acquis on Renewable Energy

Title of Document	Implementation Deadline for Georgia
Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC	31 Dec 2018



## Acquis on Energy Efficiency

Title of Document	Implementation Deadline for Georgia
Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC.	31 Dec 2018
Directive 2010/30/EU on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (recast)	31 Dec 2018
Directive 2010/31/EU on the energy performance of buildings (recast)	30 Jun 2019



## Acquis on Oil

Title of Document	Implementation Deadline for Georgia
Directive 2009/119/EC imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products	1 Jan 2023



## Acquis on Infrastructure

Title of Document	Implementation Deadline for Georgia
Regulation (EU) 347/2013 on guidelines for trans-European energy infrastructure and repealing Decision 1364/2006/EC and amending Regulations (EC) 713/2009, (EC) 714/2009 and (EC) 715/2009	1 Jul 2017



## Acquis on Statistics

Title of Document	Implementation Deadline for Georgia
Directive 2008/92/EC concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users (recast)	31 Dec 2017
Regulation (EC) 1099/2008 on energy statistics	31 Dec 2017



## Acquis on Competition

The *acquis* on competition rests on three pillars:

1. The prohibition of anticompetitive agreements established by Article 101 of the Treaty on the Functioning of the European Union (TFEU);
2. The prohibition of abuse of a dominant position provided for in Article 102 of the TFEU; and
3. The prohibition of State aid granted in violation of Article 107 of the TFEU.

With reference to Article 106 of the TFEU, public undertakings, including undertakings providing services of general economic interest, must also comply with the above rules.

The Contracting Parties are under an obligation to introduce, to the extent the trade of network energy between the Contracting Parties may be affected, rules prohibiting cartels (agreements between undertakings, decisions by associations of undertakings and concerted practices), abuses of a dominant position, and rules prohibiting State aid. Georgia is under the same obligation from 1 July 2017. The respective prohibitions are to be applied to public undertakings and undertakings to which special or exclusive rights have been granted by virtue of Article 19 of the Treaty.





Following the ratification of the accession agreement by the Parliament of Georgia on 21 April 2017 and the country's subsequent accession to the Energy Community on 1 July 2017, Georgia is now on a firm path towards closer ties with the EU internal energy market and those of the Energy Community Contracting Parties. There are many benefits to be gained by the citizens of Georgia as a result of the process of aligning the country's energy sector regulation with EU laws and principles. Just to name a few: greater transparency of energy governance will result in a conducive investment climate, while the creation of an environmentally responsible, diversified and competitive energy sector will facilitate a sustainable future for this and subsequent generations. Moreover, membership in the Energy Community has a wider political implication. It clearly shows the country's pro-European orientation. By being a member of this wider community, the energy security questions are also redefined.

However, just as it brought opportunities, its membership also brought new challenges. The accession of Georgia to the Energy Community is equally a game changer for the Energy Community as an international organisation. With Georgia's accession, the Energy Community expands to ten Parties: the European Union, six Western Balkan and three Eastern European / Black Sea Region Contracting Parties. Georgia's membership brings new dynamics to energy cross-border cooperation in the whole Southern Caucasus.

Despite Georgia being the first Contracting Party not to border the EU internal market or any other Energy Community Party, many of the challenges are shared between the "old members" and the new kid on the block – a legacy of dependence on the former USSR, poor performance in terms of competitiveness of the energy sectors and an absence of a regulatory framework that stimulates smart, energy efficient solutions. Georgia is practically the only country among the Eastern Partnership countries that has no energy efficiency legislation at all. There are thus many lessons learnt that can be passed on to the newcomer.

This report on Georgia's compliance with the Energy Community *acquis* follows the same structure and methodology as the Secretariat's Annual Implementation Report, covering electricity, gas, regulator, oil, renewables, competition, energy efficiency, environment and statistics. However, it has to be underlined that the deadlines for transposition of the various pieces of *acquis* as set out in the country's accession protocol have not yet transpired. The report thus presents a snapshot of where Georgia stands now and where it should be headed.

As experience has shown in other Contracting Parties, dissolving old structures and practices is often harder than it seems. Georgia must not underestimate the time and effort required to meet the transposition deadlines set in its accession protocol as well as ensuring the effective implementation of the laws in practice. The road ahead will be certainly challenging and the Energy Community Secretariat stands ready to assist Georgia in this endeavour. The adoption of the Energy Law, drafted by the Secretariat and aimed at transposing the Third Energy Package in the electricity and gas sectors, in the course of 2017 would be a significant first step towards putting Georgia on track towards meeting its obligations under the Energy Community Treaty.

This report was prepared by all units of the Secretariat. Salome Janelidze deserves special thanks for her contribution and for the many months she had dedicated to this task.



Janez Kopač, Director



# 1 Executive Summary

The aim of this report is to review where Georgia presently stands with respect to implementation of the Energy Community *acquis communautaire* and evaluate the path the country will have to take to achieve full compliance with the Energy Community Treaty. The report finds that even though large-scale reforms are required to achieve compliance with the *acquis*, Georgia has already implemented a number of reforms which have transformed it from a post-Soviet republic into a country committed to European values, which has demonstrated its willingness to establish itself as a successful member of the Energy Community.

Georgia has a well-functioning power sector. Electricity generation largely relies on hydropower, which creates distinct seasonal supply and consumption patterns. Most of the generation facilities in Georgia have been privatized. The wholesale electricity market is based on bilateral agreements, whereas security of supply is guaranteed through gas-powered thermal power plants. The main challenges throughout Georgia's journey towards a competitive power market will be the long-term guaranteed power purchase agreements with power producers executed in the past.

The transmission system operator unbundling and certification requirements of the *acquis* in the electricity sector have not been transposed yet. Electricity distribution and supply activities in Georgia are not separated. The retail customers are supplied by the electricity distribution companies and are not eligible to switch suppliers, except when purchasing electricity directly from small power plants (up to 13 MW).

As to the natural gas sector, Georgia receives around 90% of its primary gas supply from Azerbaijan. A significant share of the imported gas is utilized for electricity production. Due to its geostrategic location, Georgia provides a transit pathway for transportation of natural gas from Azerbaijan to Turkey and from Russia to Armenia. The main gas transit pipelines, SCP and NSGP, are exempted from implementation of Directive 2009/73/EC and Regulation (EC) No 715/2009.

Natural gas supply and distribution are separate activities in Georgia, whereas gas supply is partially deregulated. Any customer, including household customers, is free to switch supplier at no charge. However, due to the early development stage of the

gas market, practical benefits of such a right are relatively trivial.

The national regulatory authority, GNERC, has developed the reputation of an independent and competent body. Certain competences of national regulatory authorities foreseen by the *acquis* are bestowed on the Ministry of Energy of Georgia. The latter is responsible for approval of electricity and natural gas balances, as well as market rules in both sectors. Furthermore, the amount of penalties that may be imposed by GNERC creates an obstacle to the effective exercise of its powers.

Presently the legal framework of Georgia does not stipulate the obligation to hold emergency oil stocks.

As regards to renewable energy, Georgia has well-developed hydropower generation and has recently started utilization of its wind energy potential. In the future, the country intends to tap more actively into other sources of renewable energy, such as solar energy and biomass. Georgia has yet to develop a special law dedicated to renewables as well as targets of renewable energy in various sectors. Nevertheless, provisions regulating various features of renewable energy are set out both in primary and secondary legislation.

Energy efficiency is not adequately regulated in Georgia yet. The energy intensity of the country's economy has been deteriorating over the recent years. The draft National Energy Efficiency Action Plan (NEEAP) is already developed and awaiting adoption.

The Parliament of Georgia has recently passed a package of legislative amendments and adopted the Environmental Assessment Code, aiming to achieve compliance with the environmental *acquis*. As a result, only a few changes to the existing legal framework are necessary to achieve full compliance with the *acquis*.

As to the competition *acquis*, in 2012 Georgia adopted new legislation, modeled after the EU competition *acquis*. The law includes prohibition of agreements and concerted practices restricting competition, as well as the abuse of a dominant position and State aid that distorts or threatens to distort competition. However, the special regime set for the regulated sectors of the economy, including electricity and natural gas

sectors, does not guarantee adequate application of the competition *acquis*.

As for statistics, Georgia has implemented a significant share of its obligations under the *acquis*, whereas full transposition is expected over the course of 2017.

In conclusion, the present report finds that while there are various issues to be addressed before full compliance with the *acquis* is achieved, Georgia is on the right track, proving that it intends to adhere to the deadlines set by the Protocol Concerning the Accession of Georgia to the Treaty Establishing the Energy Community.





## 2 Electricity

		2015	2016
Electricity generation [GWh]		10.593	11.365
Net imports [GWh]		699	479
Net exports [GWh]		676	572
Total electricity supplied [GWh]		10.616	11.272
Losses in transmission [GWh]		250	258
Losses in transmission [%]		2,21%	2,03%
Losses in distribution [GWh]		582	637
Losses in distribution [%]		5,41%	5,03%
Net consumption of electricity [GWh]		10.382	11.027
Net consumption of electricity by the occupied territory of Abkhazia [GWh]		1.797	1.927
Total maximum generation capacity of power plants [MW]		3.718	3.869
Capacity of power plants [MW]	Thermal	913	924
	Hydro	2.805	2.924
	Wind		21
Transmission network [km]	500 kV	1.138,70	1.149,70
	400 kV	32,20	32,20
	330 kV	21,10	21,10
	220 kV	1.611,50	1.608,80
	110 kV	940,40	913,60
Distribution network [km]	35 kV	509,20	552,61
	110 kV	2.142,00	2.122,00
	35 kV	2.259,20	2.318,00
	6-10 kV	15.027,40	16.092,49
	0.4kV	39.205,80	38.072,90
Substation capacity [MVA]		10.213 MW	10.213 MW
Electricity customers	Total	1.653.553	1.688.907
	Non-households	97.550	126.422
	Active eligible customers	4	4
Internal market	Electricity supplied to active eligible customers [MWh]	1.266	1.271
	Share of final consumption [%]	11,5%	11,5%

Sources: ESCO, GNERC, GSE, GeoStat

### a. Sector Overview

During the last two and a half decades, the electricity sector of Georgia has been in the process of transitioning from a state monopoly system to a liberalized market. Before the collapse of the USSR, the government department *Sakenergo* was in charge of managing the power sector in Georgia, while the infrastructure was integrated in the Trans-Caucasian united energy system together with the Republic of Armenia, Republic of Azerbaijan and southern regions of Russia. The united system effectively balanced demand and supply in the region, compensating Georgia's dependence on hydropower with electricity generated by thermal power plants fuelled with cheap gas imported from other republics. After regaining independence, the reliability of the Georgian electricity system was highly affected by the

dissolution of the united energy system, the grave economic situation and armed conflict. The state of the electricity network quickly deteriorated and power-cuts and blackouts became increasingly common. In order to rehabilitate the power sector in the war-torn country and promote much-needed investments, drastic measures had to be implemented.

The circumstances that existed at the dawn of independence created the foundation for the first efforts in Georgia's aspiration to create an open, competitive electricity market. Unbundling of the power sector became a priority as early as 1996, when the president issued Decree No 437 on Restructuring of the Power Sector. The decree declared restructuring of the market, demonopolization and privatization as priorities. The decree established the Power Regulatory Commission tasked to

develop wholesale and retail electricity tariffs, while the Ministry of Fuel and Energy and the Ministry of Economy were tasked with development of a tariff methodology.

As a first step of the restructuring, *Sakenergo* was unbundled and three financially independent sub-sectors - generation, transmission/dispatch and distribution - were created. As a result of unbundling, a number of electricity distribution companies, a transmission company and several generation companies emerged. The electricity distribution utilities were reorganized into joint stock companies and first transferred to the local municipalities for management, while later most of them were merged and privatized. Generation and transmission functions were shifted to *Sakenergo Generation* and *Sakenergo Transmission* respectively. Furthermore, most of the electricity generating units were privatized, while the state retained ownership of Enguri hydropower plant (HPP) and Vardnili HPP Cascade, the largest hydropower plants of strategic importance for the country.

Presently, the electricity sector in Georgia is regulated by various legislative and regulatory acts, which include the Law on Electricity and Natural Gas, adopted on 27 June 1997, Order No 77 of the Minister of Energy on Approval of Electricity (Capacity) Market Rules, adopted on 30 August 2006, Resolution No 10 of Georgian National Energy and Water Supply Regulatory Commission (GNERC) on Approval of Network Rules, adopted on 17 April 2014 and Regulation No 20 of GNERC on Approval of Electricity (Capacity) Supply and Consumption Rules, adopted on 18 September 2008.

The state policy and strategy for development of the electricity sector are set out in the Resolution on the Main Directions of State Policy in Energy Sector, adopted by the parliament in 2015. The resolution lists the main priorities for development of the energy sector, including but not limited to gradual alignment of Georgian legislation to the EU *acquis*, development of the energy market and improvement of the energy trading mechanisms. Another document, Decree No 400 of the Government of 17 June 2014 on Approval of Socio-Economic Development Strategy of Georgia (Georgia 2020), focuses on enhancing energy security, reducing dependence on energy imports and promoting investments in the energy sector. Furthermore, the draft Energy Strategy of Georgia 2016-2025 is presently being developed by the Ministry of Energy. The draft document, which was already presented to the general public, deals with the existing challenges to development of the energy sector in Georgia and proposes measures to overcome them. In addition, the Strategic Environmental and Social Assessment of Development Scenarios for Electricity Sector Projects, which is currently underway, aims to support the government in the process of planning the development of an environmentally and socially sustainable power sector.

Regulatory powers in the electricity sector are divided by law between GNERC and the Ministry of Energy. While GNERC is responsible, *inter alia*, for licensing, setting tariffs and de-

termining quality of supply standards, the Ministry of Energy develops the national energy policy, adopts electricity market rules and approves electricity balances. In addition, the ministry has the power to deregulate or partly deregulate activities in the electricity sector.

## b. State of Compliance

According to the Protocol concerning the Accession of Georgia to the Treaty establishing the Energy Community signed on 14 October 2016 in Sarajevo, Georgia shall implement the Energy Community *acquis* on electricity within deadlines that are defined as follows: 31 December 2018 for the implementation of Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, as well as for the implementation of Regulation (EC) 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) 1228/2003. Directive 2005/89/EC concerning measures to safeguard security of electricity supply and infrastructure investment shall be implemented by 31 December 2019.

### 1. Licensing

Activities in the electricity sector are subject to licensing by GNERC. There are four types of licenses: electricity generation, dispatch, transmission and distribution licenses. Power plants with capacity of up to 13 MW, as well as electricity importers and exporters are exempt from licensing. The licensing requirement is also waived for the producers generating electricity for self-consumption, as long as they are not connected to the transmission or distribution network. Furthermore, retail customers engaged in net-metering are also exempted from the licensing requirement. The Law of Georgia on Electricity and Natural Gas and the Law of Georgia on Licenses and Permits define the procedures for issuing a license.

⚡ Licenses in the Electricity Market	
Type of a License	Number of Licensees
Electricity Generation License	18
Electricity Transmission License	3
Preliminary Electricity Transmission License	1
Electricity Distribution License	3
Dispatch License	1

Source: GNERC

Under the Law on Electricity and Natural Gas, GNERC may issue a license in the event of public necessity, even if the applicant fails to submit all of the required documents. In such cases, the licensee must rectify the matter and present all necessary documents within the time provided by GNERC. If this condition is not fulfilled, GNERC may revoke the license.

The 2006 Law of Georgia on State Support for Investments foresees the possibility to issue a preliminary license, which enters



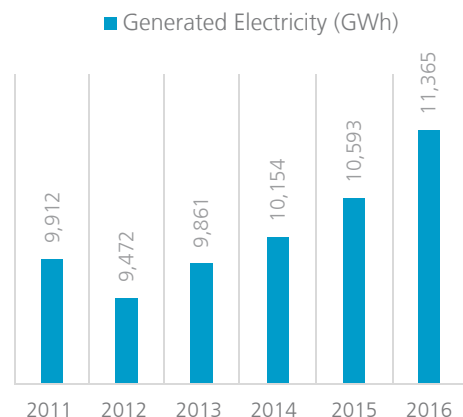
into force as soon as all of the requirements set by the law are satisfied. Once the preliminary license is granted, for the following five years it protects the licensee from changes to the licensing conditions, which would deteriorate the licensee's position.

## 2. Generation

The power system in Georgia is characterized by relatively stable seasonal supply and consumption patterns. Due to abundant hydro resources, hydropower dominates the electricity generation sector of Georgia. However, HPPs have limited storage capacities, as a result of which electricity production peaks during the spring-summer period, when the river flows are at their highest. Electricity consumption, on the other hand, decreases during the same period, thus creating an imbalance between supply and demand. The electricity shortage in winter is compensated by thermal power plants (TPPs) and electricity imports. In the spring-summer period, surplus electricity is exported. Due to the limited capacity of interconnectors, some HPPs resort to water spilling.

In 2016, there were 77 electricity producers in Georgia, with the total generation capacity of 3.869 MW. The volume of electric-

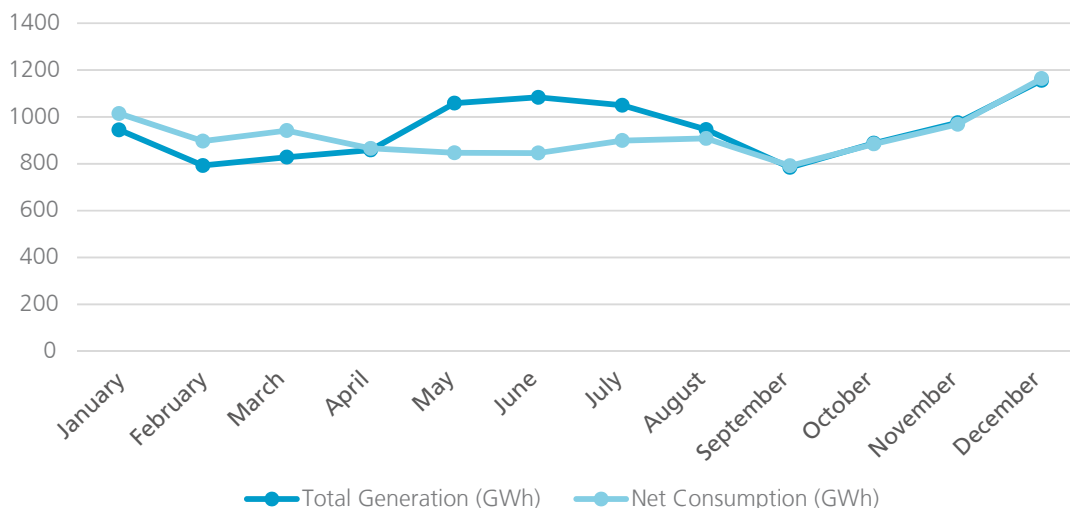
## ⚡ Total Generated Electricity



Source: ESCO

ity generated in 2016 amounted to 11.365 GWh, whereas the volume of net consumption constituted 11.027 GWh. During the last decade, electricity generation has on average increased by 4,5% annually, whereas the same growth of consumption was 3,5% p.a.

## ⚡ Total Generation and Net Consumption of Electricity in 2016



Source: ESCO

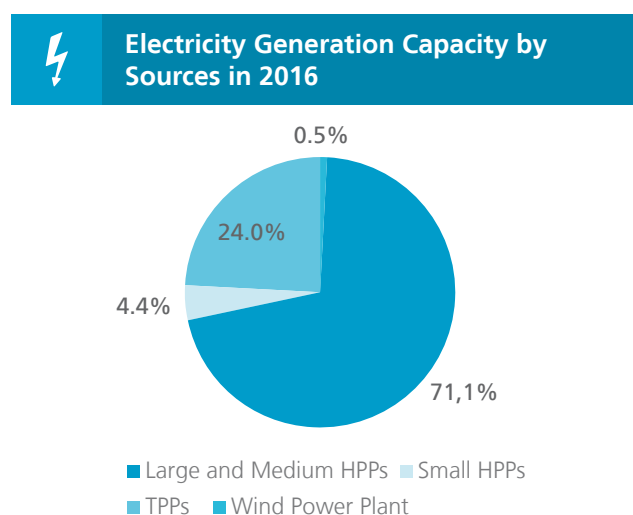
According to GNERC, the Herfindahl-Hirschman index (HHI) for the three largest electricity producers is 1.222,8, which falls within the range of a competitive market. The two largest HPPs, Enguri HPP (1 300 MW) and Vardnili HPP Cascades (220 MW), are responsible for almost half of the total HPP generation in Georgia.

Supply to the occupied territory of Abkhazia remains to be an outstanding issue of the electricity sector in Georgia. The law provides that the region should be supplied with the electricity generated by Enguri HPP and Vardnili HPP Cascade. The

amount of electricity consumed by Abkhazia has been consistently increasing and in 2016 constituted 1.927 GWh. During the winter months, when demand is high and supplies dwindle, the occupied territory of Abkhazia consumes over 90% of the electricity generated by Enguri HPP and Vardnili HPP Cascades. In some cases, when there is not sufficient electricity, the Electricity System Market Operator (ESCO) designated by the Law on Electricity and Natural Gas provides balancing electricity for the region. The cost of the electricity delivered to the occupied territory is not paid by consumers and is considered as bad debt.

There are five TPPs operating in Georgia, with the total capacity of 924,4 MW. Most of the TPPs use relatively cheap, so-called “social” gas to generate electricity. The smallest of all TPPs, the Tbilisi TPP (13 MW) is the only one fuelled with (locally produced) coal. Four TPPs have been designated as “firm capacity sources” by the government, including the recently commissioned combined-cycle power plant, Gardabani TPP. They are of vital importance for reliable operation of the electricity system. While during the autumn-winter period approximately one third of electricity is generated by TPPs, in the spring-summer period their output is reduced to the minimum.

A relatively new addition to the energy mix of Georgia is wind power, which was introduced in 2016, by commissioning the 20.7 MW Kartli wind power plant.



In 2016, the regulatory regime for net-metering was enacted, which allows retail customers to connect renewable energy sources with the capacity of up to 100 kWh to the distribution network and receive compensation for the electricity delivered to the grid. During the first year of introducing the mechanism, eight customers engaged in the net-metering scheme, with the aggregate installed capacity of 153 kWh.

### 3. Transmission

Transmission services in Georgia are carried out by three licensees - JSC Unified Energy System Sakrusenergo, Energotrans LLC and JSC Georgian State Electrosystem (GSE). In addition, JSC Energo-Pro Georgia – the largest electricity distribution company - holds a preliminary transmission license.

GSE shares are 100% held by the state-owned JSC Partnership Fund, with the management rights exercised by the Ministry of Energy of Georgia. GSE in turn holds 100% of shares of another transmission licensee, Energotrans. As to JSC Sakrusenergo, 50% of its shares are also state-owned, whereas the remaining 50% of shares are owned by Russian PJSC Federal Grid Company of Unified Energy System.

GSE, which is the only dispatch licensee in the country, was nominated as the electricity transmission system operator, following the amendments to the Law on Electricity and Natural Gas. The law requires from the transmission licensees to transfer their transmission networks to GSE, together with the right to operate and plan development of the networks. The law does not foresee requirements for transmission system operator unbundling and certification.

GSE, in its capacity as a dispatch licensee, is responsible for managing the electricity system and ensuring its secure and reliable functioning. GSE develops an annual energy demand forecast and submits it to the Ministry of Energy for approval. Furthermore, GSE performs daily and hourly scheduling of the generation facilities and the supply sources. It is responsible for keeping the unified registry of direct contracts and informing the market operator of the volume of electricity contracted through bilateral agreements. The obligations of the dispatch licensee also include organization and provision of ancillary and system services. The main types of ancillary services are defined by the Network Rules and include frequency and voltage control, management of the electricity system, operational reserves and black start of the system.

Transmission and dispatch services are provided based either on individually negotiated contracts or on standard contracts approved by GNERC. Compliance of this arrangement with the *acquis* is to be verified. Tariffs for the services are set by GNERC based on the cost plus principle, which ensures recovery of reasonable expenditures, as well as gaining a fair profit. Presently, the dispatch services are subject to 0,082 tetri/kWh tariff, while the transmission service tariffs are set at 0,872 tetri/kWh for GSE, 0,180 tetri/kWh for Sakrusenergo and 0,387 tetri/kWh and 0,496 tetri/kWh for the 500 kV and 400 kV transmission lines of Energotrans, respectively.

The rules on connection to the transmission network are stipulated in the Network Code and specify the procedure, timeline and price for such connections. The transmission licensees are allowed to refuse an application for connection to the network, if the nearest substation or transmission line lacks available capacity, or the connection would threaten the security of the system. In case of refusal of connection, the transmission licensee is required to provide the applicant with the information on the works to be carried out in order to allow new connection to the network and the related costs. If the applicant is willing to cover the costs of reinforcement of the network or construction of new transmission lines, a written agreement will be executed between the applicant and the licensee. This process is monitored by GNERC.

The transmission sector in Georgia has achieved tremendous improvement in terms of minimizing electricity losses, which have decreased from 15% in early 2000s to 1,7-2,2% for the last several years. GNERC sets an allowed level of losses for each licensee and the costs of losses in the transmission network above this level are not reflected in the licensee's tariff.

In order to improve reliability and security of electricity supply in Georgia, the obligation of the transmission system operator to develop a ten-year transmission network development plan has been introduced by the law. The draft ten-year plan is reviewed by GNERC and presented to the Ministry of Energy for approval. The ten-year plan is obligatory for the transmission system operator and the respective transmission licensees, as well as other entities, obliged to develop corresponding network elements, as stipulated in the plan. The investments, which are foreseen by the ten-year plan and intended to be carried out within the following three years, are approved and monitored by GNERC, whereas the Ministry of Energy is responsible for monitoring implementation of the plan in general. The ten-year plan is reviewed and updated on an annual basis.

The latest ten-year transmission network development plan for 2017-2027 aims to develop a reliable, cost-effective and efficient transmission system. The document focuses on reinforcement of the existing network and construction of new infrastructure. The ten-year plan also foresees the necessary measures to be implemented for integration of new types of renewable energy sources into the transmission network, such as wind and solar energy. In addition, a significant part of the ten-year plan is dedicated to cross-border trade and enhancement of interconnection capacities.

Even though a number of large-scale transmission network rehabilitation works have been carried out, the main problem of the electricity system of Georgia remains its lack of resilience and reliability. The electricity generation sources are unevenly distributed across the territory of Georgia, with the majority of them concentrated in the Western part, while the Eastern part, where the capital is located, is responsible for the larger share of consumption. Therefore, it is essential to ensure a secure transfer of electricity from one part of the country to the other. According to GSE, the only 500 kV transmission line connecting Enguri HPP to the eastern part of Georgia is not fully backed-up by parallel 220 kV transmission lines, which represents one of the most serious threats to the reliability of the Georgian electricity system.

#### 4. Distribution and Supply

The electricity distribution and supply activities in Georgia are not separated, which represents a substantial barrier to development of a competitive electricity market and will have to be changed in line with the *acquis*. The retail customers are supplied by the electricity distribution companies and are not allowed to switch suppliers. However, an exception exists – customers may purchase electricity from small power plants (up to 13 MW) based on direct agreements, at non-regulated electricity prices. Nevertheless, due to the absence of a competitive electricity retail market, non-regulated direct agreements between retail customers and small power plants are not common. In fact, for the last two years, no such agreement has been executed.

The electricity distribution license allows the license-holder to purchase, wheel (transfer of electricity by a third party outside the transmission network), distribute, trade and supply electricity. There are three distribution licensees in Georgia - *JSC Telasi*, *JSC Energo-Pro Georgia* and *JSC Kakheti Energy Distribution*.

Electricity Distribution and Supply	
Distribution Licensee	Number of Customers in 2016
JSC Telasi	548.275
JSC Energo-pro Georgia	1.006.363
JSC Kakheti Energy Distribution	134.272

Source: GNERC

*Telasi* distributes and supplies electricity within Tbilisi. Its privatization in 1998, when 75% of shares were sold to *AES Silk Road Holdings B.V.*, a subsidiary of the American company *AES Corporation*, marked an important milestone in the rehabilitation of the power sector of Georgia. As a result of measures implemented by the new owner of *Telasi*, reliability of electricity supply and collection rates in Tbilisi drastically improved within a short time. In 2003, the ownership of *AES Silk Road Holdings B.V.* was transferred to *RAO Nordic OY (INTER RAO Holdings B.V.)*, a subsidiary of Russian *Inter RAO UES*, while some 25% of *JSC Telasi* shares belong to the state-owned *JSC Partnership Fund*, with the Ministry of Energy of Georgia exercising the management of the shares.

*Kakheti Energy Distribution* carries out distribution and supply activities in Kakheti – the eastern region of Georgia. The company has been going through bankruptcy proceedings since 2011 and is managed by a bankruptcy manager. In 2008, the company was purchased by the Lithuanian concern *Achema Group*, but recently it was transferred to state ownership.

*Energo-Pro Georgia* is the largest distribution company, serving over one million customers and covering most of the territory of Georgia. The company was split up in 2016 to establish *JSC Energo-Pro Generation*, while all the assets in the electricity generation were transferred to the latter.

The Electricity Supply and Consumption Rules define a simple, time-efficient procedure for connection to the electricity distribution network. By the end of 2016, there were approximately 1,5 million household and 126.500 non-household electricity customers in Georgia.

Electricity losses in the distribution network amounted to 5,03% in 2016. The losses per licensee largely differ. *Telasi* is the most efficient, with a 5,27% loss (compared to normative loss value of 5,34%), followed by *Energo-Pro Georgia* with an 8,39% loss (normative loss value – 8,26%), while *Kakheti Energy Distribution* has the poorest performance – a 19,65% loss (normative loss value – 10,5%). GNERC offers distribution licensees financial incentives to minimize electricity losses, ac-

ording to which the difference between actual losses and the allowed level of losses will not be considered for tariff calculation purposes. Thus, if the actual losses of a licensee are lower than the allowed level, the utility is entitled to keep the profit.

A distribution licensee is required to prepare a five-year network development plan on an annual basis. The five-year plan is first reviewed by *GSE* to ensure compliance with the ten-year transmission network development plan and afterwards approved by *GNERC*. The latter is also responsible for monitoring implementation of the plan.

### 5. Unbundling

In 1997, when the Law of Georgia on Electricity and Natural Gas was adopted, it included a provision prohibiting licensees to hold more than one license or own shares of another licensee, without the prior consent of *GNERC*. However, the provision was later removed and, presently, the legislative framework of Georgia does not transpose the requirements for unbundling of transmission and distribution system operators as foreseen by Directive 2009/72/EC. Nevertheless, the obligation to conduct separate accounting is in place. According to the Law of Georgia on Electricity and Natural Gas, when a person holds more than one license, or is engaged in another commercial activity in addition to the licensed activity, it is required to keep separate accounts for revenues, expenses, assets, liabilities, financial outcomes and equity capital.

While most of the generation assets have been privatized, the two largest HPPs, Enguri HPP and Vardnili HPP Cascade, are still owned by the state. The state is also the ultimate owner of Gardabani TPP, Kartli Wind Power Plant and *ESCO*. Furthermore, the state has almost full control over the transmission system in Georgia and owns shares in the distribution sector. The right to manage the state-owned companies in the energy sector lies with one single entity – the Ministry of Energy. This is non-compliant with the requirements for unbundling as defined by the electricity *acquis*.

*Energo-Pro A.S* carries out activities in electricity generation, distribution and supply sectors, through two separate legal entities. In addition to being a distribution licensee, which inherently grants the right to engage in supply activities, *Energo-pro Georgia* also holds a preliminary transmission license, which seems to be not in line with Directive 2009/72/EC.

In the context of unbundling, it is also noteworthy that there are vertical relations between the gas and electricity markets. Namely, the Ministry of Energy is also responsible for management of the state-owned Georgian Oil and Gas Corporation and Georgian Gas Transportation Company.

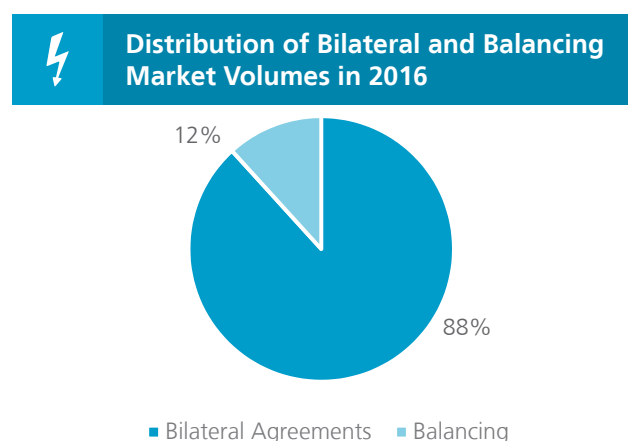
### 6. Market Model

The wholesale electricity market in Georgia is based on bilateral agreements between the sellers and buyers, which become

effective upon registration with *ESCO*. The wholesale market participants are electricity transmission and dispatch licensees and the so-called qualified enterprises, which include electricity generation and distribution licensees, small power plants, importers, exporters, the electricity market operator and final customers. Any person willing to participate in wholesale trade must register with *ESCO*.

The Electricity Market Rules set the minimum electricity consumption threshold for direct consumers to purchase electricity for own use under non-regulated conditions on the wholesale market, i.e. define their eligibility. The threshold has been reduced from 1 GWh to 1 kWh in 2017, rendering virtually any customer eligible to participate in the wholesale market. However, due to the lack of maturity with respect to market development, the practical significance of the threshold decrease is low. In fact, some of the large customers have chosen to switch back to the regulated tariff system over the years. The number of customers participating in the wholesale trade of electricity has been consistently decreasing. Presently only two of them remain.

*ESCO* is responsible for trading balancing electricity and firm capacity. It creates and maintains a unified database and registry of wholesale electricity trade. Furthermore, *ESCO* determines the volumes of electricity traded by the electricity sellers and buyers and makes the information available for the settlement purposes, in accordance with the Electricity Market Rules. The tariff for the services provided by *ESCO* is set at 0,019 tetri/kWh by *GNERC*.



Source: *ESCO*

*ESCO* purchases the volume of electricity delivered to the network by electricity producers and importers, which is not covered by direct agreements. If during the settlement period – i.e. one month - the electricity consumed by a qualified enterprise exceeds the volume indicated in the bilateral agreement, the qualified enterprise will be considered to be a party to the standard agreement with *ESCO* and purchase the necessary volume of balancing electricity.

A Transmission Grid Strengthening Project, which is currently underway, will facilitate development of a wholesale power exchange platform in Georgia and provide support with obtaining

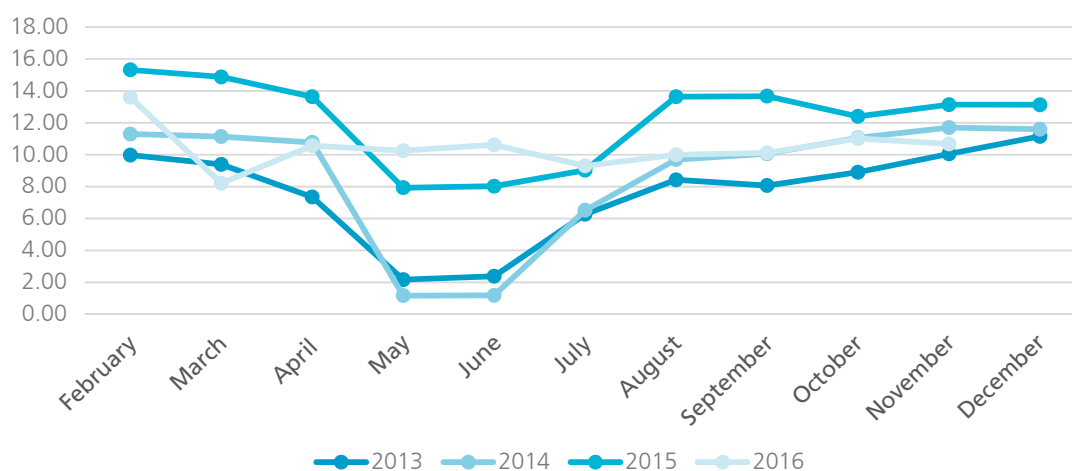
the necessary hardware and software for hourly metering and balancing, which in turn will aid the process of transition to the day-ahead market.

### 7. Balancing

Electricity trade on the balancing market is carried out only through ESCO, based on negotiated or standard over-the-

counter (OTC) agreements. For this purpose, ESCO registers the standard terms with the dispatch licensee. The price of balancing electricity is formed on a monthly basis by ESCO, based on the average weighted price of the imported electricity and balancing electricity, purchased from various domestic producers. In 2016, the volume of electricity traded on the balancing market amounted to 1.392 GWh, while the weighted average price of balancing electricity was 8,21 tetri/kWh.

## Weighted Average Tariff of Balancing Electricity Sold by ESCO (in tetri/kWh)



Source: ESCO

Firm capacity generated by the TPPs is determined by the government and is meant to ensure reliability and security of the electricity system. Firm capacity is at the dispatch licensee's disposal, which independently takes decisions regarding its operation. The capacity is traded only through ESCO, based on negotiated or standard OTC agreements, approved by GNERC and registered with the dispatch licensee. Buyers of firm capacity from ESCO include distribution licensees, direct customers and exporters.

Firm Capacity Source	Firm Capacity Price Gel/Day	Electricity Tariff tetri/KWh
G-Power LLC	42.256	14,120
Mtkvari Energy LLC	66.264	12,194
Georgian International Energy Corporation LLC	35.853	14,234
Gardabani Thermal Power Plant LLC	343.884	9,056

Source: GNERC

### 8. Construction of New Electricity Generation Capacities

The rules and procedures for construction of new electricity production capacities in Georgia are laid down in three main acts:

- Resolution No 214 of the Government on Approval of the

Rule on Expression of Interest for Technical and Economic Feasibility Study, Construction, Ownership and Operation of Power Plants in Georgia, adopted on 21 August 2013;

- Resolution No 107 of the Government on Approval of the State Programme Renewable Energy 2008 – the Rule on Facilitating Construction of New Renewable Energy Sources in Georgia, adopted on 18 April 2008; and
- Decree No 40 of the Minister of Energy on Rules of Submission of Proposals to the Ministry of Energy of Georgia, Review of Proposals and Approval of Conditions related to Technical and Economic Feasibility Study, Construction, Ownership and Operation of Power Plants, not included in the List of Potential Power Plants in Georgia, adopted on 10 April 2014.

Resolution No 214 describes the terms and conditions for expression of interest in building power plants in Georgia, the list of which is approved and periodically reviewed by the Ministry of Energy. The ministry, either on its own initiative or upon request of the interested party, announces the expression of interest on technical and economic feasibility study, construction, ownership and operation of a specific potential power plant from the list. The winner will be chosen based on the lowest power purchase price offered to ESCO. The winner then signs a memorandum on cooperation with the government and the electricity market operator. The winner is further required



to execute a long-term guaranteed power purchase agreement with the market operator and sell to the latter the full volume of electricity generated during the winter period (September-April), for the duration of ten years. A memorandum of understanding may foresee the obligation to sell additional volumes of electricity to the market operator. Compliance of this arrangement with the *acquis* remains to be verified. In order to support the export of the electricity generated by the new power plant, the memorandum may also call for conclusion of a special agreement with the transmission system operator for the provision of services on a new (i.e. commissioned after 2012) interconnection line.

As to construction of power plants not included in the list of potential power plants in Georgia, Decree No 40 of the Minister of Energy envisages that parties interested in construction and operation submit a proposal to the Ministry of Energy, together with a pre-feasibility study. The government may conduct direct negotiations with the interested party and execute a memorandum of understanding. Similar to Resolution No 214, a mandatory condition of a memorandum of understanding executed under Decree No 40 is to sell on the domestic market the full volume of electricity generated during the eight months of the winter period, for ten years after commissioning of the power plant. Again, justification for this arrangement will have to be assessed.

In 2016, following the recommendation of the International Monetary Fund, the government temporarily terminated the process of executing new guaranteed power purchase agreements, until the methodology for risk assessment was developed. As a result, the standard term and price for the mandatory sale of electricity were fixed. *ESCO* now purchases the full volume of generated electricity during the eight months of the winter period for a price of up to USD 6 cents per kWh.

The State Programme Renewable Energy 2008 stipulates the rules and procedures regarding construction of new renewable energy projects. According to this document, the full volume of electricity generated during three months of the winter period must be sold and supplied to customers in Georgia for a duration of ten years. The electricity may be sold to any buyer in Georgia, based on freely negotiated prices, and/or to the electricity market operator based on the guaranteed power purchase agreement.

### 9. Third Party Access

Third party access to the electricity network is guaranteed by the legislation of Georgia to certain categories of consumers. The Law on Electricity and Natural Gas provides that persons eligible to sell electricity directly to electricity consumers shall have access to the electricity transmission and distribution systems of the relevant licensees. Furthermore, the Electricity Market Rules prevent qualified enterprises from denying interested parties access to their own networks, unless such refusal is justified by network congestion or non-payment of the wheeling tariff.

The tariff for wheeling, is set by GNERC, based on the incurred expenses and the volume of transferred electricity.

Where electricity wheeling is requested through the network owned by a person other than a distribution licensee, the network owner is obliged to tolerate the use of the network, in accordance with the requirement of the Civil Code. In such cases, the network owner is entitled to compensation, calculated based on Resolution No 15 of GNERC on Approval of Rules on Calculating the Price for Wheeling Electricity, Natural Gas and Drinking Water, through the Network Owned by Third Parties, adopted on 30 December 2013.

In the absence of unbundling provisions, third party access to the transmission and distribution systems in itself does not make a significant contribution to the creation of a competitive market. Therefore, it is essential to separate distribution and supply activities and implement the unbundling requirements of the *acquis* as soon as possible.

### 10. Interconnections and Cross-Border Trade in Electricity

The electricity system of Georgia is interconnected with the systems of all neighbouring countries. 500 kV and 220 kV transmission lines connect the Georgian and Russian electricity systems, while 400 kV and 220 kV transmission lines connect the Georgian electricity system with the one of Turkey. The electricity system of Armenia is connected with the Georgian system through 220 kV transmission lines and the one of Azerbaijan through 500 kV and 330 kV lines. The total transfer capacity with neighbouring power systems presently amounts to some 2.570 MW, which, according to the ten-year network development plan 2017-2027, will be increased to 4.500 MW by 2021.

Georgia's power system mainly operates in a synchronous regime with the systems of the Russian Federation and Azerbaijan. The parallel synchronous regime is essential for reliable operation of the power system, frequency regulation and maintenance of a certain quality of supply level. In addition, the Georgian power system operates in a parallel asynchronous regime with the system of Turkey. The dispatch licensee is responsible for management of parallel operation of the power systems and for this purpose executes necessary agreements with the neighbouring systems.

Due to the seasonal changes in the patterns of supply and demand and the dependence on hydropower, Georgia needs to import electricity during the winter period. Electricity import and export are not subject to licensing and any person may engage in such activities, based on direct agreements. The price for imported electricity is subject to the cap calculated in accordance with the methodology laid down in Resolution No 33 of GNERC on Electricity Tariffs of 2008. Imports of the cheapest electricity are granted priority. Exporters, on the other hand, are free to determine the price. However, when exporting balancing electricity, the exporter is required to purchase the most expensive electricity from *ESCO*.

By the end of 2016, there were 12 exporters and 29 importers registered with ESCO. In 2016, for the first time since 2011, Georgia became a net exporter, by importing 479 GWh and exporting 559 GWh of electricity. The positive trade balance

is expected to change in 2017, since during the first three months of the year, the imports reached already 395,4 GWh of electricity, which is partially due to the maintenance works at Enguri HPP.

Country	Share of Georgian Imports (GWh)	Share of Georgian Imports (%)	Share of Georgian Exports (GWh)	Share of Georgian Exports (%)
Russia	369,2	77%	147,6	26%
Azerbaijan	109,8	23%	5,4	1%
Turkey	-	-	294,5	53%
Armenia	-	-	111,5	20%

Source: ESCO

The Georgian electricity system has two interconnectors with the Turkish electricity network. The 220kV transmission line with a capacity of 150 MW operates in an isolated mode, while the 400kV transmission line commissioned in 2013, with a capacity of 700 MW, connects the HVDC converter in Akhaltsikhe with the substation in Borcka, Turkey.

The regulatory framework for operation of the 400kV transmission line was established by the Agreement between Georgia and the Republic of Turkey concerning Cross-Border Electricity Trade via Borcka-Akhaltsikhe Interconnection Line, signed in 2012, which identified the basic principles of electricity trade through the line. Based on these principles, the Electricity Market Rules were amended to incorporate the procedures for capacity allocation and the rules on auctioning the capacity of new electricity interconnection lines. The capacity of a new interconnection line for the next calendar year must be defined and published on the website of GSE no later than 1 August of each year. Subject to the conditions provided in the Electricity Market Rules, power plants commissioned after 2010 and operating on renewable energy sources are granted priority access to the new interconnection lines to export electricity. Among such power plants, the ones with long-term contracts with the transmission system operator and dispatch licensee have even higher priority. The procedures for capacity allocation for the new interconnection lines may also be used by the dispatch licensee to allocate capacity for any other interconnection line.

Turkey has the most advanced electricity market in the region. Wholesale electricity prices are generally higher in Turkey as compared to Georgia, making it an attractive market for export. Furthermore, since Georgia is geographically isolated from other Energy Community Parties, the only possibility to export electricity to the European markets is through the territory of Turkey, which has already synchronized its network with that of ENTSO-E. GSE also seeks observer membership in ENTSO-E. In 2015, the Governments of Turkey and Georgia concluded an agreement on cooperation in the energy sector, whereby the Turkish transmission system operator, TEİAŞ, agreed to share its experience with regard to ENTSO-E integration process and provide assistance to GSE.

Due to its location, Georgia has a potential to become an electricity transit hub. In 2016, approximately 850 GWh was transited in total from Russia to Armenia and from Azerbaijan to Turkey. The latter flows constituted 96% of total transit. Presently the North-South Energy Corridor project is underway, with the participation of Georgia, Armenia, Iran and Russia. Within the scope of the project, a 500/400 kV HVDC back-to-back station in Armenia will be constructed, which will asynchronously connect the united systems of Georgia and Russia with the united system of Armenia and Iran. The project will enhance energy security in the region and contribute to reliable supply in Georgia.

In order to carry out transit of electricity on the territory of Georgia, an interested party enters into an agreement with the dispatch licensee, which determines the terms for provision of technical support through the transmission lines and services of transmission licensees. Since electricity transit is not regulated by GNERC, the price for transit is determined on a contractual basis. The Law on Electricity and Natural Gas provides that the transit price should cover all expenses related to provision of the service.

The obligation to pay the electricity transmission and dispatch tariffs does not apply in case of transit. The dispatch and transmission licensees execute a side agreement, which sets the price for utilizing the network and service provided by transmission licensees. If a transmission licensee refuses to enter into an agreement with the dispatch licensee, the obligation to tolerate the use of its network for electricity transit purposes kicks in.

### 11. Tariffs

According to the Law on Electricity and Natural Gas, one of the main purposes of tariffs is to protect customers from monopolistic prices. GNERC, as an independent regulatory authority, is responsible for developing methodologies and calculating tariffs in the electricity sector. GNERC sets tariffs for electricity generation, transmission, distribution, wheeling, import and consumption, generation of firm capacity, as well as tariffs for

the services provided by the market operator and the dispatch licensee. In 2014, GNERC developed new tariff methodologies in line with best European practices. The methodology relies on incentive-based and cost-plus pricing principles. The law also foresees the possibility of setting seasonal and peak load pricing; however, currently no such pricing is used.

There are various tariff regimes applicable to the market participants. Enguri HPP and Vardnili HPP Cascade are subject to a fixed generation tariff presently set at 1,496 and 2,880 tetri/kWh respectively. Both power plants were commissioned in 1970s and, therefore, most of the assets have already depreciated, rendering the cost of electricity generation relatively low.

Power plants with a capacity of over 13 MW operate under price caps set by GNERC, while small power plants and power plants commissioned after 1 August 2008 are not subject to price regulation and may sell electricity based on negotiated prices.

GNERC sets three electricity supply price blocks, applicable to household customers. The lowest price is reserved for the customers who, within a 30-day period, consume 101 kWh or less. The second and the third blocks set increasingly higher tariffs and apply to household customers who consume within the range of 101-301 kWh and more than 301 kWh, respectively.

 <b>Electricity Consumption Tariff Caps for Household Customers</b> (in tetri/kWh)			
Electricity Consumption	JSC Telasi	JSC Energo-Pro Georgia	JSC Kakheti Energy Distribution
<b>101 kWh or less</b>	11,000	10,978	11,000
<b>101-301 kWh</b>	14,400	14,348	14,000
<b>Over 301 kWh</b>	18,200	18,178	14,830

Source: GNERC

The memoranda of understanding concluded between the government and investors often fix a long-term power purchase price, thus creating a regulatory framework overlapping with the one set by GNERC. This has been commonly justified by the fragile state of the electricity sector and the acute need for new investments, which in turn requires a stable and predictable investment climate. Considering the abovementioned circumstances, the Protocol concerning the Accession of Georgia to the Treaty establishing the Energy Community allows Georgia to keep its commitments regarding electricity distribution tariffs, undertaken before the signature of the protocol.

## 12. Customer Protection

Customer protection is among the main responsibilities of GNERC and is ensured through various regulatory mechanisms. Even though the concept of vulnerable customers is not *per se* defined by the regulatory framework, there are a number of instruments aimed at protecting customers who are considered vulnerable due to different circumstances.

The Rules on Supply and Consumption of Electricity set various requirements aiming to protect retail electricity customers. The rules, *inter alia*, ensure access to information on consumption data, define the content of a bill, oblige licensees to respond to the requests of consumers in a timely manner and require the notification of customers ahead of planned interruptions. The rules also prevent distribution licensees from terminating electricity supply to consumers without first allowing at least one month of additional time for payment of the bill if it would jeopardize human lives. To ensure effective exercise of their rights, GNERC provides customers with a free and efficient dispute settlement mechanism.

GNERC's Rules on Commercial Quality of Service, adopted on 25 July 2016, set mandatory quality standards to be respected by the distribution licensees. There are two types of standards: general and guaranteed. Whilst the breach of a guaranteed standard entitles customers to direct monetary compensation, deterioration or improvement of a general standard will have a corresponding effect on the regulatory cost-base tariff component, thus creating financial incentives to ensure due implementation of the standards. GNERC has recently developed a new system for monitoring commercial quality of service, which allows it to control the implementation of the quality standards by licensees in real time.

There are a number of mechanisms in Georgia aimed at providing financial support to households. Financial support is offered, for instance, by the 2015 Law on Development of High Mountainous Regions, which foresees partial subsidization of the electricity costs for the residents of mountainous settlements. Decree No 381 of the government of 30 July 2015 sets rules for partial subsidization of electricity costs and targets specifically socially vulnerable customers, defined in accordance with a methodology approved by the government. The decree does not cover the municipality of Tbilisi, which has its own support scheme to help vulnerable households to cover the costs of electricity supply during the winter period.

In order to facilitate universal access to electricity, the government initiated a project called "Light to every village", as a result of which up to 30 villages were connected to the electricity network. In the mountainous settlements, with a few to no permanent population, solar panels were installed to provide electricity supply. Almost 100% of households in Georgia have access to electricity.

### 13. Energy Security

Georgia is largely dependent on imports to meet demand during the winter period. In a bid to enhance its self-sufficiency, Georgia has been increasing the share of renewable energy production, whilst simultaneously constructing modern TPPs. In addition to the ongoing efforts to increase the generation capacity of the country, activities are underway to curb the growth of electricity demand and facilitate energy conservation through energy efficiency measures. Furthermore, reinforcement of electricity networks and building new transmission lines and interconnectors remain the focus of the strategy for developing the electricity sector.

In order to increase security of electricity supply in Georgia, the government has been engaged in active promotion of investments in the energy sector and has minimized administrative barriers to investments in the electricity sector. As a result, the energy sector accounts for the second largest share (12% in 2016) in foreign direct investments.

One of the most serious security issues is the location of certain facilities of the largest HPPs in the occupied territory of Abkhazia.

#### c. Conclusions

Despite a decade-long economic turmoil, Georgia has managed to reform its electricity sector from a state monopoly to a mostly privatized, independent system. While technical and financial difficulties are still common, proper implementation of the electricity *acquis* will facilitate development of a resilient, secure system based on a competitive market and non-regulated electricity prices.

The main challenge is the creation of an open, competitive and liquid electricity market. Even though the threshold for direct customer participation has been lowered to an annual

consumption of 1 kWh, its practical impact has been insignificant due to the overregulation of prices and the lack of competition. Therefore, Georgia should ensure full opening of the electricity market, while gradually abandoning tariff regulation through comprehensive price reform and promoting market-based prices. Establishment of an organized electricity day-ahead market should also become a priority. As a result, correct price signals will be provided to the market and price formation for other energy products and ancillary services will be facilitated. Georgia must also implement unbundling requirements and introduce transmission system operator certification procedures, in line with the requirements of Directive 2009/72/EC. Furthermore, effective switching rules should be enacted.

A major concern for further development of a competitive market and price deregulation in Georgia is the presence of long-term guaranteed power purchase agreements signed between new power producers and the market operator, as well as the obligation of new power plants to sell to the market operator the full volume of electricity generated during the winter period (September-April) for the duration of ten years. In order to enhance energy security and export potential of the country, it is desirable to construct new generation capacities. Construction of HPPs, with reservoir storages should be prioritized, in order to close the gap between the seasonal patterns of generation. The investment climate should be further improved by creating a transparent and stable regulatory regime, developing a resilient electricity network and enhancing cross-border interconnection capacities. Integration of congestion management with intraday and balancing markets will additionally facilitate development of cross-border trade.

As to protection of vulnerable customers, Georgia should develop various support schemes in a manner that targets customers with actual financial needs. Furthermore, in order to ensure uninterrupted supply to customers, a supplier of last resort could be nominated.







## 3 Gas

		2014	2015
Natural gas production [mcm]		10,3	11,4
Import flows [mcm]		2.183,5	2.500,8
Export flows [mcm]		-	100
Stock changes		-	-
Domestic supply of natural gas [mcm]		2.193,7	2.412,1
Transformation sector input [mcm]		574,6	649,3
Losses in transmission [mcm]		17	27
Losses in distribution [mcm]		90,5	130,5
Natural gas customers	Non-households	27.519	30.549
	Households	857.233	939.552
	Industry	95,6	114,8
	Transport	350	364
Final consumption [mcm]	Commercial and public services	222,7	182,7
	Residential	597,6	694,0
	Agriculture/forestry/fishing	3,9	4,2
Non-energy use		258,8	272,5
Length of transmission network [km]		1.918,2	1.968,4
Length of distribution network [km]		15.732	18.757

Sources: GeoStat Energy Balance; GNERC Annual Reports 2015 and 2014

### a. Sector Overview

Natural gas accounts for the largest share in the energy mix of Georgia, contributing to 42,7% of the total primary energy supply in 2015. Despite a general increase in gas demand over the last several years, in 2016 the demand decreased by 6,4% to a total of 2.124 mcm.

The general increase in the demand for gas in Georgia is attributable to expansion of distribution networks and construction of commercial buildings. The 2016 decrease in demand, on the other hand, was largely attributable to the reduced consumption of natural gas by thermal power plants. The projected demand for natural gas in 2017 is 2.439 mcm.

The number of households with access to natural gas increases every year. In 2016, the number of gas costumers connected to the distribution network exceeded one million. According to GNERC, the percentage of households connected to the natural gas distribution network amounted to approximately 80% in 2015.

The main regulatory acts governing the natural gas sector in Georgia are the Law on Electricity and Natural Gas, the Law on Oil and Gas, Order No 114 of the Minister of Energy of 29 December 2006 approving Natural Gas Market Rules, Decree No 69 of the Minister of Energy of 25 September 2007 on Deregulation and Partial Deregulation of Natural Gas Supply

Activity and Regulation No 12 of GNERC of 9 July 2009 approving the Rules on Supply and Consumption of Natural Gas. The Law on Electricity and Natural Gas explicitly provides that exploration, extraction, processing and storage of natural gas, the relations between the natural gas producers and suppliers, as well as natural gas transit, are outside its scope.

### b. State of Compliance

The Protocol concerning Accession of Georgia to the Treaty establishing the Energy Community foresees 31 December 2020 as the deadline for implementation of Directive 2009/73/EC, Regulation (EC) 715/2009 and Directive 2004/67/EC.





## 1. Licensing

The gas sector legislation of Georgia governs the relations among the importers, suppliers, transportation licensees, distribution licensees, final customers and retail customers. GNERC issues licenses for natural gas distribution and transportation activities, while the State Agency for Oil and Gas is responsible for issuing licenses and permits for natural gas processing, gas exploration and gas production.

The Law on Electricity and Natural Gas determines the list of documents that must be submitted to GNERC by the license applicants. The licenses are issued for an unlimited period, but may be revoked by GNERC in case of non-compliance. In certain cases, the Law on State Support for Investments allows issuing preliminary licenses.

Natural gas supply and distribution are separate activities in Georgia. Even though suppliers are not licensed, they are nevertheless subject to the authority of GNERC and have to abide by various requirements, including regular reporting and payment of a regulatory fee. However, the inadequate legal framework prevents GNERC from effective monitoring of new suppliers entering the market, in particular, as there is no notification mechanism in place. Its implementation is prevented by the Law on Licenses and Permits, which prohibits administrative bodies from introducing corresponding obligations through their by-laws implying the establishment of a licensing regime for an activity. Introducing a mandatory notification/authorization mechanism is regarded tantamount to obtaining a consent from GNERC and therefore in violation of the law.

Suppliers and licensees in the natural gas sector are required to submit quarterly and annual reports to GNERC. The information to be provided includes finances, costs, executed contracts and implementation of quality of service standards. In 2016, GNERC introduced new reporting forms in line with best international practices.

## 2. Wholesale Gas Market

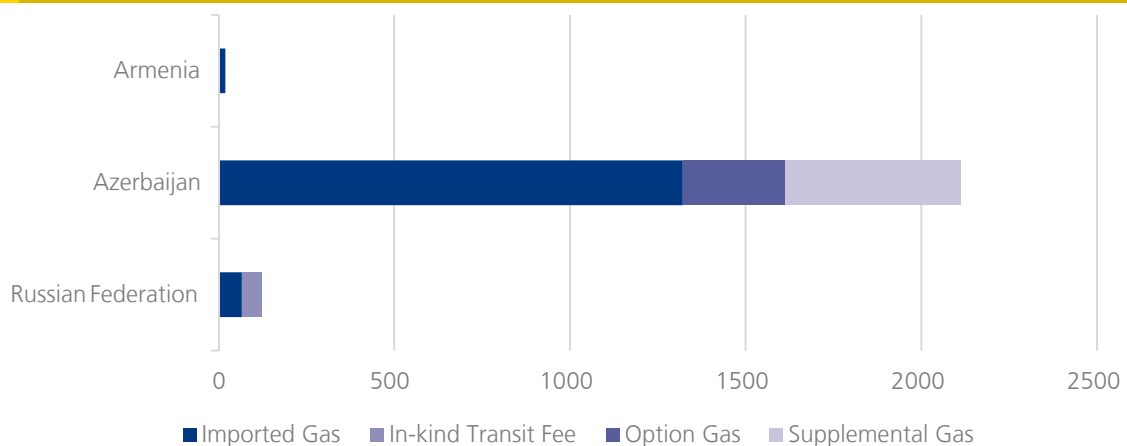
Since Georgia produces only insignificant volumes of natural gas, it relies heavily on foreign imports to satisfy domestic demand. Not so long ago, Georgia was almost fully dependent on natural gas supplied by the Russian Federation. In 2006, following the damage of the main gas pipeline importing Russian gas, Georgia was left without natural gas supply for two weeks, while only limited power supply was available. The event prompted the Government of Georgia to diversify its supply sources. Azerbaijan replaced Russia's gas supplies, accounting for 93% of the primary gas supply in 2016.

Presently there are several sources of natural gas supply in Georgia. Gas is imported from the Republic of Azerbaijan, the Russian Federation and the Republic of Armenia. In exchange for transit services, Georgia receives gas from Azerbaijan under the South Caucasus Pipeline (SCP) agreement, as well as from the Russian Federation, in exchange for transit through the North-South Gas Pipeline (NSGP). Additionally, small quantities of gas are produced locally. The gas received from product sharing agreements is auctioned by *JSC Georgian Oil and Gas Corporation (GOGC)*.

According to the arrangement which Georgia until recently had with the Russian Federation, it was allowed to retain 10% of the gas transported from Russia to Armenia through the NSGP, as an in-kind transit fee. As to the gas received from the SCP, there are two main agreements in place. The SCP Option Gas Agreement, which was concluded in 2003 and is valid until 2067, allows *GOGC* to purchase up to 5% of the transit volume of the gas transported through the SCP on an annual basis. The price for the first year was fixed at USD 50 per mcm, which is increased by 2% per year. Furthermore, under the SCP Supplemental Gas Agreement, which was concluded in the same year and is valid until 2025, *GOGC* is allowed to additionally purchase up to 500 mcm of additional gas per year, at a below-market price.



### Natural Gas Imports by Exporting Country in 2016 (mcm)



Source: GNERC Annual Report 2016

The Host Government Agreement accompanying the SCP provides that unless otherwise agreed by the parties, the seller will determine daily amounts of the option gas to be delivered in the course of the year. As to the supplemental gas, unless otherwise agreed by the parties, 60% of the gas is supplied in the winter period, while the maximum daily amount should not exceed the annual amount divided by 250.

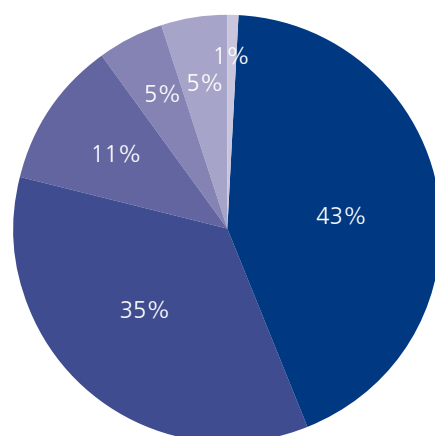
GOGC has an exclusive right to purchase option and supplemental gas received from the SCP. Under the Gas Sales Agreement concluded between GOGC and the transportation licensee, the *Georgian Gas Transportation Company LLC (GGTC)*, GOGC also has the right to purchase the full amount of the gas received from the Russian Federation as an in-kind transit fee.

Since Georgia has no gas storage facility and demand for natural gas is highly seasonal, shortages of gas during the

winter period are inevitable. According to the International Energy Agency, the imbalance between seasonal supply and consumption of natural gas in Georgia reached 150 mcm in 2014, while it is expected to increase to 200 mcm by 2030. To address the seasonal imbalance, an agreement was reached with SOCAR (the State Oil Company of the Azerbaijan Republic), according to which, the natural gas received from the SCP and NSGP is fully sold by GOGC to the SOCAR subsidiary, *SOCAR Gas Export-Import LLC*, under the Sales and Purchase Agreement concluded in 2003 and valid until 2030. In return for such agreement, SOCAR provides reliable and secure supply of natural gas to Georgia throughout the year and imports gas from Azerbaijan during the winter period, when the demand for gas is at its highest. In 2016, a new agreement was reached with SOCAR, according to which the company will provide an additional 500 mcm to Georgia at below-market prices to compensate for the gas shortage during the winter period.



## Share of Natural Gas Importers in 2015 (%)



- JSC Georgian Oil and Gas Corporation
- Socar Georgia Gas LLC
- Gas Transportation Company of Georgia LLC
- Georgian International Energy Corporation LLC
- Socar Gas Export-Import LLC
- Geotransgas LLC

Source: GNERC Annual Report 2015

SOCAR, together with the companies affiliated to it, represents the main participant on the Georgian gas market. In addition to supplying natural gas to both wholesale and retail markets to social and commercial sectors, it also owns the largest distribution network in Georgia. As a result of the wholesale market structure, the natural gas import market in Georgia is highly concentrated, with the HHI of 4.742, if affiliated companies are considered as single market participants.

### 3. Retail Gas Market

Retail customers are divided into two groups - the so-called social sector and the commercial sector. Gas supply was deregulated by the Decree of the Minister of Energy of Georgia, which granted an exception for household customers who

became gas consumers before 1 August 2008. These customers are subject to the price cap set by GNERC and, together with thermal power plants, represent the social sector entitled to consume cheap natural gas received from the SCP and the NSGP. In contrast, prices for the fully deregulated commercial sector are not fixed and supply agreements are concluded based on the public offers made by suppliers. In 2011, the Constitutional Court of Georgia dismissed the claim that the decree of the minister was discriminating against different groups of consumers. As of 2015, 78,2% of the total amount of gas supplied to household customers were supplied under the tariff set by GNERC, whereas the rest represented the deregulated segment. Not every company has taken advantage of the supply deregulation. For example, *Kaztransgaz-Tbilisi LLC* supplies both regulated and deregulated households under the same price.

Any customer, including household customers, is free to switch supplier at no charge. However, due to the existing circumstances in the wholesale market, there is little incentive on the part of retail customers to switch supplier.

The Rules on Supply and Consumption of Natural Gas oblige distribution licensees to create a competitive environment in supply activities through their distribution networks and prohibit discriminatory treatment of suppliers. As unbundling rules are not applied, distribution licensees are not prevented from carrying out supply activities; in fact, most of them are also involved in natural gas supply, which impedes the development of a competitive retail market. In 2016, there were 27 distribution licensees, out of which 24 were also involved in supply of gas. In total, 35 suppliers were active in the retail market at the end of 2016.

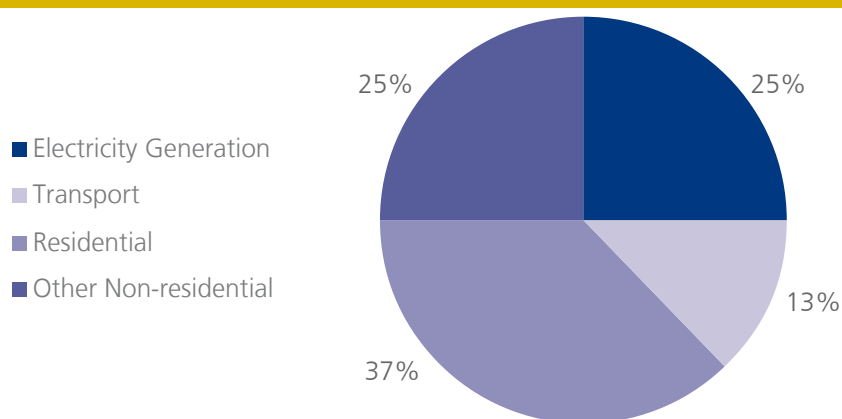
The three biggest distribution companies, each serving over 100,000 customers and simultaneously involved in the supply activities are *SOCAR Georgia Gas LLC*, *JSC SakOrgGas*, which is a *SOCAR*-affiliated company, and *Kaztransgaz-Tbilisi LLC*. While the latter is the main supplier in Tbilisi, *SOCAR Georgia*

*Gas LLC* and *JSC SakOrgGas* cover most of the territory of Georgia outside Tbilisi.

In 2015, these three companies together supplied 90% of household and 73% of non-household customers on the retail market. The same companies were responsible for distributing 90% of the total amount of distributed gas and for 95% of the new customer connections to the distribution network. As a result, the natural gas retail market is highly concentrated.

In 2016, the average annual consumption of natural gas by a household customer amounted to 773 cm, which constitutes a 5% increase compared to the previous year. Possible reasons for the increase provided by GNERC are colder climate and increasingly common natural gas appliances in households. There is a significant difference between the natural gas consumption patterns in Tbilisi and the rest of the country – while in 2016 one household customer in Tbilisi on average consumed 1,011 cm of natural gas, the same indicator outside Tbilisi was only 596 cm. This can be explained by the fact that natural gas is not a popular source for heating outside Tbilisi, where people prefer wood as a cheaper fuel alternative.

## Natural Gas Consumption by Sectors in 2016 (%)



Source: GNERC Annual Report 2016

In order to make natural gas an increasingly accessible commodity for the population as well as business entities, the government has been actively working on construction of new gas networks in the country. The government adopts a Decree on Required Measures for Providing Gas Supply to the Population of Georgia on an annual basis.

Natural gas distribution network codes have yet to be adopted in Georgia. Connection to the natural gas distribution network is regulated by GNERC through the Rules on Supply and Consumption of Natural Gas. The document sets fixed prices and timelines for connection to the low pressure pipelines in those districts and municipalities where natural gas distribution networks exist and which have been included in the relevant list of administrative units with access to natural gas, approved by

GNERC. Presently the list includes over 700 districts. Household customers are allowed to choose payment by instalments over 16 months. In cases where the type of requested connection does not meet the criteria described above, terms of connection are determined by bilateral agreements.

The Law on Electricity and Natural Gas guarantees third party access to the network by requiring from natural gas transportation and distribution licensees to wheel natural gas through their network, under the tariff set by GNERC. If wheeling is requested for a network, owned by a person other than a distribution licensee, the owner of the network is required under the Civil Code of Georgia to tolerate the use of its network against compensation. According to GNERC, in 2016 only two suppliers employed their third party access right to supply household

customers, whereas in case of non-household customers, nine suppliers took advantage of such right.

In 2015, GNERC adopted Resolution No 5 approving Rules on Setting Normative Losses in Natural Gas Distribution Network, which introduced incentive-based regulation for determining normative (allowed) losses for natural gas distribution licensees. The rules envisage fixing normative losses for each individual licensee, based on the actual performance in terms of natural gas losses in the distribution network. The rules set the ultimate target of 2% for the licensees, to be achieved within a five-year period, but allow fixing individual targets for each tariff year during the five-year period. Once the 2% goal is achieved, new, lower targets will be determined based on the average losses incurred during the previous years. According to GNERC, *KazTransGaz Tbilisi LLC* is responsible for the highest percentage of losses, contributing to 59% of total losses in the distribution network. The same indicator for *JSC SakOrgGas* and *SOCAR Georgia Gas LLC* is 19% and 16% respectively.

#### 4. Transmission

The unbundling requirements of Directive 2009/73/EC have not been transposed into the legislation of Georgia. Nevertheless, the requirement of having separate accounts are in place.

The Main Gas Pipeline System (MGPS) transports natural gas within the territory of Georgia. It mostly consists of pipelines with the diameter of 700-800 mm, with the total length amounting to approximately 2.200 km. MGPS connects to NSGP, SCP and the 1.000 mm diameter pipeline at the border of Azerbaijan. Natural gas from various sources is transported to the Saguramo unit, from where it is distributed across the territory of Georgia.

The MGPS is owned by *GOGC* and, on the basis of a lease agreement, operated by *GGTC*, which is the only natural gas transportation licensee in Georgia. *GGTC* acts as a system operator for MGPS and bears all costs in relation to maintenance and operation of the pipeline. *GOGC* remains responsible for the capital expenditure. In practice, *GOGC* also prepares an annual ten-year network development plan on a voluntary basis.

*GOGC* shares are 100% owned by a state-owned company, *JSC Partnership Fund*, whereas 100% of *GGTC* shares are owned directly by the state. The Ministry of Energy manages both companies. In addition to the activities in the gas sector, *GOGC* is engaged in activities in the electricity sector and owns 51% of shares in Gardabani Thermal Power Plant LLC, 100% of shares in Gardabani Thermal Power Plant 2 LLC, which will be commissioned by 2020, and 42,85% of shares in Kartli Wind Farm LLC. *GGTC* is involved in both transportation and supply activities.

The Law on Electricity and Natural Gas includes various requirements to be implemented by a transportation licensee. Such requirements include development (and maintenance)

of the natural gas transportation system as well as investment programmes to be submitted to GNERC for approval.

A supplier or a direct customer may request transportation of natural gas. The transportation licensee will refuse transportation, if a technical condition interfering with transportation exists, or the requested volume is not foreseen by the natural gas balance, unless the transportation licensee decides to carry out services beyond the quantities set by the balance in order to ensure uninterrupted and stable supply to a customer. Compliance of these conditions with the *acquis* is yet to be assessed.

Connection of a direct customer to the transportation system does not require modification of the transportation license, unless additional compressor stations, measuring stations or other types of facilities are installed. If a connection is requested by a customer, whose annual natural consumption exceeds 15% of the annual volume distributed by the relevant licensee, consent of GNERC must be obtained. The transportation licensee must prevent a connection of a distribution licensee or a direct customer to the transportation network, if such connection will adversely affect the transportation system as a whole, or impair the ability to serve other customers in accordance with the established standards.

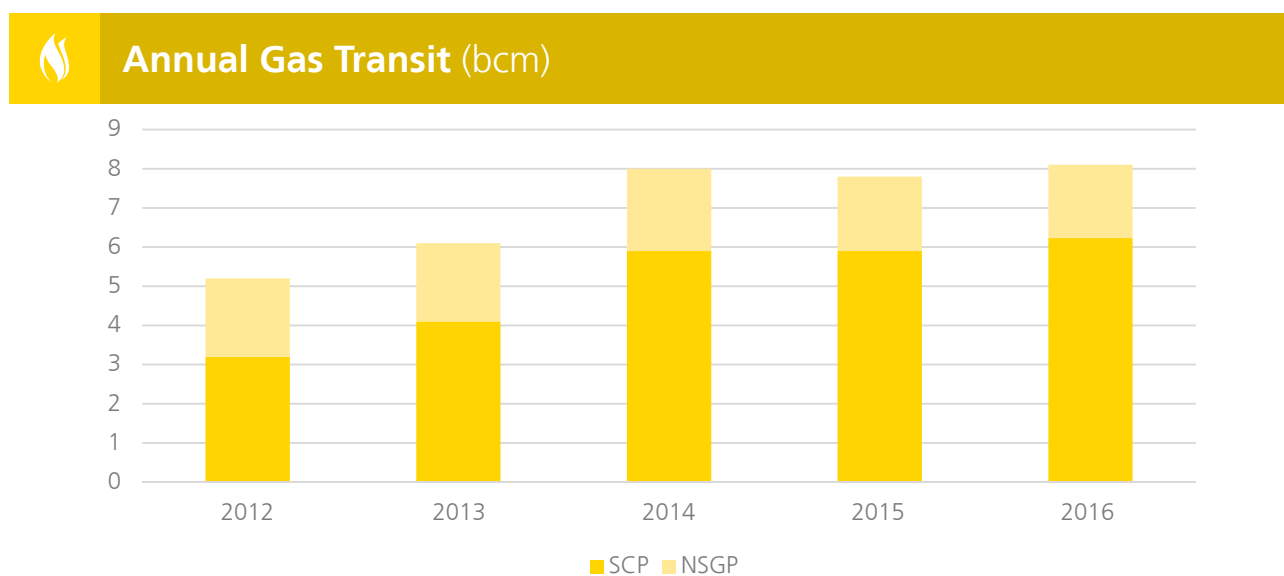
Once a gas sale agreement is executed, the seller is required to submit an application, together with the copy of the agreement, to the transportation licensee. If congestion in the natural gas transportation system arises, the transportation licensee is obliged to grant priority to the cheapest natural gas, in accordance with the least cost principle, i.e. congestion management is a matter of contract optimization. If congestion in the transportation system affects distribution licensees and direct customers, the transportation licensee is obliged to take into account the dependence on gas and the principles of fairness and necessity when allocating the natural gas. In case of a shortage, supply to thermal power plants should be prioritized. Also this arrangement needs to be scrutinized against the requirements of the *acquis*.

Due to its geostrategic location, Georgia acts as a transit corridor for transportation of natural gas from West to East and from North to South. The main gas transit pipelines are the SCP and NSGP. The NSGP, commissioned during the Soviet era, transports gas from the Russian Federation to the Republic of Armenia. The annual capacity of the pipeline is 12 bcm. The conditions for transit services are negotiated every year. Until recently, Georgia was able to retain 10% of the volume of the gas transported to the Republic of Armenia as an in-kind transit fee. However, in the beginning of 2017, the conditions were changed. The new, two-year contract concluded between the Government of Georgia and *Gazprom* provides that the remuneration system will be gradually monetized, meaning that in 2017 Georgia will receive 10% of the first one bcm of transported natural gas (100 mcm) as an in-kind payment, while remuneration for the following transit volumes will be made in monetary payments. The Government of Georgia has not

disclosed the agreed transit price for confidentiality reasons. As a result of the new deal, Georgia will also be able to buy additional supplies of natural gas from the Russian Federation during the winter period, for the reduced price of USD 185 instead of USD 215 per 1000 cm. Furthermore, according to the Ministry of Energy, the new agreement with *Gazprom* includes a ship-or-pay clause. The contracted transit capacity for 2017 is at least 2 bcm and 2,2 bcm for 2018.

The SCP has been operational since late 2006 and transfers gas from the Shah Deniz gas field in Azerbaijan to Turkey. The length of the pipeline is 691 km, out of which 248 runs

through the territory of Georgia. The pipeline is owned by the SCP Consortium. *BP* is the designated technical operator and its responsibility includes construction and operation of the pipeline, while *SOCAR Midstream Operations Ltd* serves as the commercial operator and is in charge of business administration. The existing SCP system is currently undergoing expansion within the scope of Shah Deniz Full Field Development project. As a result of expansion, two new compressor stations will be constructed in Georgia and the annual capacity of the pipeline will be increased from around 8 bcm to over 20 bcm. The expanded SCP will connect to TANAP at the border with Turkey.



Source: GOGC

The regulatory framework for the SCP is created by the Host Government Agreement, concluded between the Government of Georgia and the SCP participants. The agreement promulgates the terms of allocation of the pipeline's available capacity and provides that any access to the pipeline should be subject to negotiation on a transparent and non-discriminatory basis.

One of the prospective projects for delivering natural gas from Republic of Azerbaijan to the European markets is the Azerbaijan-Georgia-Romania-Hungary Interconnector (AGRI), which was initiated in 2010. The project foresees building an LNG terminal at the Black Sea in Georgia and delivering the product to Romania by tankers. A feasibility study for the project has already been conducted, according to which, it will be possible to develop the project once the second phase of the Shah Deniz oilfield development is complete.

### 5. Tariffs and prices

GNERC is required to set tariffs in a transparent manner and the existing procedures ensure effective public participation in the tariff-setting process. In 2014, GNERC developed a new tariff methodology for the natural gas sector, which was approved by Resolution No 33 approving Methodology for Calculating

Tariffs for Natural Gas. The resolution regulates the setting of tariffs for consumption of natural gas and services of transportation, distribution and wheeling. The methodology relies on the cost-plus regulation principle, which ensures stable operation of an undertaking by recovering reasonable expenses and receiving a fair return. So far, the resolutions of GNERC on setting tariffs in the natural gas sector were triggered by mergers between distribution licensees. Only recently, GNERC started reviewing tariffs in the gas sector, after tariff applications were submitted by several licensees.

In 2013, the Government of Georgia concluded a Memorandum of Understanding with natural gas suppliers, according to which, suppliers agreed to decrease the price of natural gas provided to household consumers by GEL 0,05 per cm. The reason for such commitment was the changes made to the agreement among *SOCAR Gas Import-Export*, GOGC and the Government of Georgia, which decreased the price of social gas supplied by *SOCAR*.

### 6. Gas Storage

Georgia is the only country in the region without gas storage facilities. However, *JSC Georgian Oil and Gas Corporation* is cur-



rently developing a project, which aims to build an underground gas storage facility in Ninotsminda, where a depleted oilfield is located. The gas storage facility will have a capacity of 210-280 mcm, constituting around 15% of current annual consumption of natural gas. The construction works are intended to start in 2018 and be finalized in 2020, by the time the volume of gas transit from Shah-Deniz field through the SCP is increased.

In addition to significantly contributing to the energy security of Georgia, the new gas storage facility will help to balance the seasonal change in demand for natural gas. However, even though the works related to development of the gas storage facility have been in progress for some time, there is still no legal framework in Georgia regulating such facilities.

### 7. Customer Protection

The regulatory framework in Georgia includes a number of provisions aimed at customer protection. The Rules on Supply and Consumption of Natural Gas regulate relations between distribution licensees, suppliers and retail customers. The document stipulates the rights and obligations of the parties and regulates various issues, which include, *inter alia*, metering, connection to the network, supply rules, procedures for switching a supplier, terms for disconnecting a customer and dispute resolution.

GNERC provides a free and time-efficient dispute settlement mechanism and effectively uses social media and various advertising campaigns to raise customer awareness with regard to natural gas-related issues. In 2016, GNERC reviewed 1.099 complaints submitted by customers against the undertakings in the natural gas sector.

In 2016, GNERC adopted Resolution No 13 approving the Rules on Commercial Quality of Service. According to the rules, if natural gas suppliers and distribution licensees do not implement the guaranteed quality of service standards within the required timeframe, they have to pay compensation to the affected customers. In certain cases, where the overall standards are concerned, failure to comply with the quality requirements might affect the tariff set by GNERC for the relevant undertaking's services.

Even though the concept of a vulnerable customer is not defined by the legislative framework, there are certain rules in place regulating the issue. For example, the Rules on Supply and Consumption of Natural Gas provide that if disconnection for non-payment would pose a threat to a person's life or health, the supplier must grant additional time for payment, but no more than three months. Furthermore, during the cold season, there are subsidies available to populations of certain mountainous municipalities.

### c. Conclusions

Over the last decade, the Government of Georgia has taken various steps to liberalize the natural gas market, but significant

challenges remain, partially caused by the long-term contracts executed with natural gas importers. The measures aimed at guaranteed supply of gas, which have been implemented in Georgia, were bound to result in the highly concentrated wholesale market of today.

Georgia has to carry out comprehensive legislative changes to ensure due implementation of the gas *acquis*. The accession protocol requests that Georgia must ensure that all non-household customers become eligible customers from 31 December 2018. All customers, including households, will become eligible from 31 December 2019. Timely transposition of the unbundling requirements is also essential for development of a liberalized gas market.

As regards cross-border infrastructure, the protocol grants derogations related to exemptions to both SCP and NSGP from implementation of Directive 2009/73/EC and Regulation (EC) 715/2009 until 31 August 2026, the date of expiration of the Energy Community Treaty.

Furthermore, the protocol provides that accession of Georgia to the Energy Community will not affect the Intergovernmental Agreement concluded between Georgia and the Republic of Azerbaijan relating to the transit, transportation and sale of natural gas in and beyond the territories of Georgia through SCP, as well as other agreements concluded within the framework of the intergovernmental agreement.

Georgia remains largely dependent on the Republic of Azerbaijan for natural gas supply. In order to enhance energy security of the country, measures, such as, *inter alia*, constructing a gas storage facility should be recognized as an important step towards enhanced energy security. It is important to swiftly develop the necessary regulatory framework.





## 4 Georgian National Energy and Water Supply Regulatory Commission (GNERC)

### a. Legal and Regulatory Framework

The predecessor of GNERC, the Power Regulatory Commission, was established in 1996 under the Ministry of Economy, by Decree No 437 of the President on Restructuring of the Power Sector. The decree foresaw the regulation of wholesale and retail electricity tariffs as the main responsibility of the commission. The development of the tariff methodology, however, was a joint competence of the Ministry of Fuel and Energy and the Ministry of Economy.

In 1997, the Law on Electricity established GNERC as the independent Georgian Power Regulatory Commission. The Power Regulatory Commission was dissolved by Decree No 534 of the President. The main responsibilities of the Georgian National Power Regulatory Commission included regulating the electricity sector by issuing licenses for generation, transmission, dispatch and distribution activities, as well as setting tariffs, monitoring compliance with licensing conditions and resolving disputes.

In the same year, the name of the law was changed to the Law on Electricity and Natural Gas; the Commission was renamed to Georgian National Energy Regulatory Commission (GNERC) and the regulation of natural gas sector was added to its responsibilities. In 2007, the competence of GNERC was further extended by the Law on Electricity and Natural Gas to include the water supply sector, and the name of the authority was once again changed to Georgian National Energy and Water Supply Regulatory Commission.

Presently, the legal framework for operation of GNERC includes the Law on Electricity and Natural Gas and the Law on National Regulatory Authorities. GNERC represents the sole, country-wide authority with the power to regulate the electricity, natural gas and water supply sectors in Georgia. Any concurrent regulatory authority is prohibited by the Law of Georgia on National Regulatory Authorities, in line with the Energy Community *acquis*.

### b. Organisation

GNERC is headed by five commissioners, including the chairperson. In order to adopt a decision, at least three commissioners must attend a meeting and more than half of the commissioners attending the meeting must vote in favour of it. The Law on Electricity and Natural Gas and the Law on National Regulatory Authorities define a complicated procedure for electing the commissioners: the president, in agreement with the government, selects the persons to be nominated as can-

didates to the parliament. The commissioners are elected for a period of six years. Appointment requires a positive majority of the members of parliament. Even though such an election procedure can be considered effective in terms of contributing to the independence of the commissioners, it is time-consuming and in the absence of a clear timeframe for election of a new commissioner it can – and in praxis has already proved to – affect the operation of GNERC. Namely, if a new commissioner is not elected in a timely manner, GNERC might not have sufficient commissioners to cast votes, at least in cases where only three out of the maximum five commissioner posts are filled. When, for instance, on 6 October 2015 the mandate of one of the three members of the commission expired, and the new commissioner was not appointed until 27 October 2016, GNERC was unable to adopt any decision for over 20 days.

The selection criteria for potential commissioners are limited to the mandatory requirements listed in the Law on Electricity and Natural Gas, according to which a candidate must be a citizen of Georgia with higher education and sufficient qualification and experience to carry out the tasks foreseen by the law. The requirements are broad and not elaborated any further. In addition, there is no legal requirement to publicly announce the vacancy for the position of a commissioner, and no such announcement is made in praxis. There is no legal requirement for transparency in the selection. When in 2015 a selection committee formed by experts in the energy sector, as well as a representative of Transparency International Georgia, was involved in the process of selecting candidates for the commissioner's position, this was a result of the goodwill of the president rather than a mandatory legal requirement.

A commissioner may be re-elected for another six-year term. The number of re-elections is not limited, which is not in line with the *acquis*. The Law on Electricity and Gas applied a rotation scheme to the first three commissioners, who were appointed for six-, four- and two-year terms. Furthermore, the law ensures that the end dates of the commissioners' term continue to be different by requiring that if a position of a commissioner becomes vacant prior to expiration of the term, a new commissioner should be elected for the remainder of the term.

The law limits the grounds for dismissal of a commissioner from office to losing the citizenship of Georgia, criminal conviction, failure to comply with the law regulating conflict of interests and failure to perform duties for four consecutive months. In the last two cases, the parliament must vote on termination of the mandate. The dismissed commissioner has the right to appeal the decision. Related provisions are, thus, to be considered compliant with the *acquis*.

GNERC approves its own charter and is free to determine the structure and organisation of the commission. The employees are appointed by the chairperson in agreement with the commissioners. As of 31 December 2016, the staff of GNERC consisted of 110 employees.

### c. Independence

A high level of independence of GNERC is guaranteed by the applicable legal framework. The Law on National Regulatory Authorities provides that national regulatory bodies must be independent from any political pressure or unlawful interference from state authorities and other bodies, or any other actions that may impinge on their independence.

The law provides a comprehensive definition of independence and prohibits any attempt of interference or control of GNERC's activities. Any attempt to influence a commissioner or a member of the apparatus is considered to be illegal and represents a ground for invalidity of a normative act issued by GNERC. Commissioners have the right to file a motion with the court to prevent or eliminate any attempt of undue influence or interference. Furthermore, the law mandates that if a body does not comply with the principles of independence, it shall not be considered to be a regulatory authority.

The notion of conflicts of interest is regulated by the Law on Electricity and Natural Gas, the Law on National Regulatory Authorities and the Law on Corruption and Incompatibility of Interests in Public Service. Commissioners are required by the Law on Regulatory Bodies to suspend membership of a political party. The law also prohibits formation of a political party or a civil organization within GNERC. Commissioners, as well as employees of GNERC, are not allowed to have a direct or indirect financial interest in a licensee, or hold a position at a licensee. Furthermore, a cooling-off phase will be applicable to the commissioners and employees of GNERC if their positions are terminated. According to the amendments to the Law on Corruption and Incompatibility of Interests in Public Service, within one year after dismissal, a dismissed person may not start working at a public institution or carry out activities at an enterprise, which has been under his or her official supervision during the previous three years. Within this period, he or she may not receive income from such a public institution or enterprise.

Financial independence of GNERC is also guaranteed by the law. GNERC determines and publishes its own budget, which is formed by regulatory fees paid by entities carrying out activities that fall within the scope of GNERC's authority. The Law on Regulatory Bodies requires that the regulatory fee is sufficient for covering the expenses foreseen by GNERC's budget, whereas the Law on Regulatory Fees states that the amount of the regulatory fee shall not exceed 0,75% of the total value (excluding VAT) of the supply of regulated goods (services). Excess revenues shall be transferred to the account of the following year and reflected in regulatory fees. At the start of GNERC's activities, budgetary shortages were common. However, they

did not result from the overall cap of the regulatory fee, but rather from non-payment of the fee due to the country's economic crisis at the time.

GNERC publishes annual reports on its activities and sends them to the president, the government and the parliament for informational purposes. GNERC is required to conduct financial audits and publish annual financial reports. The Law on Regulatory Bodies provides that the parliament may decide to audit compliance with the budget approved by GNERC. In such cases, an audit will be conducted by independent auditors, elected by the Tender Commission and approved by the Parliament of Georgia.

Even though the staff of GNERC did not have the status of public servants under the 1997 Law of Georgia on Public Service, the procedures of appointing public servants nevertheless applied. From 1 July 2017, the law has been replaced by the 2015 Law of Georgia on Public Service, which also applies to the staff of GNERC, granting them the status of public servants. Nevertheless, by virtue of the recent changes to the Law on National Regulatory Authorities, GNERC has retained autonomy on internal organization, including staff appointment and remuneration.

For the purposes of carrying out its activities, GNERC adopts resolutions and decisions. Resolutions of GNERC are published on the website of the Legislative Herald of Georgia, whereas other acts adopted by GNERC are published on its own website. Under the General Administrative Code, GNERC is required to substantiate its decisions, which is strictly adhered to in praxis. Decisions of GNERC may be subject solely to a judicial review.

The rules governing the decision-making process are promulgated in the General Administrative Code, as well as in the secondary legislation adopted by GNERC. Public consultations are required before adopting a resolution or when exercising authority in relation to licensing and tariff setting. GNERC meetings are in general open to the public. In order to protect confidentiality of information, the commission may decide to hold a closed meeting. Decisions adopted at closed meetings must be published.

In praxis, GNERC reports to the general public on a daily basis, through its website and by working closely with the representatives of media. To ensure high quality reporting on the energy related issues, GNERC has established a long-running programme, the Media Club, which targets awareness raising among media representatives.

In order to create additional mechanisms for protection of consumer rights, the position of a Public Defender was established in 2003 under the Law on National Regulatory Authorities. The main responsibilities of the Public Defender include, *inter alia*, protection of consumer interests by representing them before GNERC and energy undertakings and participating in drafting of normative acts, which might influence the interests of consumers. The Public Defender is financed from the budget of GNERC.

In order to select a Public Defender, the Sector Economy and Economic Policy Committee of the Parliament forms a commission, comprised of representatives of the parliamentary majority and minority, independent MPs, as well as representatives of the Public Defender of Georgia and GNERC. The commission elects the Public Defender by a majority of votes. Following the decision of the commission, the chairperson of GNERC issues an order on appointment of the Public Defender within ten days. The Public Defender is appointed for a five-year term.

#### d. Competences

Competences of GNERC include a wide array of activities, aimed at regulating the electricity and gas sectors in Georgia. GNERC regulates energy undertakings by setting licensing terms and conditions, issuing licenses and revoking them where necessary. One of the main responsibilities of GNERC is developing tariff methodologies and setting tariffs. In the electricity sector, GNERC determines tariffs for electricity generation, transmission, dispatch, distribution, wheeling, import and consumption, as well as for the services provided by the market operator. Additionally, GNERC determines the firm capacity fee and tariffs for electricity generation by firm capacity sources. Electricity producers that have signed a memorandum of understanding with the government and are party to the guaranteed power purchase agreement with ESCO are excluded from GNERC's tariff-setting authority for the duration of such agreement.

In the natural gas sector, GNERC sets tariffs for natural gas transportation, distribution, wheeling, supply and consumption. Tariffs on natural gas sold at auto gas stations are excluded from GNERC's regulatory scope.

Other competences of GNERC include organizing and coordinating activities related to certification in the energy sector, resolving disputes, and protecting consumers' rights. GNERC monitors investments, quality of service, time for repairs and connection to distribution and transmission networks, switching and disconnection rates, network security and reliability. GNERC regulates third-party access to the networks and has adopted Resolution No 10 approving the network code, which includes rules regarding congestion management of electricity transmission networks. GNERC shares certain competences of national regulatory authorities foreseen by the *acquis* with the Ministry of Energy. The ministry is responsible for approval of electricity and natural gas balances. Furthermore, the Law on Electricity and Natural Gas confers the right to approve market rules to the Ministry of Energy both in the electricity and natural gas sectors. The market rules are the main document regulating wholesale markets and various issues related to their functioning, including congestion management, balancing and capacity allocation for cross-border transmission lines.

GNERC is also responsible for conducting inquiries and cooperates with the national competition agency. Since 2013, the competences of GNERC include market monitoring. Until now,

however, GNERC has not been able to carry out its market monitoring function to full effect.

In order to ensure compliance with the requirements foreseen by the primary and secondary legislation, GNERC has the right to carry out inspections of regulated undertakings. According to the Administrative Offences Code, in case of non-compliance with the licensing terms and conditions determined by GNERC, a penalty in the amount of GEL 5.000 may be imposed. Following the requirements foreseen by the Law on Licenses and Permits, Resolution No. 23 of GNERC approving the Rules on Control of Activities and Licensing in Electricity, Gas and Water Supply Sectors provides that if the breach is not remedied within the time indicated by GNERC, the penalty may be tripled. Furthermore, GNERC may revoke a license if infringement is not remedied after the fine has been tripled twice, or if it is clear that imposing a fine will not have any effect on implementation of the licensee's obligations. Where revoking a license would result in more damage than good, GNERC may decide to allow the licensee to continue its activities and set additional requirements. Such requirements are not precisely defined by legislation, but can be defined based on the specific circumstances of the very case. In praxis, this tool is rarely used. If the licensee nevertheless fails to fulfil its obligations, GNERC may decide to implement the obligations itself or through a third party, at the expense of the licensee. Where such arrangement is impossible, the court may appoint a special manager at the request of GNERC.

#### e. Conclusions

In accordance with the requirements of the Third Energy Package, GNERC is a single authority with nation-wide competences in regulating electricity and natural gas sectors in Georgia. Since GNERC was established by law, it would require a decision of the parliament to liquidate it.

Procedures for appointment of GNERC commissioners are complicated, aiming to ensure their independence. However, due to the lack of timeframe for completion of these procedures, the ability of GNERC to function properly might be at stake under certain circumstances, which has been proved by past experience.

Contrary to the requirements of Directive 2009/72/EC and Directive 2009/73/EC, there is no limit to the number of times a commissioner's term may be renewed. The rotation scheme was applied to the first three commissioners, while the law requires that if a commissioner is dismissed prior to expiration of the term, the new commissioner should be elected for the remainder of the term.

The competences of GNERC under the applicable legal framework largely reflect the requirements of Directive 2009/72/EC and Directive 2009/73/EC. The main shortcoming of GNERC's regulatory scope is that in 2005 the power to approve Electricity Market Rules and Gas Market Rules – the key documents



regulating electricity and gas markets in Georgia – was shifted to the Ministry of Energy of Georgia, which adversely affects GNERC’s regulatory authority.

Even though GNERC has been unable to properly implement its market monitoring functions, ongoing activities aimed at capacity building in this field will facilitate the necessary change and enable GNERC to carry out effective market monitoring activities.

Another critical issue is inadequate amount of fines that may be imposed by GNERC. While the Energy Community *acquis* requires that penalties on energy undertakings in breach of their obligations are effective, proportionate and dissuasive,

the amount of penalties foreseen by the legislation of Georgia may be considered to meet this requirement only in case of small undertakings, while they are completely inadequate when large undertakings are concerned.

In implementing the Energy Community *acquis*, a selection committee, composed of neutral, high-level experts in the field of energy, regulation and administration, should be introduced for selection of commissioners. Moreover, criteria for appointment of commissioners should be defined more specifically. Vacancies for commissioner posts should be announced publicly, and terms of commissioners should be limited to a one-time renewal. Finally, penalty rights of GNERC have to be upgraded to the threshold foreseen by the Third Package.







## 5 Oil

### a. Sector Overview

Oil products account for around 30% of energy consumption in Georgia. The country is almost 100% dependent on foreign imports of crude oil and refined petroleum products required to satisfy its domestic demand. Imports are mainly carried out from Romania, Azerbaijan, the Russian Federation, Bulgaria, Greece and Turkmenistan. Even though oil production in Georgia is insignificant, due to its geostrategic location, Georgia has a long history of serving as a transit corridor for oil transportation from the Caspian Sea to the western energy markets.

The main legislative acts regulating upstream oil activities in Georgia are the Law on Oil and Gas of 1999 and Decree No 2 of the Head of the State Agency for Regulation of Oil and Gas Resources concerning National Regulations for Conducting Oil and Gas Operations in Georgia. On the upstream mar-

ket, there are five major oil importing companies operating in Georgia: *Sun Petroleum Georgia LLC (Gulf)*, *Lukoil Georgia LLC*, *Rompetrol Georgia LLC*, *SOCAR Georgia Petroleum* and *JSC WISSOL Petroleum Georgia*. These companies represent between 60-70% of total Georgian imports; the remaining share of imports is covered by some other 15 companies with smaller market shares. The Georgian oil product supply market is liberalized, with no formal requirements/barriers to entry for market participants and prices freely determined by the market.

The law designates the State Agency of Oil and Gas established within the Ministry of Energy as a responsible body for regulation of oil and gas operations, oil refining, gas processing and transportation activities. The Ministry of Energy is responsible for developing the principal directions of the state policy in the oil sectors, whereas the State Agency of Oil and Gas is responsible for managing the sector in compliance with the strategic directions.



## Crude Oil Production 2013-2015

Years	Total Oil Production (tonnes)	GOGC Share (tonnes)	Investor Share (tonnes)
2012	48.977	18.411	30.566
2013	47.863	19.558	28.305
2014	42.632	21.114	21.518
2015	40.206	18.773	21.433
2016	38.557	17.102	21.455

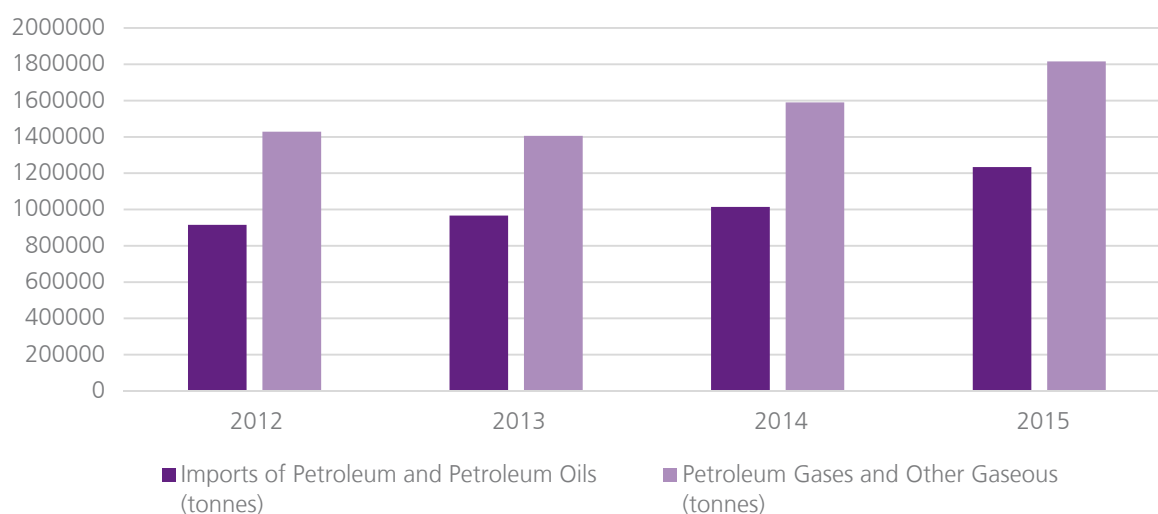
Source: GOGC

Oil and gas operations may be performed, in whole or in part, by the State of Georgia and natural or legal persons. The Law on Oil and Gas requires from companies to obtain a license issued by the State Agency of Oil and Gas to carry out oil and gas exploration and extraction activities. A tender or an auction is conducted by the agency and the winner enters into an agreement with the State of Georgia. The law requires that the agreement should, among other issues, define the procedure for determining the market price for oil and gas and the value of cost recovery oil. All operational and commercial duties arising from the agreement with the investor (except for the regulatory functions) are transferred to the National Oil Company by the State Agency of Oil and Gas. The government has granted the status of National Oil Company to *JSC Georgian Oil and Gas Corporation*, 100% shares of which are owned by *JSC Partnership Fund* and managed by the Ministry of Energy.





## Import of Petroleum Products and Gases



Source: GeoStat

Even though both the Law on Electricity and Natural Gas and the Law on Oil and Gas cover transportation activities, they are fundamentally different. The transportation activity under the latter law refers to shipment of raw material or oil and gas products by means of transport within the territory of Georgia. An application for a transportation license may be submitted to the State Agency of Oil and Gas only for transporting products that are either produced or owned by the applicant. The Law on Oil and Gas provides that transportation must be available to all carriers on a non-discriminatory basis, in accordance with the regulatory acts adopted by the agency. Furthermore, where the conditions foreseen by the law apply, a transportation licensee is obliged to make the unused pipeline capacity available to other carriers on a non-discriminatory basis.

The territory of Georgia is divided into 25 licensing blocks for the purpose of exploration and production. In 2015, six companies produced crude oil, whereas nine companies were engaged in exploration-only works. According to the Ministry of Energy, proven oil resources (1P) are insignificant – 1,4 million tonnes, whereas probable (2P) and possible (3P) reserves amount to 5,2 million and 23,3 million tonnes respectively. To this day around 27 million tonnes of oil have been extracted in Georgia.

Oil refining activities in Georgia were resumed in 2015. Presently there are two oil refining licensees in Georgia – *Globus LLC* and *ZD Oil Company LLC*. The oil refinery of *Globus LLC* is located in Tbilisi and its design capacity is 80.000 TPA. The oil refinery of *ZD Oil Company LLC* is located in Gardabani municipality and its design capacity constitutes 130.000 TPA. In 2015, only *ZD Oil Company LLC* was engaged in oil refining and refined 12.460 tonnes of crude oil. As a result, 4.610 tonnes of diesel, 2.234 tonnes of Naphtha, 5.215 tonnes of fuel oil and 6,5 tonnes of bitumen were produced.

During the first two quarters of 2016, 14.226 tonnes of crude oil were processed. Another oil refinery will be built in Kulevi by 2020.

Quality of fuel is regulated by Decree No 124 of the Government on Quality Norms of Car Petrol and Decree No 238 of the Government of Georgia on Quality Norms of Diesel Fuel, Analysis Methods and the Measures for Implementation. From 2017 on, the allowed sulphur content in petrol has been reduced to a maximum 10 ppm (mg/kg), in compliance with the EU standards (the so-called Euro V standard). The standards for sulphur content in diesel fuel lags behind the EU standards and is set at 100 ppm. However, it will be decreased to 50 mg/kg from 1 January 2019 (which is equivalent to the Euro IV standard). The State Agency of Oil and Gas is in charge of quality control of the petroleum products.

The production of oil in Georgia has been declining over the last years, and the imports of crude oil and petroleum products are rising. Consumption of petroleum products in Georgia was at around 1,3 million tonnes in 2015.

### b. Transit

Georgia has two main oil pipelines:

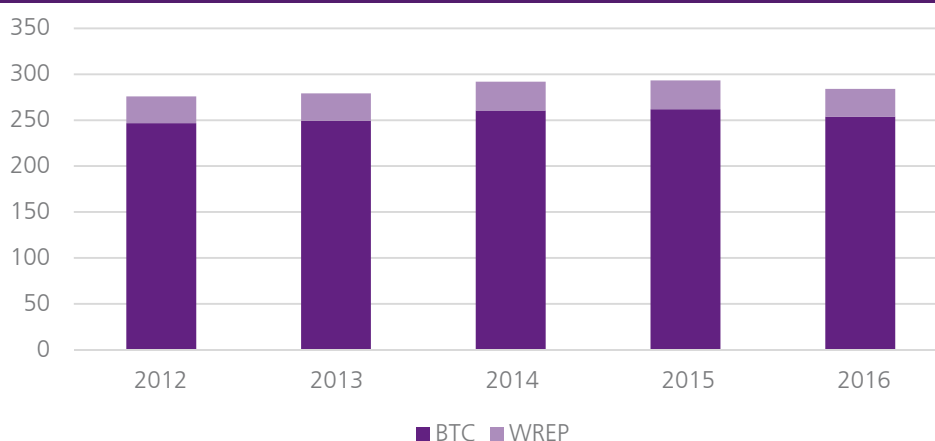
The Baku-Tbilisi-Ceyhan Pipeline (BTC), which is among the longest pipelines in the world, became fully operational in 2006 and transports oil from Azerbaijan to Turkey through the territory of Georgia. The pipeline is also used to transport oil from Turkmenistan and Kazakhstan. The pipeline is 1 768 km long, out of which 249 km run through the territory of Georgia. BTC is capable of transporting 1,2 million barrels of oil per day (around 58 MTA). The pipeline is operated by *BP* and owned by the International Consortium *BTC Co*, shareholders of which

include *BP, AzBTC, Chevron, Statoil, TPAO, ENI, Total, Itochu, INPEX, CIECO* and *ONGC Videsh Ltd.*

The other pipeline is the 829 km-long (out of which 375 km is in Georgia) Western Route Export Pipeline (WREP). It became operational already in 1999 and transports oil from Azeri–Chirag–Gunashli oilfield to the Supsa terminal in Georgia, from

where it is transported to Turkey by tankers. The pipeline is capable of transporting up to 100.000 barrels of oil per day (around 4,8 MTA). The Georgian part of WREP is owned by *GOGC* and operated by *BP*. A small (approximately 1.5 km) part of the WREP pipeline falls within the territories occupied by the Russian Federation, giving rise to significant energy security concerns.

## Oil Transit (million barrels)



Source: GOGC



Legislation of Georgia presently does not foresee mandatory requirements with regard to emergency oil stocks and no emergency oil stockholding exists. As a member of the Energy Community, Georgia will have to implement the Oil Stocks Directive 2009/119/EC by 1 January 2023. According to the roadmap adopted in Sarajevo in 2016, Georgia is to bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 31 December 2017. The Ministry of Energy is taking the lead in transposing the Oil Stocks Directive.

According to preliminary estimates, a stockholding obligation based on 90 days of net imports translates to a required volume of roughly 300 thousand tonnes.

The oil terminals in Batumi, Poti, Supsa and Kulevi may potentially be used for storage of emergency oil stocks. The tank farms of Batumi Oil Terminal have a total capacity of up to 551.000 cm, whereas storage capacity of Poti Terminal and Supsa Terminal amount to approximately 118.000 cm and 160.000 cm respectively. The capacity of the Kulevi Oil Terminal was recently increased from 320.000 cm to 380.000 cm. Nevertheless, the current storage capacity in Georgia is likely not sufficient for emergency stocks.

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### c. Conclusions

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Oil products make up for 30% of the energy consumption in Georgia, making the country heavily dependent on foreign oil imports. The main oil pipelines transiting the country, BTC and WREP, provide a significant contribution to the energy security and financial revenues of the country. Therefore, proximity of the WREP pipeline to the conflict region in Georgia represents a substantial cause for energy security concerns.

One way to alleviate the energy security concerns is developing the mechanisms for introduction of the requirements on maintaining the minimum stocks of crude oil and petroleum products. Implementation of such requirements will ensure that in case of turmoil in the region, Georgia will be able to satisfy its domestic demand for oil until alternative sources of supply are available.

As a first step, Georgia should gather all necessary information by and through one single point within the Ministry of Energy, and determine the emergency stockholding model. In addition, initial calculations of the stockholding obligation should form the basis for determining, in primary legislation on emergency oil stockholding, who will be responsible for the establishment of stocks and how the stockholding will be financed.



## 6 Renewable energy

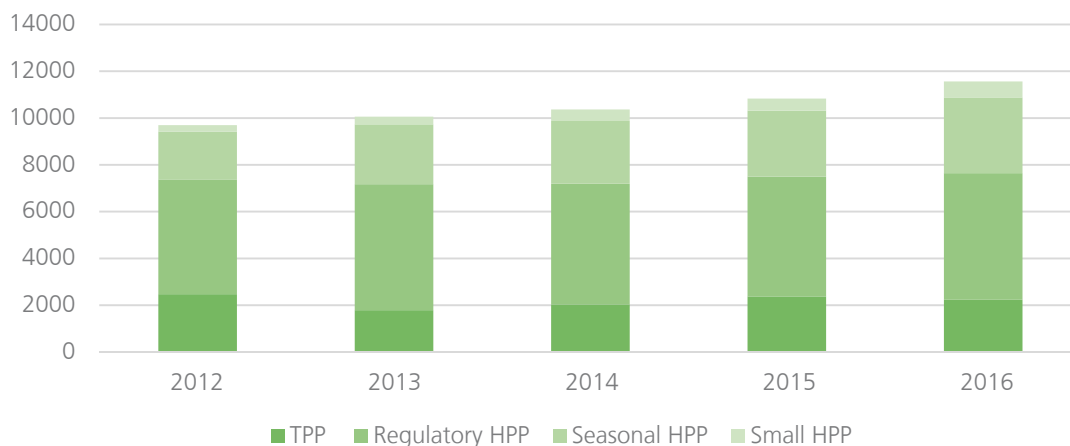
### a. Sector Overview

Georgia has a significant potential for development of renewable energy. Since gaining independence, utilization of hydropower capacities has been part of the government's strategy for enhancing energy security and satisfying the increasing demand for electricity. In recent years, the interest in other sources of renewable energy has also grown. Still, the 27% share of renewables in the total final energy consumption is attributable to the hydropower generation and wood fuel.

The potential for renewable energy development in Georgia remains largely untapped. Even though the country has one of the richest hydro resources per capita in the world, only approximately 20% of these resources have been utilized. Presently the share of renewable energy generation capacity in the total electricity generation capacity constitutes around 80%, while the share of renewable energy in total final energy consumption is 27%.



### Share of Sources in Electricity Generation (million kWh)



Source: ESCO

According to the Main Directions of the State Policy in Energy Sector of Georgia, utilization of renewable energy sources should be one of the state policy priorities and be developed by means of domestic and foreign investments. The document emphasizes the importance of development of a legal framework, scientific research and creating the necessary infrastructure. One of the main directions of state policy in the energy sector is to make the country a regional platform for clean energy trade. Exploiting the potential of local hydropower and other renewable energy sources is also among the stated purposes of the Law on Electricity and Natural Gas.

The main document targeting the promotion and development of renewables in Georgia is the State Programme Renewable Energy 2008 adopted by the government. The document promulgates rules and procedures applicable to developing new renewable energy sources in the country and provides incentives for investors in terms of fixed price and guaranteed power purchase agreements.

According to the State Programme Renewable Energy 2008, electricity from renewable sources must be sold domestically for ten years after commissioning during the three months of the winter period (in accordance with the electricity balance). Electricity may be sold to any buyer in Georgia based on deregulated prices, and/or to the Electricity Market Operator based on the guaranteed power purchase agreement, which determines the applicable tariff in accordance with the law.

A number of other measures targeting promotion of investments in renewable energy have been implemented by the government. One of such measures was deregulation of small power plants and power plants commissioned after 1 August 2008, which has proved to be a successful reform. According to the Ministry of Energy, as of May 2017, ongoing and potential renewable energy projects included 146 power plants with projected total installed capacity of 5 358 MW and generation capacity of 19 943 GWh, requiring investments in the amount of almost USD 8,8 billion.



Forty-seven of these projects are already at the construction or licensing stage.

In 2010, the government established the *JSC Georgian Energy Development Fund (GEDF)*, 100% shares of which are owned by the state and managed by the Ministry of Energy. *GEDF* facilitates investments in renewable energy and develops joint renewable energy projects with investors. The Ministry of Energy of Georgia publishes on its website information on renewables, including applicable legislation, requirements and procedures, energy potential of various renewable sources, list of available projects, map of potential HPPs and a cost handbook.

The draft Spatial Planning and Construction Code, developed by the Ministry of Economy and Sustainable Development, introduces requirements related to renewable energy utilization in the building sector. The draft code includes an article dedicated to consumption of renewable energy and provides that the possibility to utilize renewable energy should be taken into account during construction planning.

In 2016, the Law on Electricity and Natural Gas and the Electricity Supply and Consumption Rules were amended to introduce net-metering. As a result, for the first time in Georgia, retail customers who own renewable energy sources with a capacity of up to 100 kW, may connect them to the distribution network and sell excess electricity to the distribution licensee for the tariff fixed by GNERC. In order to ensure stability of the system, total generation capacity of micro power plants connected to the distribution licensee's network may not exceed 2% of annual peak load. The standard application form for connection of a micro power plant to the distribution network is approved by GNERC. The timeline for completion of the works related to connection, as well as the connection fee, is also determined by GNERC. In order to facilitate engagement in net-metering, GNERC requires distribution licensees to provide customers with any necessary technical, legal and other kinds of assistance.

### 1. Wind Power

Georgia has recently started exploiting the wind energy potential. The first wind power plant (WPP) in Georgia was commissioned in Gori in 2016. The WPP is owned by *Kartli Wind Farm LLC*, 57,15% shares of which are owned by *GEDF*, whereas 42,85% of shares are owned by *JSC Georgian Oil and Gas Corporation*. The WPP consists of six wind turbines, each having 3,45 MW installed capacity. In January 2017, the WPP registered as a qualified enterprise and generated 0,7% of total energy supplied to the grid. During the first ten years following commencement of Kartli WPP, 100% of the electricity generated by Kartli WPP will be purchased by *ESCO* for the fixed tariff of USD 6,89 cent per kWh at the interconnection point.

Since 2015, *GEDF*, together with *Calik Enerji Sanayi ve Ticaret A.S* has been developing two more WPPs - Nigoza WPP (installed capacity 50 MW) in Shida Kartli region and Central WPP (installed capacity 150 MW) in the Imereti region. Furthermore, in January 2017, *GEDF* invited investors to express interest in joint development of another WPP in Zestaponi, with an estimated installed capacity of 150 MW and annual generation of 478,2 GWh.

The total wind resource potential in Georgia is estimated to be 1 500 MW, whereas average annual generation is estimated to be around 4 TWh. The *GSE* states in the Ten Year Network Development Plan of Georgia for 2017-2027 that unless specific rehabilitation works are undertaken and integration with the European energy market is achieved, the installed capacity of wind power plants connected to the power system should not exceed 100 MW by 2020.

### 2. Solar Power

The total potential of annual solar energy potential in Georgia is estimated at 108 MW. According to the Ministry of Energy, total annual solar radiation varies between 1.300-2.500 kWh/



m<sup>2</sup>, depending on geographic location. During the recent years, a number of solar energy projects have been implemented in Georgia. Solar electricity generation systems were installed in Tbilisi International Airport and Ilia State University, with the capacity of 316 kW and 34 kW respectively. *GEDF* is also developing a solar power plant project in Udabno, Kakheti region. The installed capacity of the project is 5 MW, while an average annual generation capacity will be approximately 8 GWh.

In 2017, the government concluded a memorandum of understanding with *JSC Caucasus Sun Company*, which foresees carrying out feasibility studies on solar power plants in Ksani, Marneuli, Kaspi, Gldani, Akhaltsikhe and Gardabani. The projected capacity of each solar power plant is 50 MW.

### 3. Other Renewable Energy Sources

Biomass represents another important source of renewable energy. According to the draft Energy Strategy of Georgia 2016 - 2025, prepared by the Ministry of Energy, a feasibility study for potential construction of the first 2 MW biogas power plant in Gardabani municipality will be performed.

Presently, utilization of wood in Georgia is taking place in an unsustainable manner and the country is facing impacts of illegal logging and gradual deforestation. Wood remains the fuel of choice for heating in rural parts of the country, even where households have access to natural gas.

Geothermal energy represents another potential field for development. Geothermal water temperature varies between 30-110 degrees Celsius, whereas the country-wide resources total to

approximately 250 mcm. Presently, geothermal energy is utilized on a small scale, mostly for household and agricultural purposes.

### 4. Development of Infrastructure

Since prices of electricity in Georgia remain relatively low, development of the network infrastructure represents an inevitable precondition for further development and utilization of Georgia's renewable energy potential. The main project in this regard was the completion of the Georgia-Turkey Borcka-Akhaltsikhe ("Meskheti") cross-border interconnection line in 2013, which opened the possibility to enter the Turkish power market for the hydropower producers in Georgia. Development of the North-South Energy Corridor with the Russian Federation, Armenia and Iran in the upcoming years will bring additional opportunities for renewable energy generation in Georgia.

A number of changes were made to the legislation, aiming to accommodate infrastructural developments and facilitate renewable energy trade. Under the Electricity Market Rules, renewable energy sources are granted priority access to new cross-border interconnection lines – i.e. those commissioned since 2012. However, such priority does not apply in a uniform manner and only electricity generated by power plants commissioned after 2010 can benefit. Furthermore, power plants having concluded long-term export contracts have priority over power plants without such contracts. Compliance of this arrangement is still to be verified.

According to the Ten Year Network Development Plan of Georgia for 2017-2027, prepared by *GSE*, one of the main development goals is to ensure sufficient transfer capacity for



integration of renewable energy sources into the network. A similar commitment is required from distribution licensees under Resolution No 10 of GNERC approving the Network Rules of 17 April 2014, which provides that five-year distribution network plans should include integration of renewable energy sources in the distribution network.

### b. State of Compliance

Presently, the legal framework in Georgia does not include a special law dedicated to renewables. Provisions regulating various aspects of renewable energy are incorporated both in primary and secondary legislation. The country lacks targets of renewable energy in the electricity, heating and cooling, and transport sectors. Furthermore, a National Renewable Energy Action Plan (NREAP) has yet to be developed. The requirements of Renewable Energy Directive 2009/28/EC are not satisfied by the existing legal framework in Georgia.

Since there is no single legislative act on renewables, Georgia lacks a systematic approach towards regulation of the field. Most of the studies on potential of renewable energy sources are outdated and additional research is required to establish accurate data.

Notwithstanding, the Government of Georgia has implemented successful measures of promotion and managed to attract investments and develop new sources of renewable energy through various support schemes. In the heart of such support schemes are guaranteed power purchase agreements, which distort the market and are not in line with the State aid rules.

Insufficient cross-border capacities for electricity export remain a challenge for development of new renewable energy sources, which will be partially resolved through building of new interconnectors by GSE. Even though Electricity Market Rules grant producers of renewable energy priority access to new cross-border interconnectors, not all producers are eligible to benefit from the rules due to applicable exceptions. That is discriminatory.

The regulatory framework in Georgia does not foresee special rules on connection to the network for producers of renewable

energy, except for the customers engaged in net-metering. Moreover, the system to issue, transfer and cancel guarantees of origin for energy has not yet been developed either.

### c. Conclusions

Since Georgia has committed to promote energy from renewable sources and implement Directive 2009/28/EC in accordance with the protocol of accession to the Energy Community, measures should be put into effect to create an effective legislative and regulatory framework for attracting investments in renewable energy. Further development of renewables in Georgia will reduce energy dependence, increase energy security, contribute to environmental protection, stimulate development of aging and outdated facilities, create premises for sustainable development and growth and create new jobs.

The adoption of a National Renewable Energy Action Plan should become a priority on Georgia's energy agenda. It is recommended to adopt targets of renewable energy and specific regulatory measures aimed at encouraging the use of renewable energy in heating and cooling. Furthermore, effective support schemes for promotion of energy from renewable sources that are compatible with European State aid *acquis* should be introduced. The support schemes have to be part of a long-term, predictable and stable policy and strategic framework. They require scrutiny to ensure they are proportionate and do not create undue distortions in the market. The support should be based on public consultation with all relevant stakeholders and should be notified to the State aid enforcement authority before adoption.

Support should be granted through a competitive bidding process. The design of the tender for selecting the beneficiary of the support needs to be considered carefully in order to ensure that it achieves its objective for driving the cost of supporting renewables down while allowing the most competitive technology to be selected by the market.

Investor confidence is threatened by disruptions of the support scheme or retroactive changes that affect their legitimate expectations. This should be avoided as it usually leads to legal disputes increasing the risks in those markets and deterring new investors.



## 7 Energy Efficiency

Energy Efficiency Action Plan (EEAP)			
Period covered by EEAP		N/A - drafting phase	
Key institution in charge		Ministry of Energy; Ministry of Economy and Sustainable Development	
Main data and energy efficiency indicators		2013	2014
Total primary energy supply (TPES)		ktoe	4.145,8
Energy intensity (TPES/GDP)		toe / 1.000 USD	0,26
TPES/Population		toe/capita	1
Total final energy consumption (TFEC)		ktoe	3.726,3
Share of TFEC by sector	Residential		31
	Services		9
	Industry		18
	Transport		30
	Other		4
	Non-energy use		8

Source: GeoStat

Indicator calculated by the Energy Community Secretariat based on the data published by GeoStat

### a. Sector Overview

One of the earliest references to energy efficiency in Georgian regulation was made in 1996, when the president adopted Decree No 437 on Restructuring of the Power Sector, stating that among the main tasks of the Ministry of Fuel and Energy was to develop strategies for improvement of energy efficiency. Nevertheless, the issue has not been effectively addressed in practice and its implementation has been largely limited to voluntary instruments and activities carried out within the scope of projects financed by international donors.

Presently, Georgia still lacks an adequate legal framework to govern energy efficiency related issues. There is no law specifically regulating energy efficiency. Instead, relevant rules may be found in several legal acts, often employing general language. For example, the Law on Electricity and Natural Gas foresees a general obligation of the Ministry of Energy to facilitate the measures related to energy efficiency, without providing a definition of the term.

The Main Directions of State Policy in the Energy Sector includes development and implementation of a unified approach towards energy efficiency among the main priorities of state policy. According to the document, reducing energy intensity and implementation of energy efficiency programmes are essential for economic development and optimized energy consumption. The Social-Economic Development Strategy of Georgia 2020 is another document referring to energy efficiency. It requires that improvement of energy efficiency be facilitated and applicable legislative mechanisms be drawn up in accordance with international and European regulations.

The main state agencies responsible for energy efficiency regulation are the Ministry of Energy, which is in charge of developing energy efficiency legislation and measures, and the Ministry of Economy and Sustainable Development, which is responsible for energy efficiency in the sectors of construction, transport and green economy.

As part of Georgia's attempts to address the existing lack of regulation in the energy efficiency field and transpose Directive 2012/27/EU on Energy Efficiency, preparation of the First National Energy Efficiency Action Plan (NEEAP) started as early as in 2015. The draft NEEAP was developed by the Ministry of Energy and the Ministry of Economy and Sustainable Development. The NEEAP will address a number of issues stemming from the requirements of the energy efficiency *acquis*. They include energy efficiency in public buildings, energy audits, energy labelling, "green" procurement system and awareness raising. The draft NEEAP also includes a roadmap for implementation of Directive 2012/27/EU and creates the basis for the establishment of an Energy Efficiency Agency, which will facilitate the implementation of energy efficiency-related measures and mobilize investments in this field.

Even though the energy intensity of the Georgian economy exceeds the EU-28 average, it is still lower than the Energy Community Contracting Party average. However, energy intensity has been increasing during the past years. The transport sector and households account for the highest shares of energy consumption – 35% and 30% respectively - whereas industry is accountable for 15% of total consumption.

Buildings are major sources for greenhouse gas emissions in Georgia. Most of them were constructed during the Soviet



era, when due to abundance of cheap fuel, energy efficiency standards were not applied. Over 10% of such buildings are estimated to have exhausted their lifetime. Before the post-soviet energy crisis engulfed the country, a district heating system operated in Tbilisi, which was abruptly suspended, following the devastating events in 1990s, forcing the residents to resort to wood and kerosene stoves. Presently, wood remains the primary source of heating in the rural areas of Georgia, even in the households with access to natural gas. In 2013, 86% of greenhouse gas emissions were attributable to residential buildings, whereas public buildings and commercial buildings accounted for 5% and 9% respectively.

The draft Spatial Planning and Construction Code, developed by the Ministry of Economy and Sustainable Development, incorporates energy efficiency requirements for construction of new buildings. According to the draft code, the highest level of energy efficiency shall be ensured during construction of a building. As to the old buildings, there are various ongoing projects aimed at increasing energy efficiency on a municipal level, such as partial grants for refurbishing of roofs, modernizing municipal buildings and installing energy-efficient lightning. Even though the potential for energy savings in old buildings is significant, insufficient financial resources remain the main obstacle to achieving this goal. Energy performance certification of administrative buildings on a voluntary basis has been actively promoted by various international projects. Through the support of donors, a number of public schools and kindergartens were refurbished and received energy performance certificates.

GNERC is among the public bodies involved in designing and implementing various measures aimed at improvement of energy efficiency. For example, block tariffs for electricity supply were introduced. Accordingly, the more electricity a household consumes, the higher the tariff that applies, which prompts customers to save energy. Furthermore, due to the measures implemented by GNERC, electricity and natural gas losses in transmission, transportation and distribution networks were significantly reduced over the recent years, while the percentage of customers with individual metering devices increased to almost 100%.

Another measure implemented by the government targeted promotion of energy-efficient cars. From the beginning of 2017, the excise tax imposed on hybrid motor cars not older than six years is 60% less compared to the non-hybrid ones, while the tax is altogether waived for electric cars, thus motivating customers to switch to energy-saving motor vehicles.

Georgia is still lacking national targets in energy efficiency. The issue is partially addressed on the level of municipalities. Over 10 cities and municipalities in Georgia are signatories to the Covenant of Mayors, the EU initiative involving voluntary commitments by municipalities to reduce greenhouse gas emissions by at least 20%. The Ministry of Energy, together with the Ministry of Environment and Natural Resources Protection,

is the national coordinator of the Covenant of Mayors for the local authorities in Georgia. Signatories to the Covenant of Mayors prepare and implement Sustainable Energy Action Plans (SEAPs). The Tbilisi SEAP Monitoring Report revealed considerable improvement of energy efficiency levels, such as overall decrease in emissions by 246 Gg CO<sub>2</sub>eq within three years, from which 230 Gg were attributable to the transport sector and 16 Gg to the buildings sector.

There are a number of other ongoing projects financed by various donors, such as energy efficiency credit lines to Georgian financial institutions, allowing small and medium-sized consumers to obtain energy efficient technology for residential and commercial purposes; new municipal transport in Tbilisi, operating on compressed natural gas; Enhancing Capacity for Low Emission Development Strategies (EC-LEDS)/Clean Energy Programme; development of new energy efficiency building regulation and a legal framework for labelling energy-related products etc.

There are no mandatory requirements regarding energy labelling in Georgia. The Product Safety and Free Movement Code represents the main legal act regulating product labelling and foresees minimum information that must be provided with the product, but does not contain provisions regarding energy labelling. While Georgia has insignificant production of residential electronic devices, a large share of such devices is imported from countries that have enacted mandatory energy labelling requirements. As a result, in practice, customers in Georgia often have an access to full information regarding energy consumption of a specific product.

As to consideration of energy efficiency levels of products during public procurement procedures, presently the Law of Georgia on Public Procurement contains no requirements in this regard.

One of the challenges associated with improvement of energy efficiency levels in Georgia is the lack of knowledge of the subject by the general public. To address this issue, a number of measures have been implemented by various institutions. One of the first pioneers in this field was the Energy Efficiency Centre, established in 1998, which has conducted successful awareness raising campaigns. Furthermore, in 2016, the Sustainable Energy Information Centre was established at the Tbilisi City Hall. The centre is involved in raising awareness regarding energy efficiency through direct conversations with the visitors of the Tbilisi City Hall. Moreover, a comprehensive handbook on energy efficiency, aimed at small and medium-sized enterprises was published.

## b. State of Compliance

By signing and ratifying the Protocol concerning the Accession of Georgia to the Treaty establishing the Energy Community, Georgia undertook the obligation to implement Directive 2012/27/EU on energy efficiency and Directive 2010/30/EU on



the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products by 31 December 2018, whereas Directive 2010/31/EU on the energy performance of buildings should be implemented by 30 June 2019. Currently, Georgia is not in compliance with the energy efficiency *acquis*.

As a first step towards due implementation of Directive 2012/27/EU, the first NEEAP has been drafted. It includes measures for transposition and implementation of the directive. Georgia should continue with the adoption of NEEAP and start working on development of primary legislation (Energy Efficiency Law).

Due to the unsatisfactory state of the existing building stock in Georgia, the sector requires effective measures to meet the requirements of Directive 2010/31/EU. This includes an Energy Performance of Buildings Law as well as the implementation of measures for renovating the building stock to reach minimum energy performance requirements. Additionally, the necessary legal framework should be developed to create the basis for energy performance certificates and facilitate market incentives for involvement of the private sector (e.g. energy service companies).

In order to provide consumers with the necessary information and implement the requirements of Directive 2010/30/EU, mandatory energy labelling must be introduced. Furthermore, the Law on Public Procurement should be amended and consideration of energy efficiency criteria should be added to public procurement procedures. Additionally, in order to render energy bills more informative and educational for energy efficien-

cy purposes and simultaneously promote more energy-saving behaviour of customers, GNERC should consider revising the existing requirements for information on consumption to be provided in bills.

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### c. Conclusions

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The legal and regulatory framework for energy efficiency is not adequately regulated in Georgia. However, the gap created by the lack of legislative requirements was partially filled in by voluntary mechanisms and donor-funded projects. In recent years, the Government of Georgia has become determined to address the issue and even in the absence of such obligations, as part of preparatory activities for joining the Energy Community, started development of the first NEEAP in 2015. This initiative, coupled with the activities and projects carried out both on the state and municipal levels, emphasizes the determination of Georgia to improve energy efficiency in the country.

The adoption of the first NEEAP for Georgia, as well as starting transposition of directives through development of primary legislation, should be the first priority. Establishment of energy efficiency standards for construction of new buildings are essential steps towards creating an adequate framework for energy efficiency regulation. Therefore, the Government of Georgia should take measures to finalize the draft documents and initiate procedures for their adoption. Developing a detailed roadmap with milestones and adopting clear, measurable energy saving targets should also be prioritized. Once these tasks are accomplished, implementation will require measures for mobilization of necessary funds and stimulating investments.





## 8 Environment

### a. Sector Overview

The Ministry of Environment and Natural Resources Protection of Georgia is the main body responsible for implementation of state policy related to environmental protection. The competences of the ministry include, but are not limited to exercising control over environmental protection and the use of natural resources, monitoring pollution, raising awareness and ensuring accessibility to information on environmental issues, conducting examinations, issuing environmental impact permits, protecting biodiversity and developing strategies related to climate change.

Environmental protection issues in Georgia are regulated by a number of primary and secondary legislative acts. In addition, Georgia is a party to various international environmental treaties and agreements, which prevail over national normative acts, provided that they are compliant with the Constitution of Georgia.

The main principles of environmental protection are stipulated in the 1996 Law of Georgia on Environmental Protection and include, *inter alia*, risk mitigation, sustainability, biodiversity preservation, environmental impact assessment, public involvement in the decision-making process, information accessibility and the polluter pays principle.

### b. State of Compliance

The Protocol concerning the Accession of Georgia to the Treaty establishing the Energy Community requires the implementation of Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 97/11/EC and Directive 2003/35/EC by 1 September 2017, without prejudice to commitments under EU-Georgia Association Agreement. Directive 1999/32/EC relating to reducing sulphur content shall be implemented by 1 September 2021, without prejudice to commitments under EU-Georgia Association Agreement. The deadline set for implementation of Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants is 1 September 2018.

Chapter III, Annex V and Article 72(3)-(4) of Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) for new plants shall be implemented by 1 September 2018, whereas for existing plants the deadline is 1 September 2026. Finally, the protocol of accession requires the implementation of Directive 79/409/EC, Article 4(2), on the conservation of wild birds by 1 September 2019.

### 1. Environmental Impact Assessment

The Law on Environmental Impact Permits is the main document regulating environmental impact assessment procedures. The Parliament of Georgia has recently adopted the Environmental Assessment Code, but most of its provisions will become enforceable from 1 January 2018 only, i.e. after the 1 September 2017 deadline set by the protocol of accession for the implementation of Directive 85/337/EEC. From 1 January 2018, the Law on Environmental Impact Permits will cease to apply.

The law currently in force requires an environmental impact assessment in order to avoid adverse impacts on the environment resulting from certain types of activities. The importance of environmental impact assessment procedures is also emphasized by the Main Directions of the State Policy in the Energy Sector, adopted by the parliament, which provides that during implementation of projects with significant impact on social and environmental issues, such as large HPPs, best international practice should be followed, including environmental and social impact analysis, consultations with the local communities and ensuring accessibility to all relevant information by the general public.

While Annex I to Environmental Impact Assessment Directive 2011/92/EU is not fully transposed, there is a certain degree of overlap between Annex I and the list of activities subject to mandatory environmental impact assessment under the Law on Environmental Impact Permits. Environmental impact assessment is required for new facilities, as well as for existing ones in case of substantial changes. Activities subject to mandatory environmental impact assessment include, among others, crude oil and gas refineries (500 or more tonnes per day), construction of hydropower plants (capacity of 2 MW or more) and thermal power plants (capacity of 10 MW or more), dams, high voltage overhead electrical power lines (35 kV or more), installations for storage of oil and petroleum products, liquid and natural gas (if capacity of one of the installed tanks is at least 1.000 cm, or total capacity of the tanks exceeds 1.000 cm). On the other hand, the Law on Environmental Impact Permits does not require an environmental impact assessment for extraction of petroleum and natural gas and does not foresee a screening procedure such as the one required by Article 4(2) of Directive 2011/92/EU for projects listed in its Annex II.

The rules and procedures of conducting environmental impact assessments are set by the Law on Environmental Impact Permits and Order No 31 of the Minister of Environment and Natural Resources Protection on Approval of the Regulation on Environmental Impact Assessment. The procedure is carried out

by the project developer, who must ensure the involvement of the public in the decision-making process and organize public reviews of the report. For this purpose, the developer is required to publish detailed information regarding the planned activities, set a deadline for submitting written opinions (45 days) and the place and date for public discussions. A public discussion of the environmental impact assessment report should be held within 50 to 60 days following publication of information on planned activities at the administrative centre of the relevant self-governing unit. If the developer does not take into consideration the opinions and suggestions provided by representatives of the public, a written explanation should be prepared.

The Ministry of Environment and Natural Resources Protection of Georgia examines the report and other documents submitted by the developer and prepares a reasoned conclusion. A positive conclusion is a precondition for granting an environmental permit. If an activity subject to mandatory environmental impact assessment also requires a construction permit, the authority responsible for issuing the permit submits the necessary documents to the Ministry of Environment and Natural Resources Protection of Georgia for environmental examination. In such cases, the conclusion prepared by the ministry will become part of the construction permit and the environmental impact permit will not be issued (one-stop shop principle).

In terms of compliance, the Law on Licenses and Permits stipulates that the obligation to obtain licenses and permits, including the environmental permit, generally does not apply to activities carried out by ministries and their subordinate state agencies. Furthermore, if there is a national interest to commence a specific activity promptly, the Law on Environmental Impact Permits foresees a possibility of an exemption from mandatory environmental impact assessment, based on a decision of the Minister of Environment and Natural Resources Protection of Georgia. Since the term "national interest" is not further elaborated, it is to be considered too broad and vague and should be abandoned.

The Environmental Supervision Department of the Ministry of Environment and Natural Resources Protection of Georgia is responsible for monitoring the implementation of the conditions set by the environmental permit. Violation of the conditions will incur an administrative fine in the amount of GEL 5.000, which may be tripled twice, if the breach is not remedied in time. Conducting activities without an environmental permit implies a fine between GEL 7.000 and 10.000. A failure to remedy the breach after the fine was imposed constitutes a criminal offence and the relevant sanctions foreseen by the Criminal Code of Georgia apply, including a fine, mandatory public works or imprisonment.

In order to transpose the environmental *acquis*, the Parliament of Georgia has recently passed a package of legislative amendments and adopted the Environmental Assessment Code. The code transposes the requirements of Directive 2011/92/EU. One of the most important features of the draft code is the

introduction of screening and scoping procedures and almost complete transposition of Annexes I and II of Directive 2011/92/EU. However, Annex I of the Environmental Assessment Code still does not foresee extraction of petroleum and natural gas as an activity subject to a mandatory environmental impact assessment, which is expected to be remedied by another legislative act.

The Environmental Assessment Code includes improved procedures of public involvement in the environmental impact assessment and decision-making process and ensures the rights of the members of the public to receive full information on the project at each stage of the procedure. Additionally, the code shifts the responsibility of organizing public participation from the developer to the state.

Another novel mechanism introduced by the Environmental Assessment Code is the procedure of transboundary impact assessment, which requires cooperation with foreign countries in a decision-making process, if implementation of an activity, or a strategic document could potentially entail an environmental impact across borders. The relevant provisions of the code will enter into force only following the ratification of the Convention on Environmental Impact Assessment in a Transboundary Context and Protocol on Strategic Environmental Assessment by the Parliament of Georgia.

## 2. *Strategic Environmental Assessment*

At present, Georgia has not transposed the provisions of Directive 2001/42/EC. However, the necessary mechanisms and procedures will be introduced by the Environmental Assessment Code, which aims to ensure environmental assessment of certain strategic plans and programmes and effective public participation in this process. For the documents subject to mandatory strategic environmental assessment, it is necessary to obtain recommendations from the Ministry of Environment and Natural Resources Protection and the Ministry of Labour, Health and Social Affairs of Georgia. Pursuant to the code, such recommendations are not mandatory but should be taken into account. The main part of the provisions on strategic environmental assessment will enter into force on 1 July 2018.

Currently, a Strategic Environmental and Social Assessment of Development Scenarios for the Electricity Sector project is being implemented. The project aims to assist the government with developing scenarios for the power sector in an environmentally and socially sustainable manner, based on the principles of Directive 2001/42/EC.

## 3. *Sulphur in Fuels*

With the aim to transpose Directive 1999/32/EC, the Government of Georgia on 25 May 2017 adopted Decree No. 256 approving Technical Regulation on Setting Threshold Values of the Sulphur Content in Certain Liquid Fuels. The technical regulation restricts the use of heavy fuel oils and gas oils within



the territory of Georgia if their sulphur content exceeds 1% and 0,1% by mass respectively.

The technical regulation also includes thresholds of 0,5% of sulphur content by mass for marine fuels in Georgian territorial seas, exclusive economic zones and pollution control zones and 0,1% for such areas falling within SO<sub>x</sub> Emission Control Areas. Furthermore, the technical regulation prohibits import, production, supply and consumption of marine diesel and marine gas oils, if their sulphur content exceeds 1,5 % and 0,1% by mass respectively.

The thresholds set by the technical regulation will become effective from 1 January 2020.

#### 4. Conservation of Wild Birds

There is no law in Georgia specifically dedicated to the conservation of wild birds. Nevertheless, the requirements of Directive 79/409/EEC are incorporated in the Law on Wildlife Protection, the Law on Red List and Red Book of Georgia and other acts of primary and secondary law. Georgia is also a party to the Convention on Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Ramsar Convention, the Convention on Migratory Species and the Convention concerning the Protection of World Cultural and Natural Heritage. The Law on Environmental Protection includes a general prohibition of any action, which could inflict damage upon wildlife, areas of habitat and breeding and migration routes. Another document targeting the protection of wild birds is the Biodiversity Strategy and Action Plan of Georgia for 2014-2020, adopted by the government, which foresees various actions aimed at protecting migratory birds. Furthermore, the Ministry of Environment and Natural Resources Protection is developing the necessary legal framework for the creation of special protected territories and Emerald networks for birds.

#### 5. Industrial Emissions

The legal framework of Georgia does not set emission limit values for specific types of objects, such as combustion plants or thermal power plants. Instead, the 1999 Law of Georgia on Ambient Air Protection determines the maximum values of concentration of harmful substances in the air in relation to each particular harmful substance and establishes emission ceilings for a given period of time. The law provides that limit values of emission of harmful substances in ambient air are determined once in every five years by the Ministry of Labour, Health and Social Affairs in agreement with the Ministry of Environmental Protection and Natural Resources. According to the law, the limit value for concentration of harmful substances in ambient air should be determined based on the requirements of Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe and Directive 2004/107/EC Relating to Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air. An application for an environmental permit must

comply with the limit values of emissions of harmful substances, projected by the developer for the period of five years.

A methodology for calculating the limit values for emission of harmful substances was approved by Decree No 408 of the Government of 31 December 2013. The law requires the determination of the limit values by reference to the best available technology. However, this provision is difficult to enforce, as there are no definitions available either in the legal framework or in practice as to what constitutes best available technology.

Notwithstanding the requirements of the Law on Ambient Air Protection, the last time the limit values of the threshold concentration of emission of harmful substances were amended was in 2010. Presently, the authorities are developing new limit values, intended to be compliant with the EU *acquis*. These values are expected to be adopted in 2017.

An operator is required by the law to self-monitor emissions from stationary sources and submit annual emission indicators to the authorities. Based on these reports, the ministry prepares an annual report on emission of harmful substances from stationary sources and motor vehicles in ambient air. The Department of Environmental Supervision is responsible for the state monitoring of emissions of harmful substances.

The Administrative Offences Code of Georgia determines the sanctions applicable in case of violation of various requirements of the Law of Georgia on Ambient Air Protection. Payment of a fine does not absolve the responsible party of compensating the damages inflicted to the environment, which are calculated in accordance with Decree No 54 of the Government of 14 January 2014.

### c. Climate Change

Georgia is a Non-Annex I Party to the *UNFCCC*. In 2015, the Third National Communication to the *UNFCCC* was submitted, which, among other issues, includes a climate change strategy, a national inventory of greenhouse gases and measures for mitigation of greenhouse gas emissions. The document also discusses the impact of global warming on glaciers in Georgia and the subsequent implications for hydropower production.

Georgia ratified the Kyoto Protocol in 1999 and has the right to participate in Clean Development Mechanisms. There are several projects carried out within the scope of the Clean Development Mechanism as well as the Nationally Appropriate Mitigation Actions projects.

In 2015, the Government of Georgia submitted the Intended Nationally Determined Contribution to the *UNFCCC*, by virtue of which it pledged to reduce greenhouse gas emissions by 15% below the business as usual scenario by the year of 2030. According to the document, the indicator could be increased to 25%, subject to availability of technical cooperation, access to necessary financial resources and technology

transfer. The Parliament of Georgia has recently ratified the Paris Agreement.

Georgia has reiterated its commitment to contribute to the reduction of greenhouse gas emissions by implementing various programmes and participating in international platforms and mechanisms. As a part of Georgia's ongoing efforts to reduce greenhouse gas emissions, an Enhancing Capacity for Low Emission Development Strategies (EC-LEDS)/Clean Energy Programme is currently being implemented in the country. Furthermore, a number of cities and municipalities in Georgia are signatories to the Covenant of Mayors and have voluntarily pledged to reduce greenhouse gas emissions by at least 20%.

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#### d. Conclusions

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Even though the existing environmental legal framework is not yet fully compliant with the Energy Community *acquis communautaire*, Georgia is very actively preparing for transposition of the *acquis* by the deadlines provided in the Protocol concerning Accession of Georgia to the Treaty.

In order to ensure full and timely transposition and implementation of the environmental *acquis*, it is particularly important to finalize amendments to the normative acts regulating limit values of emission of harmful substances in the ambient air and develop a regulatory approach towards existing combustion plants in accordance with the requirements of the *acquis*.



Ushguli village at the foot of Shkhara mountain, Georgia





## 9 Competition

### a. Sector Overview

The Law on Competition governs competition and State aid law in Georgia. Moreover, the government and the Competition Agency adopted the following acts of secondary legislation in 2014:

- Decree No 526 of the Government on Exemptions from Prohibition of Agreements Restricting Competition;
- Decree No 529 of the Government approving General Rules on Insignificant Amounts of Individual State Aid and Granting State Aid;
- Order of the Chairperson No 30/09-1 of the Competition Agency approving the Application and Complaint Forms, Rules on Submission and Procedures and Terms related to Admissibility of an Application and a Complaint;
- Order No 30/09-2 of the Chairperson of the Competition Agency on Rules on Application of the Cooperation Programme and Exemption from Liability;
- Order No 30/09-3 of the Chairperson of the Competition Agency approving Methodological Instructions on Market Analysis;
- Order No 30/09-4 of the Chairperson of the Competition Agency approving Rules on Submission and Consideration of a Notification on Concentration; and
- Order No 30/09-5 of the Chairperson of the Competition Agency approving Rules and Procedures of Inquiry.

The entry into force of the Law on Competition in 2012 represented a significant step towards implementation of the competition *acquis*. The law prohibits agreements as well as concerted practices restricting competition, the abuse of a dominant position and State aid, which distorts or threatens to distort competition. The law applies to both undertakings and public authorities.

The Law of Georgia on Competition designates the Competition Agency as an independent body, responsible for the enforcement of competition law in Georgia. An exception applies to the regulated sectors of the economy, including electricity and natural gas sectors, where the regulatory authority is responsible for the enforcement of competition policy. The Competition Agency is funded by the state budget and reports to the Prime Minister of Georgia, who appoints the chairperson of the agency. The

agency has the right to conduct inquiries on alleged breaches of the law, carry out on-site inspections and impose fines on undertakings responsible for violations of the law.

### b. State of Compliance

#### 1. Competition

The Law on Competition of Georgia applies only to anti-competitive practices that affect the internal market of the country, whether they are carried out within or beyond the territory of Georgia. According to the Protocol concerning Accession of Georgia to the Treaty, “Georgia will promote and apply [the *acquis* on competition] insofar as trade between the contracting parties may be affected”.

The law applies to private, as well as public undertakings, and transposes Article 18 of the Treaty by prohibiting agreements between undertakings, which prevent, restrict or distort competition. The law also prohibits the abuse of a dominant position and regulates State aid by transposing and closely following the language of Article 18 and Annex III to the Treaty.

The Competition Agency is responsible for market monitoring, targeted at prevention of anti-competitive practices. The Competition Agency may commence inquiries on alleged breach of the Law on Competition of Georgia based either on its own initiative or as a response to a complaint or an application submitted to it. Once the agency decides to pursue a case, the final decision must be adopted no later than within three months. This term may be extended by up to 10 months. Decisions of the Competition Agency are subject to judicial review. According to the Law on Competition, complaints regarding breaches of the requirements promulgated in the law may also be submitted directly to the court, without first applying to the Competition Agency.

The Competition Agency may require from the concerned parties information or documents necessary for the inquiry, including information regarding legal, organizational and business relations. If the requested information is not submitted to the Competition Agency, the concerned undertaking may be fined by up to GEL 3.000. As an additional means to compel compliance with the request for information, the Competition Agency may file a motion with the court.

Where the grounds foreseen by the Law on Competition exist, the Competition Agency may conduct an on-site inspection, subject to acquiring a warrant from the court. During the inspection, the Competition Agency has the right to gain access

to the premises of undertakings, take statements, examine and take copies of business-related records, even if they are confidential.

The Rules on Submission and Consideration of a Notification on Concentration provides that a concentration should be notified to the Competition Agency, if the following conditions exist simultaneously: (a) combined annual turnover of the undertakings concerned exceeds GEL 20 million on the territory of Georgia; and (b) each of at least two of the undertakings concerned have a turnover exceeding GEL 5 million. In addition, a notification is required where the overall cost of the assets located on the territory of Georgia exceeds GEL 10 million and each of at least two of the undertakings concerned have assets on the territory of Georgia with an overall value of GEL 4 million. If the Competition Agency considers the envisaged concentration adverse for competition, the National Agency of Public Registry will not register the newly created undertaking.

If, as a result of an inquiry, the Competition Agency finds an abuse of a dominant position or an agreement restricting competition, it may impose a fine, which should not exceed 5% of the overall annual turnover for the previous fiscal year of the undertaking concerned. In case of a repeated offence, the fine will increase to up to 10% of the annual turnover. There is no financial penalty foreseen in case of concentrations violating the requirements of the law.

Since its establishment, the Competition Agency has conducted several inquiries on anti-competitive practices for various product markets. In 2014, the Agency initiated an inquiry in the petroleum market and found that 30 undertakings were part of agreements restricting competition. The amount of fines imposed by the Competition Agency in relation to this case totalled to approximately GEL 55 million.

## 2. Regulated Sectors of the Economy

The Law on Competition creates a special regime for the regulated sectors of the economy, which includes the electricity and natural gas sectors. According to the law, if a complaint regarding an alleged distortion of competition in a regulated sector is submitted to the Competition Agency, the latter forwards it to the relevant regulatory authority, which in turn informs the Competition Agency, once proceedings are initiated on the alleged infringement of competition. Even though the law foresees a general obligation for the Competition Agency and a regulatory authority to cooperate in carrying out inquiries and remedying distortions, the provisions regulating such cooperation use a rather soft language.

According to the law, the regulatory authority may consult the Competition Agency regarding competition-related issues. The Competition Agency has a right, rather than an obligation, to prepare expert opinions on competition cases, if requested to do so by the regulatory authority. The regulatory authority has the right to request participation of the Competition Agency

in carrying out inquiries. Furthermore, the Competition Agency and the regulatory authority may create a joint working group to conduct inquiries. As GNERC has never pursued a case regarding alleged infringements of competition law, the aforementioned provisions of the law have so far not been applied in practice.

The main drawback of the special regime applicable to the regulated sectors of the economy is the fact that the regulatory authorities do not have the same effective tools against anti-competitive practices, which are available to the Competition Agency. In particular, the law provides that the fines applicable in case of abuse of a dominant position or agreements restricting competition, may not be imposed upon undertakings in a regulated sector. As a result of this provision, GNERC cannot impose effective sanctions for violations of competition law. The undertakings in a regulated sector engaged in a concentration are exempt from the obligation to notify the Competition Agency before closing of the merger. In addition, the law explicitly states that third party access to networks in regulated sectors is governed by “the relevant legislation of Georgia”. As a result of such limitations, the Law on Competition is not in line with the requirements of Article 18 of the Treaty and the relevant case law of the Court of Justice of the European Union.

## 3. State Aid

The Law on Competition includes the general prohibition of State aid in any form, if it distorts or threatens to distort competition. State aid is defined as “a decision made with regard to an undertaking, stipulating tax exemptions, tax reductions or tax deferrals, debt relief, debt restructuring, granting loans on favourable terms, transfer of operating assets, monetary assistance, granting profit guarantees, privileges, etc.”. This definition is too narrow compared to the prohibition enshrined in Article 18 of the Treaty and is therefore non-compliant with the Energy Community *acquis*: State aid does not only encompass decisions with regard to an undertaking, but also with regard to certain energy resources as well as support schemes.

State aid is permissible with the consent of the Competition Agency, if it does not significantly distort or threaten to significantly distort competition and is granted to facilitate the economic development of certain areas, or to aid conservation of culture and cultural heritage. The authority granting the aid must submit an application to the Competition Agency including a description of the aid and a substantiation that the State aid concerned does not significantly distort competition. The Competition Agency then decides whether the State aid is in compliance with the law and makes a legal assessment. Where the State aid is deemed incompatible with the law, the Competition Agency may request additional substantiation and/or prepare a recommendation and submit it to the relevant authority and the government. The decision regarding the State aid in question is adopted by the government. Compliance of this system with the *acquis* is yet to be assessed.

The Law on Competition lists the exceptions to the general rule of State aid prohibition. The law partially employs the language of Article 87 as attached in Annex III to the Treaty and provides that the following do not require the consent of the Competition Agency:

- Aid of a social character, granted to individual consumers, provided that such aid does not lead to discrimination against the producer of the relevant goods/services;
- Aid intended to make good the damage caused by natural disasters or *force-majeure* events;
- Aid intended to carry out environmental protection activities;
- Aid intended to exercise the rights or fulfil the obligations stipulated under the relevant legislative act of Georgia or an international agreement, to which Georgia is a party;
- Individual State aid of insignificant amount; and
- Aid intended for implementation of a significant state project, if the Government of Georgia has adopted a decision in this respect.

Some of these scenarios do not correspond to the grounds for compatibility of State aid laid down in Article 87(2) and (3) of the Treaty establishing the European Community, as enshrined in Annex III to the Treaty. Furthermore, apart from *de minimis* aid, only an *ex ante* notification to the competent authority and a positive decision by it can guarantee effective enforcement of the State aid prohibition.

Decree No 529 approving General Rules on Insignificant Amounts of Individual State Aid and Granting State Aid elab-

orates on the meaning of insignificant amount of State aid and provides that overall no more than GEL 400.000 per undertaking over the period of three consecutive fiscal years may be considered as such.

Decree No 529 requires adherence to the principles of non-discrimination and transparency when granting State aid. If the State aid significantly distorts competition or established procedures for granting State aid are violated, the person who has directly incurred damages may appeal to the court.

### c. Conclusions

A significant issue that hinders compliance with the competition *acquis* are the unjustified and inadequate exemptions granted to the undertakings in regulated sectors of the economy by the applicable special regime. Namely, exemption from the obligation to notify the Competition Agency of a merger and inapplicability of the fines foreseen by the Law on Competition create obstacles to effective implementation of the law. Therefore, in order to adequately regulate competition in the electricity and gas sectors, it is essential to amend the Law on Competition and expand the scope of certain provisions to encompass the regulated sectors of economy or extend the competences of the Competition Agency without further limitations to the regulated sectors.

Furthermore, the narrow definition of State aid does not comply with the definition contained in Article 18 of the Treaty and leaves room for State aid incompatible with the *acquis* being granted. Moreover, the exceptions to the State aid prohibition are partially non-compliant with Article 87 of the Treaty establishing the European Community, as enshrined in Annex III to the Treaty. The enforcement system itself needs to be scrutinized in more details.





## 10 Statistics

### a. Sector Overview

The main legislative act concerning energy statistics in Georgia is the Law on Official Statistics adopted in 2009. The law designates an independent body responsible for the production and dissemination of official statistics, the public authority National Statistics Office of Georgia (“GeoStat”), which reports to the government and the parliament on an annual basis.

An important step towards improvement of quality of national statistics in Georgia was taken in 2015, when amendments to the Law of Georgia on Official Statistics were adopted. The amendments, in line with the best international practice, determined the basic principles of official statistics, which, *inter alia*, include impartiality, equal access, accountability and transparency, confidentiality, national coordination, application of international standards and international co-operation.

According to the law, GeoStat should produce statistics based on the methodologies and standards approved or recognized by the board of GeoStat. Based on such methodologies and standards, other state bodies and entities may also produce official statistics, while GeoStat remains responsible for the coordination of works and exchange of statistical information. Furthermore, GeoStat issues recommendations regarding the production of official statistics and facilitates their implementation.

Each year, GeoStat prepares the Statistical Activity Programme, which is approved by the government and provides the scope of GeoStat’s activities, including the list of tasks to be completed by the responsible authorities, as well as the frequency of observation and the dates of publication.

To ensure effective discharge of GeoStat’s duties, the law grants it the right to request from administrative bodies and other natural and legal persons any information necessary to fulfil its functions, including information containing confidential and/or personal data. GeoStat determines the period of time – no less than seven days - during which the requested data should be provided. If an undertaking fails to provide GeoStat with the information requested under the Statistical Activity Programme, it will be held liable pursuant to the Administrative Offences Code of Georgia.

In 2013 GeoStat, the Ministry of Energy and INOGATE jointly adopted a national Energy Statistics Action Plan (ESAP) for Georgia.

### b. State of Compliance

The Protocol concerning Accession of Georgia to the Treaty establishing the Energy Community sets a tight deadline - 31 December 2017 - for the implementation of Directive 2008/92/EC and Regulation (EC) 1099/2008.

Even though the Law of Georgia on Official Statistics does not include any specific provisions dedicated to energy statistics, the annually approved Statistical Activity Programme foresees activities related to production of statistics in the energy sector, which include research of energy consumption and production of energy balances for the previous year. The deadline for publication of the energy balance is also set by the programme, which is strictly adhered to in praxis.

GeoStat has achieved significant progress over the last few years in bringing its practice closer to what is required by the *acquis* on statistics. Presently, it produces and disseminates data on supply, consumption, production, imports and exports in the following sectors: electricity and heat, natural gas, coal, oil, petroleum products, biofuel and energy from waste. GeoStat does not produce statistics on energy efficiency.

For the purposes of preparation of an annual energy balance, GeoStat uses administrative data, expert assessments and the data collected by comprehensive surveys. Two types of surveys are conducted: the energy sector survey and the final consumption survey. Surveys in the energy sector cover energy producers, suppliers, distributors and traders of energy (coal, natural gas, electricity, renewable energy, oil and oil products). The final consumption survey covers all institutional sectors - non-financial and financial corporations, non-profit institutions serving households, households and public administration. A survey of financial corporations, non-profit institutions serving households and public administration is carried out once in every three or five years, while in between the time expert assessment method is employed. The household surveys are conducted through face-to-face interviews, whereas online questionnaires are used for other respondents. GeoStat has implemented various activities, together with the Ministry of Energy, in order to improve the rate and quality of responses of energy undertakings to the questionnaires.

Presently the energy balance produced by GeoStat is in compliance with Annex B of Regulation (EC) 1099/2008, except for the disaggregated data on final use of energy by the residential sector (i.e. space heating, space cooling, water heating, cooking, lighting and electrical appliances and other end uses). Ac-



tivities related to the collection of necessary data, including the sample survey, are taking place during 2017 and final results of the survey will be available in September 2017.

As to the monthly statistics, Georgia collects and disseminates monthly JODI gas and oil data, as well as production, export and import and supply of electricity, including wind energy. Along with improving the completeness of these collections, remaining obligations to achieve full compliance with Annex C and D of Regulation (EC) 1099/2008 concern monthly coal data.

Furthermore, GeoStat does not publish the prices of gas and electricity charged to industrial end-users as required by Directive 2008/92/EC. To obtain data on natural gas and electricity prices, GeoStat signed a cooperation memorandum with GNERC in April 2017.

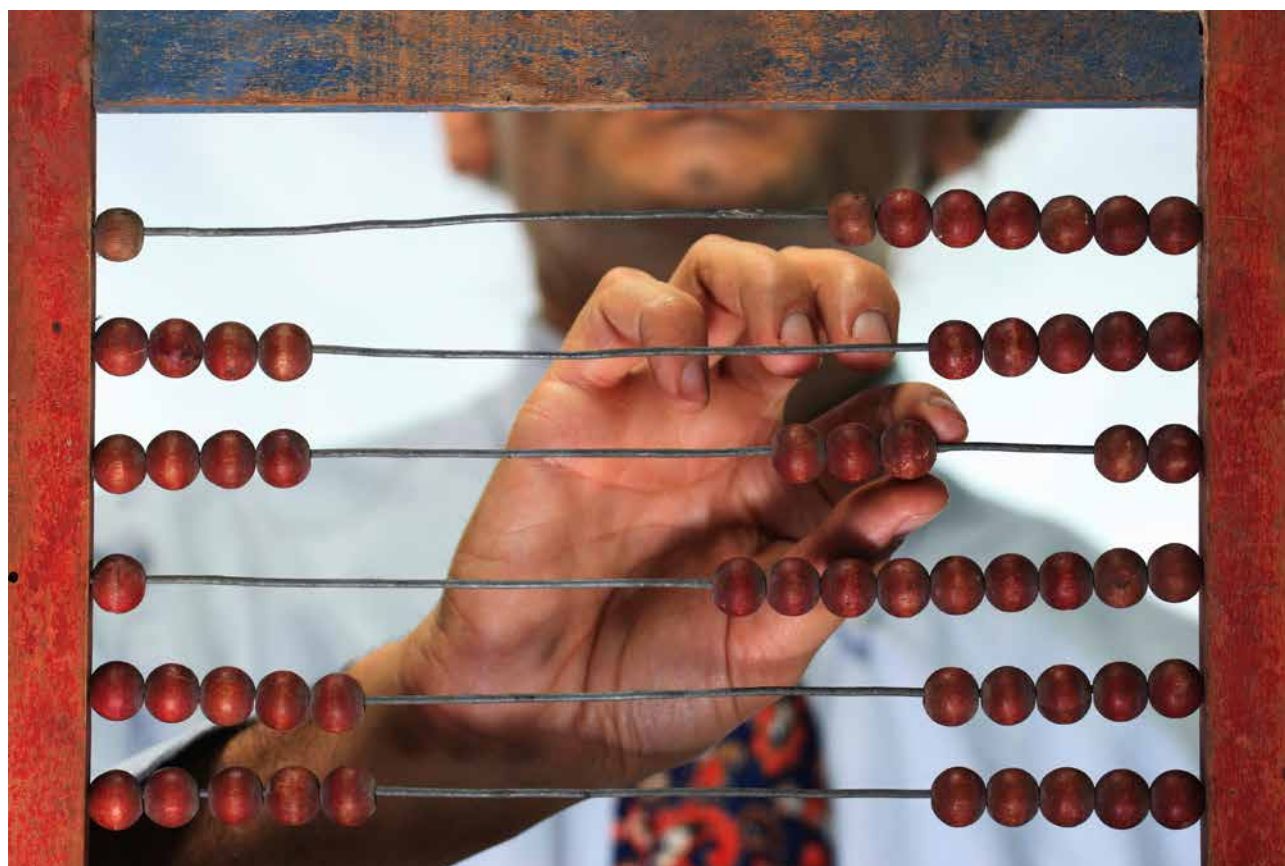
In the course of producing statistics, GeoStat closely cooperates with various public authorities. Administrative data are received from GNERC on an annual and monthly basis. The Georgia Revenue Service also provides administrative data on import and export of energy forms on an annual basis, based on customs declarations. Furthermore, data on crude oil production

are provided by *GOGC*. The information regarding electricity production, transmission, export and import is annually provided by *GSE*, whereas the same type of data for the gas sector is provided by *GGTC*.

GeoStat actively cooperates with various international agencies and provides statistical data in the electricity, natural gas, coal, oil products and biofuel sectors to the International Energy Agency on an annual basis, whereas information regarding production, export and import of energy resources is sent to the United Nations Statistics Division annually.

### c. Conclusions

Even though the legal framework in Georgia does not include specific provisions regarding energy statistics, the annual energy balance published by GeoStat is close to compliance with the requirements of Annex B of Regulation (EC) 1099/2008, taking into account the ongoing activities to obtain the disaggregated data on energy consumption in households. The main challenges in terms of compliance with the statistics *acquis* are related to production of short-term monthly statistics, as well as the price statistics for electricity and natural gas sectors.





# Glossary

## Abbreviations

AGRI	Azerbaijan-Georgia-Romania-Hungary Interconnector	MGPS	Main Gas Pipeline System
BP	British Petroleum	MPs	Members of Parliament
BTC	Baku – Tbilisi – Ceyhan Pipeline	NEEAP	National Energy Efficiency Action Plan
EC	European Community	NREAP	National Renewable Energy Action Plan
EC – LEDS	Enhancing Capacity for Low Emission Development Strategies	NSGP	Nord Stream Gas Pipeline
EEAP	Energy Efficiency Action Plan	NSGP	North – South Gas Pipeline
ENTSO-E	European Network of Transmission System Operators for Electricity	OTC	Over-the-counter
ESAP	Energy Statistics Action Plan	SCP	South Caucasus Pipeline
ESCO	Electricity System Market Operator	SEAPs	Sustainable Energy Action Plans
EU	European Union	SOCAR	State Oil Company of the Azerbaijan Republic
GDP	Gross Domestic Product	TANAP	Trans Anatolian Natural Gas Pipeline
GEDF	Georgian Energy Development Fund	TFEC	Total Final Energy Consumption
GGTC	Georgian Gas Transportation Company	TFEU	Treaty on the Functioning of the European Union
GNERC	Georgian National Energy and Water Supply Regulatory Commission	TPA	Third Party Access
GOGC	Georgian Oil and Gas Corporation	TPES	Total Primary Energy Supply
GSE	Georgian State Electrosystem	TPP	Thermal Power Plant
HHI	Herfindahl – Hirschman Index	UNFCCC	United Nations Framework Convention on Climate Change
HPP	Hydropower Plant	USSR	Union of Soviet Socialist Republics
HVDC	High Voltage Direct Current	VAT	Value-Added Tax
LNG	Liquefied Natural Gas	WPP	Wind Power Plant
		WREP	Western Route Export Pipeline

## Measurement units

kV	kilovolt	toe	tonnes of oil equivalent	mg	milligram
kW	kilowatt	mm	millimeter	kg	kilogram
MW	megawatt	m	meter	Gg	gigagram
kWh	kilowatt hour	km	kilometer	ppm	parts per million
GWh	gigawatt hour	cm	cubic meter	MTA	million tonnes per annum
TWh	terawatt hour	mcm	million cubic meter	USD	US-Dollar
t	tonne (metric tonne)	bcm	billion cubic meter	GEL	Georgian Lari



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