

Annual Report on Electricity and Natural Gas Markets of the Republic of Lithuania to the European Commission

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1. Introduction

In the electricity sector the year 2009 required new decisions to reorganize the electricity industry. The shutdown of Ignalina Nuclear Power Plant (hereinafter - Ignalina NPP) and establishment of the electricity exchange facilitated hourly power exchange trading by independent electricity suppliers. The electricity exchange mechanism launched on 1 January 2010 is a significant step towards the competitive electricity market.

In 2009 the National Control Commission for Prices and Energy (hereinafter – the NCC) licensed 10 independent electricity suppliers. At the end of 2009 their number reached 30, and as of July 2010 it has reached as many as 48, and all of them are independent electricity suppliers currently able to compete for customers. 14 out of 48 independent electricity suppliers are engaged in the licensed activities. Under legislation passed in 2009 public (final) electricity tariffs are under gradual abolishment and the increasing number of customers migrate to new market players, therefore competition is only going to get tougher.

By the virtue of the Law on Electricity the NCC is tasked with ensuring effective competition in the electricity market. Development of the joint electricity market of the three Baltic States and integration into the Scandinavian electricity market is the key task for the upcoming years, both for the NCC and the electricity market players.


Upon amending the Law on Electricity in 2009 some electricity market pricing principles were modified, namely fixed asset value for licensed activities is established by assessing the un-revalued (historic) asset value of companies. This principle facilitated significant mitigation of the electricity price jump upon the shutdown of Ignalina NPP. The principle of un-revalued (historic) asset value was also included into service pricing regulations of the natural gas market. The profit margin was reduced down to 5% for the regulated activities.

In 2010 the new Law on Electricity concept was approved transposing the Third Legislative Package on EU Electricity Market. This will ensure efficient unbundling of electricity supply and generation from grid operation, as well as unbundling of ownership, which is interpreted as appointing a grid owner to be the grid operator free from any supply and generation interests.

No real competition exists in the natural gas market, and throughout 2009 no single economic entity contacted the NCC to get a gas supply license. In November of 2009 gas supply companies were licensed as suppliers, and as few as 3 of them imported natural gas into Lithuania and supplied it to consumers. Thus special attention was focused on addressing gas supply diversification issues. The Baltic Energy Market Interconnection Plan (BEMIP) was developed to address gas and energy market isolation in the Baltic States.

In 2010 the Government passed a resolution approving the Natural Gas Law concept prescribing implementation of provisions of the Third Legislative Package on Energy Market by opting to unbundle gas undertaking ownership.

In 2010 the Government approved the Concept of Public Infrastructure Regulation Improvement, which provides for merging the following three infrastructure regulators: the NCC, the State Energy



Inspectorate and the Communications Regulatory Authority. A strong and independent multisectoral infrastructure regulator is thus to be established to regulate and do surveillance of electronic communications, postal and courier, electricity, gas, heat industry, water supply and waste water management activities. To ensure the independence of the national regulator and sufficiency of its financial and human resources, the Concept of Public Infrastructure Regulation Improvement provides for its financing by payments of regulated economic entities made for regulatory and surveillance activities, and by other legally available funds.

To develop this report the NCC used regular reports and other materials of undertakings operating in the electricity and gas sectors and data supplied by other authorities. The present report overviews the key development stages of the gas and electricity markets and lists significant problems faced by them.

2. Main Developments in Electricity and Natural Gas Markets

2.1. Electricity Sector

2.1.1. Wholesale Market

a) Development of the market concentration based on the relevant market

The development of Lithuanian electricity market structure was historically determined, when since 1984 Unit I of Ignalina Nuclear Power Plant was put into operation, followed by Unit II in 1987. This power plant with the installed capacity amounting to 3000 MW (doubling the installed capacity had been planned) became the topmost electricity producer both nationwide and in the entire western region of the former Soviet Union, or the current territory of the Baltic States. Therefore when the electricity market was opened at the beginning of 2002 competition was impossible.

When Unit I of Ignalina Nuclear Power Plant has been decommissioned in 2005 and with the plans to decommission Unit II at the end of 2009 Lithuanian electricity sector retained another major producer, Lietuvos Elektrine AB (Lithuanian Power Plant), the capacity of which is approximately 65% of total installed national capacity. However upon implementing new electricity market models since 2010 approved by the Resolution No. 740 *On Lithuanian Electricity Market Development Plan* of 8 July, 2009, of the Government of the Republic of Lithuania, the monopolistic status of this electricity producer has changed to facilitate higher player participation in this market.

Many decisions on structural modifications of the electricity market were made at the end of 2009, and the power exchange was established operating on the basis of Nord Pool Spot AS principles, and all this has facilitated the electricity market development.

Use of renewable energy sources is encouraged to generate electricity in order to diversify the fuel balance. The National Strategy for the Development of Renewable Energy Sources approved at the end of June 2010 provides for increasing the share of renewable energy sources up to 23% in the final energy balance in 2020.

The cogeneration plant support mechanism is currently under review, and a new unit under installation in Lietuvos Elektrine AB (Lithuanian Power Plant) will contribute to effective electricity generation, be adapted to the power plant operation under market conditions and ensure a higher number of the electricity market players.

In 2009 the key market share was represented by public electricity suppliers trading against regulated public prices. The balance share amounting to approximately 12% of electricity consumption was procured on the market against contractual prices. With the gradual abolishment of the public tariffs since 2010 started, the number of customers buying electricity from independent suppliers is to be approximately 35%. The electricity market liberalization trend is indicated by the 50% growth of the number of licensed independent electricity suppliers in 2009, which makes nearly 2.5 times difference, if the beginning of 2009 is compared with July 2010.

b) Dominating operator assessment: market power evolution

Since the very opening of the electricity market in 2002 Lithuania has had 4 key operators having respective activity licenses: one Transmission System Operator (TSO), one Market Operator and two grid line operators. At the end of 2009 two hydro power plants and the Market Operator were unbundled from activities of the Transmission System Operator thus fully implementing structural prerequisites for the electricity market development. There are plans to merge the grid line operators into a single Lithuanian grid line company since 2011, which should contribute to effective management and development of medium and low voltage networks.

Ignalina NPP kept operating till the end of 2009 thus the electricity market was not fully functional then. In 2010 the market power (or influence) of grid line operators discharging the public supplier's functions should reduce as under the passed Law on Electricity customers will have to gradually start buying electricity from independent suppliers. Since 1 January 2013 public suppliers will have to conclude contracts with and supply electricity only to household customers having requested this, with the total consumption value of 35% of the total national consumption level.

c) Market integration (across borders, at the national level), reasons of non-integration (lack of transport capacity, discriminating allocation by TSO, insufficient regulatory measures)

In 2009 Lithuania like other Baltic States kept its island status in the European Union electricity system, with the exception of a low throughput line between Estonia and Finland operation of which started in 2007. The Baltic States market would be more effective upon interconnection with other regional markets, but it was technically impossible to expand to other countries due to no interconnections available. Back in 2008 national and international projects commenced to connect the Baltic Region with North and West European countries, i.e., to connect Lithuanian electricity system with Poland and Sweden and simultaneously operate Baltic energy systems with the continental European energy system.

The first High Level Group meeting on the Baltic Region interconnection issues headed by the European Commission took place on 20 November 2008. Since the beginning of 2009 meetings of Electricity Integration and Interconnections working subgroups took place resulting in the Baltic Energy Market Interconnection Plan (BEMIP), and the Memorandum of Understanding regarding the above plan, signed on 17 June 2009 by 8 states of the Baltic Sea Region. This and other signed understandings will accelerate the development of regional electricity markets heading for the single European electricity market. To implement the plans feasibility studies are developed, preparatory works for construction of NordBalt and LitPolLink interconnections are undergoing and the related national electricity transmission system development projects are under implementation.

In 2009 Baltic Countries Regulators and Transmission System Operators continued on having regular meetings with the view of developing the Common Baltic Electricity Market and extra working groups were set up to consider transparency issues and BEMI Plan implementation.

In 2010 closer stakeholder cooperation will be required to implement a transparent and non-discriminatory method for interconnection capacity allocations. Upon shutdown of Ignalina NPP and the change in electricity flows a potential overload problem is faced. An understanding of the non-discriminatory and market based implicit auction method for interconnection power allocations is reached by the Baltic transmission system operators. Addressing this problem may require extra investments to ensure reliable operation of interconnections. Another crucial common

understanding to reach is the one on the common method for the transmission system power allocations with the third countries, which the Baltic regional electricity systems depend upon.

d) Power exchange development

Under the joint Finnish, Baltic Transmission System Operator and Nord Pool Spot AS (hereinafter referred to as NPS) project the Baltic electricity market price setting is planned thus interconnecting Scandinavian and Baltic markets.

The first project stage was completed when since 2010 the NPS platform-based power exchange (BALTPPOOL UAB) started operating in Lithuania. Up to the end of 2009 hourly electricity auctions took place on the supply side.

The second stage should allow the NPS platform-based power exchange operations throughout the Baltic States and should be finalized in 2011. This would facilitate development of the market electricity prices by individual Baltic Region areas. The power exchange aims to include both physical and financial trade.

e) National regulatory activities to stimulate wholesale market competition

The national regulator actively participated in the development of the legal framework and implementing reforms in the electricity sector after the shutdown of Ignalina NPP at the end of 2009. Since 2010 the real electricity market opening increased from the previous usual 14% to the planned 35% approximately, and since the beginning of 2009 the number of licensed independent electricity suppliers more than doubled: from the previous 20 it reached 48. The NCC also contributed to structural changes aiming to implement the hourly power trade on the demand part, as well.

Stakeholder discussions have been initiated; electricity market barriers have been analyzed, leading to amendments of some regulations to increase competition in the wholesale electricity market. Pricing principles have been reviewed to set and differentiate the transmission service price, and the prescribed gradual abolishment of public prices should contribute to the electricity market development.

The NCC representatives took part in various international meetings, arrangement of understandings and addressing Baltic regional electricity market problems together with the market players.

f) Conclusions

Like the Baltic electricity market, Lithuanian electricity market is isolated from West European and Nordic electricity markets. Without technical electricity system and market development possibilities available, operating electricity economy and ensuring affordable electricity prices for customers is both insecure and unreliable. The planned inter-system connections LitPol with Poland and NordBalt with Sweden and similar projects of the neighbouring countries should facilitate solving these problems. By focusing on this issue the European Commission helped to reach a significant progress in this area.

The year 2009 was the year of challenges to Lithuanian electricity economy, especially preparations to shutdown the NPP used to meet approximately 80% of the electricity demand and reorganization of the electricity sector. The electricity auction operating since the Quarter II of 2002 turned into the real power exchange in 2010 operating based on the Scandinavian power market principles and experience. Upon applying the hourly power trading on the demand side, independent electricity suppliers got access to hourly power exchange trading. Having started on 1

January 2010, the power exchange mechanism is the first significant step towards the competitive wholesale electricity market.

The development of the common electricity market of the three Baltic States and integration into Scandinavian electricity market is the key task for the upcoming years both for the NCC and the electricity market players. To implement this task the NCC representatives participated in the activities of working groups formed by the European Commission on Baltic electricity market and Baltic interconnections. Due to drastic financing cuts in 2010 the NCC representatives have no opportunity to participate in the Baltic electricity market formation processes to the same extent.

2.1.2. Retail Market

a) Development of the market concentration based on the delineation of the relevant market (as set forth in the Law on Competition)

In the mid 2007 the electricity market was 100% opened as in other European Union countries. This means that all customers have become eligible and may choose their electricity supplier. Having shut down Ignalina NPP at the end of 2009, the end public energy prices to customers with power capacity exceeding 400 kW have been abolished, and this level will gradually reduce up to 2013, i.e., in 2010 the real electricity market opening should amount to approximately 35 %, in 2011 – approximately 45%, in 2012 – approximately 55%, in 2013 - approximately 65 %. This will facilitate practical implementation and accelerating market relations both in the domestic and regional markets.

b) Supplier switching dynamics

Last year as at the beginning of the electricity market opening the same market players used the right to switch the supplier. They have accounted for 12% of the total national efficiently supplied electricity quantity. This was caused by the relatively cheaper-priced public supplier sold electricity and public (end) electricity prices applied versus distribution grid market prices offered by independent suppliers.

Table 1. Declared and real degree of market opening

Indicator	2002	2003	Up to 1 July 2004	Since 1 July 2004	2005	2006	Since 1 July 2007-	2008	2009
Electricity consumption by eligible customers as a share of total customer consumption, %	20	23	25	74	74	74	100	100	100
Electricity consumption by eligible customers having selected independent suppliers as a share of total customer consumption, %	17	17	15	15	15	13	12	14	12

Source: NCC

c) Price development (total and components) vs. the preceding year, including regulated prices

With natural gas price increase in 2009 the NCC estimated the average forecasted public price for electricity production in 2009, which was 41.41 EUR/MWh and which increased by 7.47 EUR/MWh compared to 2008. For 2009 the average transmission service price of Lietuvos Energija AB went up by 0.4 EUR/MWh for capacity reserves. Thus in 2009 the production and transmission price increase amounted to 7.87 EUR/MWh. At the same time price for electricity bought by distribution

grid operators to cover the technological losses and own needs also rose. However the distribution service price stopped rising and slumped slightly due to operational effectiveness improvement and the Resolution on Asset Valuation Principles to be used in the licensed activities, passed in 2009 by the Government of the Republic of Lithuania, under which the normative profit and depreciation of companies shall be calculated based on historic asset value.

Table 2. Actual and forecasted prices for 2007-2010, EUR/MWh

Indicators	VST AB				Rytu Skirstomieji Tinklai AB			
	2007	2008	2009	2010	2007	2008	2009	2010
Electricity generation price	28.9	34.32	37.56	58.59	28.9	34.32	37.56	58.59
Electricity transmission service price	10.45	10.40	10.65	9.88	10.45	10.40	10.65	9.88
Electricity supply service price	0.55	0.58	0.58	0.90	0.61	0.61	0.61	0.96
Public electricity price for customers receiving electricity from high voltage networks	39.9	45.30	48.76	69.37	39.96	45.33	48.82	69.43
Electricity distribution service price over medium voltage networks	18.33	21.58	20.24	15.41	17.11	19.55	17.84	15.35
Public electricity price for customers receiving electricity from medium voltage networks	58.23	66.88	69.0	84.78	57.07	64.88	66.66	84.79
Electricity distribution service price over low voltage networks	26.18	21.98	23.31	19.52	2375	20.71	22.53	23.11
Public electricity price for customers receiving electricity from low voltage networks	84.41	88.86	92.31	104.3	80.82	85.59	89.19	107.90

Source: NCC

d) Activities by NRAs to foster retail competition

In preparation to shut down Unit II of Ignalina NPP having dominated Lithuanian electricity market at the end of 2009, the Regulator initiated discussions since the beginning of 2009, and preparations were made to foster better environment for competition. With Lithuanian electricity market development plan approved in the mid 2009 by the Government of the Republic of Lithuania and with the amendments to the Law on Electricity passed at the end of 2009 the Regulator respectively modified the secondary legislation related to electricity and active capacity reserve prices for: producers and suppliers with the market share exceeding 25%, electricity buying prices from thermal power plants, transmission service and public prices, balancing energy prices. The likely livening-up of the electricity market since 2010 has been indicated by many Regulator-issued licenses, i.e., the number of licenses issued within a year compared to their number issued since the electricity market opening at the beginning of 2002. The Regulator was active when other authorities passed regulations, as well.

The key purpose of amending the Law on Electricity and price calculation methodologies was that the gradual abolition of public (end) electricity prices up to 2013 would encourage independent supplier activities and increase competition both in wholesale and retail markets.

e) Conclusions

Compared to 2008, in 2009 the number of independent suppliers doubled. With 23 independent electricity supplier licenses issued by the NCC since 1 January 2009, the number of independent suppliers went up to 43. **Eight** undertakings were engaged in the licensed activities.

Customer decision to switch suppliers may be economically motivated, but as public suppliers sell electricity at prices lower than the market ones, and as the transmission price was higher, only customers connected to the transmission grid have switched suppliers. Abolition of end electricity prices would gradually increase supplier switching numbers since 2010. Compared to 12% of the

real market opening in 2009, electricity consumption by customers having switched suppliers will amount to 35% of total national consumption in 2010, in 2011 it will be 45%, and in 2012 – 55%. Since 1 January, 2013, public suppliers will have to conclude contracts with and supply electricity to all household customers in its licensed territory having requested this, with the total consumption value of 35% of the total national consumption level. Thus competition in the retail market will be gradually fostered.

2.1.3. Public service obligations and consumer protection

a) Transparency

The Law on Electricity prescribes that public interests in the electricity sector means any act or omission in the electricity sector, directly or indirectly related to the public security, environmental protection, and to electricity generation from renewable energy sources at combined heat and power generation plants. The List of Public Service Obligations (hereinafter - PSO), suppliers and supply procedure shall be established by the Government or a body authorized by it with account of public interests in the electricity sector. Under the PSO supply procedure description the following 5 PSO types are included in the PSO price:

1. Electricity generation:
 - 1.1. From renewable energy sources;
 - 1.2. At combined heat and power generation plants in thermal operating mode when such plants supply heat to urban district heating networks;
 - 1.3. In listed power plants where electricity generation is necessary to ensure their energy system reserves;
2. Ensuring operational security of the nuclear power plant, waste storage and siloing;
3. Connection of installations for electricity generation using wind, biomass, solar or hydro-energy to power transmission or distribution systems.

All the data related to PSO prices when deriving an average PSO price is publicly available on the Regulator's website. For 2009 the average PSO price was set at 19.06 EURct/MWh, which compared to 2008 increased by 77% mainly due to higher natural gas prices and the price of electricity sold by Ignalina NPP, which reduced by 1.36 EURct/MWh. However the forecasted PSO costs for 2010 compared to 2009 went down by approximately 32%. This was caused by 88% reduction in costs of thermal power plant-supplied electricity generated under thermal mode and supplied to district heating systems, however the procurement costs of electricity generated from renewable energy sources increased by 17%, and energy system reserve ensuring costs went up by 59%, taking into account electricity supply security costs to be included into the PSO list.

b) Complaints (topics, amount, responsibilities)

The increasing public activity and interest in energy issues and the need to protect public interests is demonstrated by increasing loads of consumer correspondence received by the NCC, including questions, requests and complaints. In 2009 the NCC received 343 various consumer complaints and applications.

In the electricity sector the NCC received 27 consumer complaints, 4 of which were found to be unjustified. In the electricity sector consumers predominantly contacted the NCC regarding calculation of new customer connection fees, application of electricity supply prices and tariffs, disconnecting from and renewing electricity supply. Many inquiries were received about contractual prices applicable to sub-subscribers, which is out of the NCC's regulatory remit.

The NCC controlled licensed undertakings and therefore inspected VST AB and Rytu Skirstomieji Tinklai AB and recalculated new customer connection fees based on the data collected and

supplied by the companies. Since 1 July, 2009, for all new customers having newly connected or increasing their electricity capacities the payment is calculated by applying halved connection fees in average. Observing more problems with new customer plant connection to the system the NCC essentially reviewed the fee calculation methodology at the end of the year and set a higher number of differentiated fees reflecting real customer connection costs.

Electricity price and tariff application issues were topical both to household and other customers. Suburban allotment residents as customers consuming electricity in households raised the question why not all tariffs set for household customers applied to them, for instance the ones applying to customers consuming 12000 kWh per year or the ones having electric cooking stoves. The NCC was active in looking how to address this problem. Meetings with public electricity suppliers resulted in the agreement that suburban allotment residents need to get a possibility granted to concluding individual electricity supply contracts. They would allow suburban allotment residents to pay for electricity against all the tariffs set for household customers.

Industrial companies predominantly contacted the NCC regarding the justification of capacity fees. The capacity fee is applied based on the permissible capacity allocated to the customer and encourages customers to estimate and assess the real electricity need and allows grid line companies to effectively and efficiently forecast and develop electricity systems.

The NCC received many inquiries about electricity prices applicable to sub-subscribers when the primary subscriber hands over electricity to a sub-subscriber. Though the NCC does not regulate or assess the justification of extra costs incurred by customers due to transferring electricity to sub-subscribers, the NCC has always stressed that prices applied for electricity sub-subscribers may not exceed public supplier prices applicable to subscribers.

c) Conclusions

In 2009 the Regulator kept aiming for PSO price reductions. Multiple meetings and hot discussions arranged resulted in lower PSO prices to customers since 2010. No doubt, this was also caused by reasons out of the Regulator's control. The global economic crisis made natural gas prices drop significantly compared to their peak in 2008.

To protect customers the Regulator passed new regulations and improved the existing ones and actively participated in the development of other legislation. Upon amending the Law on Electricity in 2009 some electricity market pricing principles were modified, namely fixed asset value for licensed activities has been established by assessing the un-revalued (historic) asset value of companies. This principle has facilitated a significant mitigation of the electricity price jump upon the shutdown of Ignalina NPP.

Electricity companies were further controlled through on-the-spot checks which revealed inefficient investment cases and the price cap of the respective company was lowered.

The procedure of providing information related to investment planning and implementation was clarified and the investment approval procedure was improved.

Electricity supply reliability and minimum quality requirement ensuring mechanism was included into the electricity price calculation methodology to penalize or incentivize electricity companies for higher or lower quality indicators achieved.

Other methodology amendments were made, including the ones related to reduction of electricity technological cost limits. The effectiveness of these economic measures applicable under the methodology may be illustrated by the fact that since 2002 technological costs of grid line companies reduced by approximately 28%, and the maximum limits were reduced accordingly.

2.1.4. Infrastructure

a) Development of tariffs

The electricity sector has contractual and state regulated prices. Prices are not regulated in the generation (electricity and reserve capacity) and independent supply area, except when electricity producers and independent suppliers have Lithuanian electricity sales market share exceeding 25%. Prices for electricity transmission, distribution and public supply services are under regulation by price cap setting. Up to 2010 regulated public tariffs covered all customer categories – individuals and small, medium and major businesses. The Law on Electricity prescribes for gradual end electricity price abolition. Since 2013 all commercial customers, except household ones, will have to buy electricity from independent suppliers against contractual prices and end electricity prices will not be applied to them.

As mentioned above, several electricity price and price cap setting methodologies have been reviewed, as well as specific price differentiation principles. With the view of more effective electricity market the electricity transmission service price no longer includes the capacity component, which was calculated based on the maximum hourly customer capacity. Thus electricity transmission price became easier to forecast and allowed balancing regulated and unregulated electricity prices.

b) Investments/ Art. 22

In 2009 investments into the transmission network amounted to 31.4 million EUR, and investments into the distribution grids were 76.9 million EUR. Similar values are planned for 2010.

The following interconnection lines are planned: 1000 MW LitPol with Poland up to 2015 (238 million EUR) and 700 – 1000 MW NordBalt (formerly SwedLit) with Sweden (553 million EUR). During implementation of the above projects annual investments into the transmission system are to quadruple which would significantly influence the price for electricity transmission service.

In June 2007 a Law on Construction of a New Nuclear Power Plant was passed. The planned maximum capacity is 3400 MW; the construction is to be completed in 2018.

No changes were observed relating to Article 22 regulating direct use of lines.

c) Capacity distribution

Electricity transmission networks have sufficient throughput capacity, thus in 2009 like in 2008 no overloads in the electricity network were observed nationally or in the Baltic States. However preparations took place for the shutdown of the dominating electricity producer and organizing an auction of the Estlink transmission line capacity allocation under the joint project of Nord Pool Spot AS (hereinafter referred to as NPS) and Baltic and Finnish Transmission System Operators. The second stage is to apply these principles throughout the Baltic States.

Up to 2011 the capacity optimization method applies to Lithuanian interconnection capacity allocation between the TSOs for the agreed available transmission capacities (ATC) using the implicit principle and operated by Baltpool UAB (Lithuanian Power Exchange) which started its operations since 2010.

The market principle-based capacity allocation method (the implicit auction) between the Baltic market price areas should be applied and operated by NPS since 2011. In the same year NPS will apply and implement the intersystem capacity optimization method based on general market principles for trading with the third countries. Baltic Energy Regulator and Transmission System Operator working groups keep working and regulations are being developed with the view of the above aims.

d) Conclusions

Projects on interconnection lines with Poland and Sweden which should ensure supply reliability and competitiveness in the electricity market after the shutdown of Ignalina NPP at the end of 2009 have progressed but due to insufficient assistance granted by EU electricity transmission service price may double for customers. Therefore more EU assistance is necessary to further develop the electricity market and reduce the customer burden generated by the regional electricity system development. Otherwise electricity customers will incur significant losses due to electricity market development and their expectations about the electricity market facilitating lower electricity prices will not be met.

Like in 2008, in the year 2009 there were no overload problems in the Baltic Region. However potential problems have been identified in the summer of 2010. The NCC is now looking for potential solutions through cooperation with stakeholders and the Baltic region regulators during the transition time period. Preparations are made to regionally implement the intersystem capacity allocation method based on the market principles.

2.1.5. Supply Security

a) The National Regulator's remit in supply security area

Article 12 of the Law on Electricity prescribes that electricity supply reliability shall be monitored. A body authorised by the Government shall monitor the reliability of transmission and distribution systems. The outcome on reliability monitoring shall be summarised in public annual reports. The reports shall include the data related to supply and/or demand balance on the national market; the level of expected future demand and envisaged future supply possibilities; additional capacity being planned or under construction; measures to cover peak demand and to deal with shortfalls of one or more suppliers; the level and quality of system maintenance and other information.

Under the PSO Supply Procedure the Ministry of Energy monitors electricity supply security related issues on the national electricity market and annually up to 31 July posts a report with conclusions and recommendations on its website. The reports include such topics as the scope of the national market competition as seen by the regulator. Under this heading the market concentration is overviewed, as well as the degree of market opening, the market player dynamics, the market price dynamics, the degree of eligible customer activity; this chapter includes conclusions.

b) Investment development (generation, storage, LNG, transmission – incl. cross-border interconnection, transport, distribution)

With the aim of electricity supply security and reliability, as mentioned in Section 1.1.4 (b), construction of a new NPP is planned to generate electricity. Information on this project progress is available at www.vae.lt. NordBalt and LitPolLink transmission system projects should also contribute to the stable electricity system operations in Lithuania and the Baltic Region. They will require major financial allocations and influence electricity prices irrespective of periodic investments made annually according to the investment programme developed up to 2020.

Fixed assets (transformer substations, transformers, distribution grids, grid lines) used to transmit electricity get outdated with time and fail to meet technical requirements, thus increasing annual

investments are needed to reconstruct them. In 2009, LEO Lithuania AB commissioned the company Siemens AG – Energetikos Sektorius to audit Lithuanian electricity transmission and distribution system status. Based on the data in the audit report electrical installations and electricity network status of VST AB and Rytu Skirstomieji Tinklai AB was rated as predominantly satisfactory or bad.

In 2009 the difference between the accrued fixed asset depreciation costs and the effective investments became especially visible. 2009 features a major gap between depreciation costs and investment amounts. The differences were mainly caused by the fact that in 2009 fixed asset depreciation was calculated based on the revalued fixed asset value, but lower installation and works prices required less investment than planned.

All the three companies providing transmission services allocate approximately 40% of investments to reconstruct and upgrade power systems and substations. Another approximately 40% of allocations grid line companies invest into connection of new customers.

The right choice of the investment area may influence electricity transmission reliability. Having compared supply reliability data of Lithuanian TSOs and data of other foreign countries (such as Austria, UK, Italy, France, Germany) it may be stated that the overall level of electricity supply reliability indicators in Lithuania for 2005-2007 is similar to the one in the above EU member states.

c) Supply/load balance development; gas crisis 2009

The Monitoring Report on Supply Security in Lithuanian Electricity Market drafted by the Ministry of Energy provides actual and planned electricity generation, transmission and distribution capacities, and data on interconnections with the neighbouring energy systems, power capacity balances, electricity production, consumption, export and import. The latter information is based on the three yearly forecasts. According to the data of 2009, in 2010 Lithuanian electricity system capacity balance during the peak system demand time is to turn negative for the first time ever, i.e., it will drastically slump from 1727 MW down to - 326 MW for the time period 2006 – 2010. Lithuanian electricity system will stop being an exporter and will become an importer and will be more dependent on the neighbouring countries. The major imported electricity share would be supplied by a non-EU member state.

The natural gas peak in 2008 influenced electricity prices in 2009. Compared to 2008 the PSO service price more than doubled. The steep natural gas price jump made Government authorities to look for ways to cover, in the middle of the year, the unplanned high fuel costs incurred by electricity companies. This caused additional troubles and destabilized the situation when certain legislation was amended. These consequences are felt up to now due to potential losses incurred by companies still under settlement by national courts.

d) Investment delays (key reasons)

The key investments into the electricity sector were not delayed, and reduced consumption influenced by the global economic crisis is considered to be a temporary phenomenon.

A lower level of investments into the electricity networks in 2009 compared to 2008 was determined by more effective investment activities of electricity companies. In 2008 the Regulator inspected how investment plans were met and found out ineffective investment cases, and these outcomes were reflected in the lowered electricity price for the upcoming year.

e) Diversification of sources and supply

Upon shutdown of Ignalina NPP at the end of 2009 the diversity of energy sources has reduced and the stable operations of the electricity system and electricity price will become dependent on the natural gas supply reliability and price and on electricity imports from the third countries.

The new Lithuanian interconnections with Sweden and Poland and the new Visaginas NPP would facilitate bolstering energy independence and increasing energy supplier number, diversity of energy sources together with improved electricity supply security.

f) Conclusions

Electricity supply security is closely related to the national energy policy and strategy. The Regulator may send respective signals about the need for investments to the market players and apply required measures via pricing. Under the Law on Energy, energy undertakings engaged in activities with regulated prices have to approve planned investments with the NCC. If investments of such energy undertakings are not approved by the Regulator, they may not be recognized as justified for the purpose of revising state regulated prices. To retain diversity of energy sources the use of renewable ones is encouraged by increasing buying costs and by setting support for new energy sources, such as solar energy.

Upon shutdown of Ignalina NPP at the end of 2009 Lithuanian electricity system has stopped being an exporter and turned into an importer and became energy-wise dependent on the energy supply security from other countries. Long-term strategic project implementation related to new electricity lines with the neighbouring countries has started, and new generation capacities using nuclear power would allow diversifying energy supply sources and ensure electricity supply security. BEMIP is the strategy of escaping the existing energetic isolation of Lithuanian and Baltic electricity systems. But its further effectiveness primarily depends on adequate political and financial EU support. Thanks to consistent EU support the project NordBalt (power interconnection between Lithuanian and Sweden) has achieved a major progress. Therefore now concentrating all the effort on other BEMIP project implementation is necessary, namely Lithuanian and Polish interconnection LitPolLink and Lithuanian and Polish gas interconnection. These infrastructural projects are the prerequisite for Lithuanian aim to develop an integrated regional energy market in long terms.

2.1.6. Regulation/Unbundling

a) The National Regulator's remit

Under the Law on Electricity the NCC must control the efficient unbundling of accounts to prevent cross-subsidizing of generation, transmission, distribution and supply activities. Since 2002 electricity generation, transmission and supply activities are legally unbundled, i.e., via existing individual companies. Distribution and public supply activity costs are accounted for by doing individual bookkeeping accounts and accounting registers in distribution grid companies. Costs of the market operator, two hydro power plants, and other activities are also individually accounted for in the transmission company.

Legislation passed in 2009 allowed increasing the state influence in electricity companies and reorganize them. On 4 May, 2010, the Government of the Republic of Lithuania approved the new Law on Electricity concept implementing the Third EU Energy Package. Beside this, the Government approved the restructuring plan for Lithuanian energy companies. Under the latter four groups of electricity undertakings will be formed: transmission, generation, distribution and servicing. The Government will retain control in all the groups. Upon full implementation of the electricity sector restructuring operational activities of the undertakings are to improve resulting in up to 60 million LTL savings per year.

The aim of the national electricity company restructuring is to implement strategic projects of the new NPP and power interconnections to ensure energy security of the Republic of Lithuania; another aim is to develop the free electricity market, improve electricity company effectiveness and for the entire power economy to be in line with the Third EU Energy Package. Consolidating state control over electricity economy aims to match achievement of strategic goals with socially oriented energy policy.

It has been decided to unbundle power transmission systems, the TSO LITGRID UAB and the market operator BALTPPOOL UAB from Lietuvos Energija AB, and contribute state-controlled Lietuvos Elektrine AB shares to Lietuvos Energija AB.

Based on ownership unbundling provisions of the Third EU Energy Package the State of Lithuania will exercise direct control over the TSO LITGRID UAB together with its controlled market operator BALTPPOOL UAB and the power transmission systems. The company Visagino Atomine Elektrine (Visaginas NPP) company shall be responsible for developing the project of the new NPP and will be the state-controlled company to be responsible for Lithuanian investment share in the new NPP. Construction works of the new NPP will be carried out by a company to be established together with the strategic investor and strategic partners. 100% Lithuanian State-controlled Visagino Atomine Elektrine company will be a shareholder of Lietuvos Energija AB and the distribution grid company. Beside this, VST AS and Rytu Skirstomieji Tinklai AB will be reorganized to merge into a new undertaking with retained state control.

b) Sanctions imposed by the National Regulator

The NCC provides for detailed reporting requirements and liability for the failure to meet them.

In 2008 an amendment to the Law on Energy was passed on imposing sanctions which prescribes fining both officials and companies. For violations relating to the licensed activities the NCC imposes financial penalties against energy companies having failed to publish mandatory information on their licensed activities, as well as for violations or default of other terms of licensed activities, for the failure to discontinue or timely discontinue illegal activities as obliged (instructed) by the NCC, eliminate the found violations of licensed activity terms, and for violation of the activity security and reliability, fair competition and customer (system user) non-discrimination principles, and for a repeated violation of licensed activity terms during the same year. Subject to the violation the imposed financial penalty may vary from one thousand LTL to 2% of annual income of the electricity company from the specific licensed activity the terms which were violated during the preceding financial year. The Regulator applied no sanctions in the electricity sector in 2009.

c) Transmission system operator's (hereinafter – TSO's) market role (TSO interaction with market locations (power exchanges), transparency, producer dispatcherization all the time or only during overload management)

TSOs play a key role in the development of the electricity market. Knowledge of daily trade processes and electricity system data management place them in a special position. The above Nord Pool Spot AS and Baltic and Finnish TSO project demonstrates their close cooperation.

Under the first stage of this project, at the end of 2008 a market price has been set at the connection line Estlink, and during the second stage electricity market price for the Baltic States shall be set, and the daily trade market Elbas. The latter stage is planned to be finalized by March 2011 the latest. Transparency requirements established by law have been implemented. In 2009 the NCC improved and harmonized the procedure of providing information by energy companies.

The Dispatch Centre operates round the clock performing the national balancing function, with respect to the power exchange, electricity flow limitations matched with other energy systems.

As mentioned above, there was no overload in Lithuania or at the Baltic States level. However upon the shutdown of Ignalina NPP and in the process of developing the electricity market in the entire Baltic Region, preparations are made to implement capacity allocation methods based on the market principles in all the Baltic States.

d) Improving TSO and distribution grid operator (hereinafter - DGO) unbundling (TSO independence degree, improvements related to TSO market unbundling: network investments, supply security, progress since the legal DGO unbundling became obligatory)

TSO and DGO legal unbundling took place in 2002. The transmission company Lietuvos Energija AB was a state-controlled company up to the mid-2008. However upon passing respective legislation the state received more power and at the end of 2009 Litgrid UAB, a newly established company took over the TSO functions.

Lietuvos Energija AB has retained a hydroelectric power plant, a hydro-accumulation power plant and the operation of the power system. Since 2010 the market operator's functions were also performed by the newly established company Baltpool UAB, and Energijos Tiekimas UAB was engaged in energy supply activity. As mentioned in Section 1.1. (a) further structural reorganization of the electricity sector is planned, which is in line with the Third EU Energy Package provisions. Upon unbundling TSOs and DGOs no material problems have been observed regarding investments into the electricity system and the supply security.

e) Other unbundling problems (essentially the existing domination in production and supply)

Back in 1997 electricity production sector reorganization started by unbundling thermal power plants from the previous vertically integrated power company. Currently all the electricity producers are separate companies. However, the national electricity market still faces the problem as some power plants provide capacity reserve services and PSO.

2009 was the last year of Ignalina NPP operation, which was the largest electricity producer. Upon decommissioning its Unit II at the end of the year no cheap dominant electricity producer and supplier was available, and the share of electricity import increased significantly. Lithuanian electricity system will stop being an exporter and becomes an importer and will be more dependent on the neighbouring countries.

f) Conclusions

In 2009 the insufficient legal unbundling caused no material problems regarding network access and use, or inadequate investment level. The legal unbundling ensures the effectiveness of unbundling, thus at the end of 2009 new separate companies were established based on the functions of the TSO, the market operator, production and supply ones. With the view of implementing provisions of the Third EU Energy Package further electricity sector reorganization is planned in 2010.

2.1.7. General conclusions

a) Related to Present Legal Framework

No problems with the legal framework have been noticed in 2009.

b) Related to 3rd Package

In 2009 reorganization of electricity companies started, and their further reorganization is planned in 2010 in line with the 3rd Package provisions. A legal amendment is being drafted to implement the 3rd Package provisions.

2.2. Gas Sector

2.2.1. Wholesale Market

No progress in the wholesale natural gas market has been observed for several years already. This market has the maximum market concentration, i.e., gas is imported from the single source, namely Gazprom RAB distributing gas quotas to two natural gas suppliers. Though in 2009, eleven gas companies had to engage in natural gas supply activities, quotas were really allocated to Lietuvos Dujos AB and Dujotekana UAB. Though opportunities of buying gas from other countries are at hand, Gazprom RAB does not allow licensed suppliers to use gas lines operated by it. In 2009 only Lietuvos Dujos AB had a transmission license. Up to 2008 the company had transmission licenses in 9 counties out of 10. The gas company implemented a gas mainline investment project in 2008 and connected Jurbarkas City; therefore Lietuvos Dujos AB was issued a license entitling it to develop the gas transmission system throughout the territory of Republic of Lithuania.

The situation in the distribution market is basically similar to the above one. Lietuvos Dujos AB has 99% of the distribution market share. 6 other companies were entitled to engage in distribution activities but provided the distribution service only in individual regions and their total share in the overall distribution market amounted to 1%.

However different from the transmission activities, approximately 1/3 of Lithuanian territory is not gasified in terms of distribution activities. To increase competition and reduce the influence of the dominating operators in this market and to develop the infrastructure, legislation includes a competition procedure for gasifying these ungasified territories.

The natural gas supply market is dominated by the two key suppliers, Lietuvos Dujos AB and Dujotekana UAB, having supplied 99% of the total gas volume sold to Lithuanian customers. Haupas UAB supplied gas only to Druskininkai Region and sold 1% of total gas volume supplied to customers.

Lithuanian natural gas market is not integrated with other EU member states. Lithuania has the only connection with Belarus which is used for constant supplies. The connection with Latvia is meant only for emergency cases, i.e., ensuring uninterrupted gas supply in case of a supply failure via the sole gas connection with Belarus. The existing gas connection with Belarus has sufficient technical capacities to meet customer needs, but dependency on the single connection is problematic.

As far as Lithuania currently has the only connection, operating a natural gas exchange would be complicated. However creating a gas exchange is planned upon implementing the infrastructure projects: the Polish Connection Project or the Liquefied Natural Gas (hereinafter – LNG) construction one. Suppliers could use the exchange to freely trade, and customers could buy natural gas against the cheapest prices.

Under its remit the NCC has set forth incentives for the development of the wholesale natural gas market: the Regulator-approved the Natural Gas Transmission and Distribution Price Cap Calculation Methodology provides that economic incentives may be applied to projects included in the National Strategy (connections with the neighbouring countries, LNG or underground gas storage projects), i.e., extra tariff-based financing of these investment projects is provided for.

To sum up, Lithuanian wholesale natural gas market may be considered dysfunctional due to the technical isolation of the market caused by no gas supply alternatives available. Investments into Lithuanian – Polish gas line and LNG terminal are the planned solutions to this problem. Incentives to implement these projects and encourage the functioning of the wholesale market are provided for in the NCC-approved Infrastructure Price Caps Calculation Methodology.

2.2.2. Retail Market

The natural gas retail market is basically determined by the wholesale market situation. As in 2008, in 2009 customers were supplied with natural gas by the two main suppliers, namely Lietuvos Dujos AB and Dujotekana UAB. Beside these two gas companies 5 more gas supply companies exist with the market share as small as 0.9% of the total gas supply retail market. Four of them resold gas to customers, and only Haupas UAB supplied gas to Druskininkai Region customers not connected to the main natural gas system of Lithuania.

In 2009 Lietuvos Dujos AB sold gas to household and non-household customers and had 71% of the gas supply retail market share, and Dujotekana UAB supplied gas only to non-household customers and had 28% of the gas supply retail market share accordingly.

The natural gas retail market is 100% open in Lithuania. But due to the above reasons natural gas customers may not use the advantage of the open market, i.e., look for the cheapest gas market price.

The effectiveness of the natural gas market functioning depends on the number of customers having switched suppliers. For several years already Lithuanian customers may not switch their suppliers because of the gas quotas prescribed to suppliers by Gazprom RAB. Thus, Lithuanian natural gas retail market is dysfunctional.

Knowing this situation back in 2007 the Seimas of the Republic of Lithuania authorized the NCC to regulate gas supplier mark-ups applied to customers. Having analyzed mark-ups applied by natural gas suppliers really operating in gas markets, the NCC set 3-5% gas supply mark-up subject to the gas import price value. The actual gas supply margin was 3.7% in 2009 while in 2008 it amounted to 3.4%. Its increase was caused by approximately 10% reduction of the gas import price in 2009 compared to the import price in 2008.

The end customer prices for natural gas and transportation applicable since 1 July, 2010, based on Eurostat differentiation, are provided in Table 3.

Table 3. The end customer prices for natural gas and transportation applicable since 1 July 2010, based on Eurostat differentiation

Price, EUR/MWh	Customer Group	D3	I1	I4-1
Transmission		1.56	1.50	1.50
Distribution		7.96	7.63	4.04
End gas price (including 21 %VAT)		50.48	49.47	44.72

Source: NCC

Just like Lithuanian natural gas wholesale market, the retail one may also be considered dysfunctional due to the lack of natural gas supply companies operating in the gas supply area, which is caused by no gas supply alternatives available. No natural gas customers switched gas

suppliers in 2009. With respect to the really dysfunctional gas market in Lithuania natural gas supply prices are regulated by setting the gas supply margin.

2.2.3. Public service obligations and customer protection

The Law on Natural Gas provides for the public interest regulation in the natural gas sector. It provides that the Government or the institution authorized by it shall be entitled to impose on gas undertakings, in the general economic interest, public service obligations related to security, including security of gas supply, regularity, quality and price of supply, and environmental protection, including energy efficiency, and establish the list of these obligations, the rules of their performance and financing. It also provides that the performance of these obligations shall be financed with funds received for the transmission, distribution, storage and/or supply of natural gas. Beside this, the performance of these obligations may be financed with the State budget and other funds. The European Commission shall be informed on the imposed public service obligations. These obligations shall be clearly defined, transparent, non discriminatory, verifiable.

The Law on Natural Gas specifically regulates the development of the gas infrastructure as implementation of the PSO, i.e., the Government or the institution authorised by it shall have the right to adopt decisions on the installation or development of the main pipeline, natural gas storage facility and liquefied natural gas (LNG) facilities required to ensure safety. The natural gas undertakings and the NCC must implement such decisions.

Beside this, the NCC has the function to oblige a natural gas undertaking to meet the designated supply. However seeing that only the designated supply mechanism is insufficient as a measure to ensure uninterrupted natural gas supply to customers, the NCC proposed the Seimas to prescribe the parallel designated distribution mechanism as a PSO. The draft amendment submitted by the NCC is currently under consideration by the Seimas and the Government.

In 2009 the Government had no set list of PSO and financing sources to provide them. Therefore they are not reflected in the natural gas price for customers.

In the natural gas sector and within its remit the NCC has to settle received customer complaints, i.e., under the preliminary extra-judicial procedure the NCC settles complaints on gas company acts or omissions in natural gas transmission, liquefaction, re-gasification, distribution, supply, buying and storing, access to the system, the procedure of customer system connection (methodologies, prices), system balancing, price application, investment and contract terms.

Like in the electricity sector, in the gas one increasing public interest and more protection of own interests were felt. In 2009 the NCC received 44 written complaints and requests in the gas sector.

At the beginning of 2009 the majority of written complaints and requests in the gas sector were about the increased natural gas tariff for household customers. Some customers clarified the reasons for the price growth and asked to explain the structure of the natural gas tariff for household customers and differences between tariffs applied to various customer groups. Beside this, like in 2008, some customers were unclear on why the fixed part of the gas tariff was set, i.e., they thought that paying for gas though no gas was consumed was illogical. The NCC replied to these questions providing explanations and illustrations with specific numbers and graphs.

New customer connection terms were also intensively complained about. Customers complained about the procedure prescribed in the Fee Setting Methodology for New Natural Gas Customer Connection under which for three years in turn the connection fee for newly gasified house blocks

is calculated by taking into account the number of gas line meters built per customer. After three years the fee is calculated based on the gas line length from the point of the new customer connection to the existing gas system. Therefore some customers try to wait for three years to get cheaper access to gas. With respect to this situation the Fee Calculation Methodology for New Natural Gas Customer Connection was modified to eliminate the three year time for the new customer connection. Gas companies have to estimate all the potential customers at once. The key principle is that all new household customers in newly gasified blocks shall have the same connection service price applied.

Some companies contacted the NCC about harmonization of the natural gas transit and transmission tariff setting methodologies and justification of the capacity fees.

To clarify the capacity component in 2010 the NCC plans to approve the cost and accounting unbundling principles to serve as a clear basis for justification of the capacity fee.

In summary it may be stated that PSO regulation is sufficient. PSO was not reflected in the gas tariffs for 2009 as there was no PSO set. The NCC actively protected customer interests, settled complaints and took justified arguments into account, modified its approved methodologies and submitted proposals to improve legislation.

2.2.4. Infrastructure

Tariffs of the third party access to infrastructure (rTPA) are regulated in the natural gas sector. The NCC sets transmission and distribution price caps.

In 2009 the Law Amending the Law on Natural Gas was passed including several material pricing changes. The law prescribes the profit calculation principle, i.e., the profit margin calculated on the basis of the regulatory asset base may not exceed 5% before taxes. Beside this, subject to customer complaints and the NCC proposals it provided that gas tariffs for household customers shall be recalculated twice a year. This allows timely reacting to gas import price changes subject to alternative fuel price changes of international oil markets. Therefore, gas price calculation and forecasting has become clearer for customers.

As mentioned above no infrastructure projects in line with Article 22 of the Gas Directive are currently implemented in Lithuania, however some are planned for the future. It should be noted that analogous principles of the Article of the Directive have been transposed by the development of the distribution system: legislation provides that upon the NCC's approval in newly gasified territories the distribution system operator may only set a tariff to reach an investment pay back point within the payback time set by the Regulator. These tariffs may differ from others set in another distribution activity territory of the distribution operator. In this case the local (distribution) market development and competition in infrastructure development is encouraged.

Lithuanian natural gas transmission system is connected with Belarusian, Latvian and the Russian Federation gas systems. International connections with these countries are regulated on a contract basis. In 2009 Lithuanian natural gas demand amounted to 2.68 billion m³ per year, thus the long-term contractual capacity reservation causes no transmission system overloads either on the level of domestic or international connections. In 2009 the maximum import gas pipeline use was 65%.

An investment project was implemented in 2009 aiming to increase annual gas transit volumes up to 2.5 billion m³ to Kaliningrad Region of the Russian Federation simultaneously ensuring natural

gas supply security and reliability for Lithuanian customers. Infrastructure companies laid 18.4 km of the transmission system and 96.4 km of the distribution system gas lines in total.

The Lithuanian Transmission System Operator allocates the transmission system capacities to customers according to the first come first served (fcfs) principle. While monitoring published Transmission System Operator's information on capacity the NCC applied requested Lietuvos Dujos AB to publish the actual 10-yearly system use statistics and information on the future technical transmission system capacities.

It may be said that Lithuanian transmission system capacities are sufficient to meet customer needs. Thus there is no secondary trade in interruptible transmission system capacities. The NCC has approved short-term transmission tariffs of Lietuvos Dujos AB which may be used by customers related to seasonal business.

No infrastructure projects in line with Article 22 of the Directive are currently implemented in Lithuania, however but some are planned for the future to diversify gas supplies. An analogous principle encouraging gas company investments has been transposed by the development of the distribution system.

In 2009 some material pricing principles have changed: the regulatory asset base principle is in force, the profit margin is up to 5% before taxes, and gas prices for household customers are recalculated twice a year.

2.2.5. Supply Security

Long term gas supply contracts are among the key elements of ensuring the supply security and reliability. Lietuvos Dujos AB has a gas supply contract signed with Gazprom RAB up to 2015 (inclusively). This contract has been signed in 1999. Dujotekana UAB has a long term gas supply contract signed up to 2012 inclusively, and Haupas UAB – up to 2013.

The Law on Natural Gas regulates ensuring natural gas supply security. Under this law the Government-approved Supply Security Description shall set minimum gas supply security requirements, their financing principles and duties of gas supply companies and other market players and the NCC to meet the Description requirements. The Description sets the priority secure gas supply, including pipeline reserves for household customers and customers in sites with lower than 5 MW production capacities and without reserve fuel stocks, supplies to which may not be interrupted.

In line with provisions of the Law on Energy the regulators shall annually analyze natural gas supply security reports submitted by the Transmission System Operator. This information and progress made are summed up and presented in reports.

To ensure supply security and reliability within its remit the NCC is charged with analysis and approval of long term investment programmes, specific investment projects and setting price calculation methodologies prescribing principles and criteria for making such investments.

Supply companies are responsible for the uninterruptible gas supply to household customers. They have to store gas reserves, and storage costs are included into the gas supply price. Under the prescribed requirements a supply company must store reserves until reaching 60 day uninterruptible gas supply to household customers in case of uninterrupted supply to the Republic of Lithuania. In 2009 20 million m³ of gas reserves were stored in Inčukalnis Underground Gas

Storage Facility. These reserves would have ensured 20 day uninterrupted gas supply to household customers during the cold season.

As already mentioned Lithuanian natural gas system is not connected to EU member state transmission gas lines. Therefore it may be noted that like other Baltic Region gas systems, it is isolated and depend on the sole gas source, Gazprom.

However to improve EU energy security and accelerate the future infrastructure projects, in line with the Regulation (EC) No 663/2009 of the European Parliament and the Council of 13 July 2009 an Economic Recovery Programme was developed including contribution to four Lithuanian and Latvian gas projects aiming to increase the gas transmission system throughput between these countries both ways, under the financial Community support for energy projects. In Lithuania, Panevezys Gas Compressor Station will be upgraded, the transmission system throughput to Latvia will be increased and networks will be upgraded under this Programme.

The report of the High level group established by the European Commission notes that the role of Poland as the energy bridge to the common EU gas system should be increased to overcome energy isolation and reduce Lithuanian dependency on the sole natural gas supplier.

Annex I of the Decision No1364/2006 of the European Parliament and the Council of 6 September 2006 laying down guidelines for trans-European energy networks provides for the following gas network measure: Gas Networks NG. 1. United Kingdom — northern continental Europe, including the Netherlands, Belgium, Denmark, Sweden and Germany — Poland — Lithuania — Latvia — Estonia — Finland — Russia.

In April 2010 Lithuanian and Polish Transmission System Operators Lietuvos Dujos AB and Gaz System S.A., supported by the Ministry of Energy of the Republic of Lithuania and the Ministry of Energy of the Republic of Poland submitted a joint application to receive financial support under the TEN-E Programme to develop the feasibility study of Polish-Lithuanian gas line connection.

It may be said that under the gas market isolation long term gas supply contracts are a crucial element ensuring uninterrupted gas supply to the Republic of Lithuania. However, the existing infrastructure ensures only partial gas supply to customers in case of interrupted supply through the territory of Belarus. Thus, to address this problem the existing infrastructure capacities shall be expanded and new connections between EU member states and an LNG terminal shall be built.

The Regulator plays a very important role in implementing the supply security and reliability policy; it may send respective signals to companies operating in the gas sector, which may be done through pricing. Beside this, the Regulator plays a very important role in the investment approval and evaluation process: if investments are not approved by the NCC, they may not be recognized justified for the purpose of revising state regulated prices.

Initiated by the European Commission, the Baltic Energy Market Interconnection Plan (BEMIP) was developed aiming to create a real market and ensure a reliable and uninterrupted gas supply, and is the key strategy addressing the gas market isolation in the Baltic States. Both infrastructural projects planned in this area and their implementation are prerequisite for Lithuanian aim to ensure a reliable and uninterrupted gas supply and develop an integrated regional energy market in the long perspective.

2.2.6. Regulation Issues and Unbundling Vertically Integrated Companies

Activity unbundling is regulated by Article 12 of the Law on Natural Gas currently in force. It provides that in gas undertakings transmission, liquefaction, storage, distribution activities must be unbundled. Unbundling shall be affected by establishing a subsidiary or a separate undertaking. An integrated gas undertaking supplying gas to less than 100 000 customers must not unbundle the activities and establish a subsidiary or a separate undertaking. The NCC must control the efficient unbundling of gas company activities, i.e., that accounts are rightly unbundled to prevent cross-subsidizing of gas transmission, distribution and supply activities.

In 2010 the NCC plans to approve cost and accounting unbundling rules for better transparency and to set a requirement for gas companies to do bookkeeping in line with the Regulator-set rules.

Lietuvos Dujos AB is the largest natural gas Transmission System Operator in the Baltic States. More than 99% of total natural gas volume demanded by Lithuanian customers is supplied to Lithuania through the company-controlled and operated gas system. This company is the only one in Lithuania providing services to more than 100000 customers. The company is vertically integrated and has unbundled its activities internally. On its website this company is presented to customers as a single integrated company, Lietuvos Dujos AB having one logo, address and website. Activities of this company have not been legally unbundled; however the company keeps individual book-keeping records and does individual financial statements for each such activity. One of the most important and relevant upcoming issues is the one of unbundling the independent Transmission System Operator. Currently in order to implement provisions of the EU 3rd Legislative Energy Package the Programme of the Government of the Republic of Lithuania prescribes developing draft amendments to the Law on Natural Gas of the Republic of Lithuania. The Measure should be implemented up to 2011.

The Transmission System Operator plays a very important role in balancing gas flows. Currently transmission and supply activities are concentrated in one pair of hands. However upon unbundling energy companies in line with the 3rd Package requirements different companies would be engaged in natural gas transmission and supply activities therefore system balancing would be more complex. With respect to this both the Transmission System Operator and the NCC will have to set the system balancing rules and prices for the service.

Beside this, to meet requirements of the Regulation 1775/2005 the gas Transmission System Operator regularly publishes updates about the relevant points of the system on technical, actual, unused system capacities and the actual system pressure.

To sum up it may be stated that legal unbundling prescribed in the 2nd Energy Package has not been implemented in Lithuanian gas sector. This provision should be met by the sole integrated gas supply company supplying gas to more than 100000 customers, namely Lietuvos Dujos AB. However this company has unbundled accounting of activities and operates them as if they were separate gas companies. No abuse by the Transmission System Operator regarding the third party system access was observed. With respect to the fact that the vertically integrated gas company is not legally unbundled, activity cross-subsidising shall be prevented. Therefore, in 2010 the NCC intends to approve cost and accounting unbundling principles.

2.2.7. General Conclusions related to 3rd Energy Package

In May 2010 the Government of the Republic of Lithuania approved the concept of the Law on Natural Gas of the Republic of Lithuania. It has been developed to implement Directive 2009/73/EC of the European Parliament and the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/the European Commission. The purpose of the concept is to enforce key legal regulation provisions and structure of the Law Amending the Law on Natural Gas of the Republic of Lithuania. Aiming for the goals set forth in the Concept this Law will improve the following gas market areas: proper gas transmission activity unbundling from extraction and supply; customer protection to develop the competitive market; the remit, independence, international cooperation and acts of the National Regulator ensuring the proper gas supply security and reliability level; cooperation of the Transmission System Operator at the regional and EU level.

The Concept provides model of full ownership unbundling of transmission and supply activities. The Government assigned developing the draft Law Amending the Law on Natural Gas of the Republic of Lithuania, and the draft Implementation Law of the Law on Natural Gas of the Republic of Lithuania to the Ministry of Energy.

3. Electricity Market Overview and Regulation

3.1. Regulatory Issues [Article 23(1) except “h”]

3.1.1. *Management and Allocation of Interconnection Capacity and Mechanisms to Deal with Congestion*

With the day-ahead electricity market (the Power Exchange) operations having started on 1 January 2010, market traders trade anonymously. The trade strategy of market traders to allocate the traded quantities to the Power Exchange and trade under direct bilateral contracts is determined by the Power Exchange price and its trends.

When Ignalina Nuclear Power Plant was shut down on 31 January, 2009, a significant share of electricity demand is and will be covered by relatively cheaper electricity from other countries. Potential free power reserves for trading are available in Estonia, Belarus, the Russian Federation, Ukraine, and Latvia (mainly during tides). During the upcoming years changes in Scandinavian market will influence trading scope and prices, as the 350 MW capacity cable interconnecting Estonia and Finland will facilitate free trade between the Baltic States (including Lithuania) and the Scandinavian countries.

Upon the change of Lithuanian production balance from the dominating exporter to the dominating importer, managing interconnection capacities becomes critical. Therefore the throughput capacity management system based on time-synchronized capacity and electricity trade has been implemented since 2010. This means that during electricity trading throughput capacities are allocated based on electricity price priorities, i.e., transmission throughputs are allocated primarily to market players offering a lower price for imported electricity or a higher price for exported electricity. Such a throughput management style requires one centralized platform for all imported or exported electricity buying and selling transactions - Lithuanian day-ahead market (the Power Exchange).

In 2010 Lithuania will still have the autonomous Power Exchange, but since 2011 it is forecasted that trading will cover the Baltic States market aiming to integrate into the common Scandinavian and Baltic market, Nordpool Spot). These steps are included into the common Baltic States and Scandinavian electricity market joining plan that was passed in 2009 foreseeing not only the integration of electricity markets but also incorporation of electricity transmission networks between Scandinavian and Baltic States. Before expanding integration of power transmission grids by laying cables between Lithuania and Sweden and an extra cable between Estonia and Finland, the Baltic States are forecasted to develop one individual Baltic price area. This will happen because trade volumes between the Baltic States and Scandinavia will be limited by the existing Estonian-Finnish connection capacity, which is 350 MW.

Situations may be faced when different price areas will form in the Baltic States. They will depend on Estonian-Latvian and Latvian–Lithuanian transmission capacities. During time periods when due to transmission line status (repairs or other potential line disconnection cases) cross-border trade availability is limited, different price areas would form in these countries.

However in 2009 Lithuanian electricity system, just like the Baltic electricity system faced no overload problems due to sufficient power grid throughput capacity. Cross-border power flows, interconnection capacities, generation, consumption, export/import, the transmission network outage impact on transmission capacities between the neighbouring countries may be followed on-line on the website of the Lithuanian Transmission System Operator www.litgrid.eu. It also provides full information under requirements of the Regulation No. 1228/2003/EC and approved guidelines.

The maximum possible capacity flows at cross-border points under a normal network scheme are presented in Table 4.

Table 4. Maximum possible capacity flows with neighbouring countries

Connection	Capacity, MW
Lithuania-Latvia	1500
Latvia-Lithuania	1300
Lithuania-Belarus	2200
Belarus-Lithuania	1400
Lithuania-Kaliningrad	680

Source: LITGRID UAB

Table 5. Load of interconnections in Lithuania in 2009, %

Interconnection	Average load, %	Maximum load, %
LT->LV	22.82	93.09
LT<-LV	17.49	60.10
LT->BY	8.77	41.20
LT<-BY	17.11	78.70
LT->RUS	33.66	91.18
LT<-RUS	10.19	41.43

Source: LITGRID UAB

The Transmission System Operator is currently applying the Methodology for the Calculation of Interconnection Capacities to calculate the interconnection capacities. This Methodology allows assessing maximum flows, dynamic stability; emergency reserves and other network status parameters (see the Table 6)

Table 6. Planning and management stages of grid transmission capacity

Stage	Period	Parameters to be assessed
Pre-planned	Over a week in advance	Import/export Scheduled repairs
Planning	A week in advance	Work schedule of the hydro pumped storage power plant Work schedule of the hydro power plant Network status
	A day in advance	Revision of the work schedule of the hydro pumped storage power plant Revision of the work schedule of the hydro power plant Revision of the network status
Transmission capacity management	Operation day	Operation of power plants Activation of reserves Network status

Source: LITGRID UAB

Up to the shutdown of Ignalina NPP at the end of 2009 electricity network throughput was sufficient, and preparations were made to integrate congestion management into wholesale markets. However the situation has changed since 2010. The aim is to have interconnection capacities allocated based on implicit auction and operated by Nord Pool Spot AS (NPS) since 2011.

Up to 2011 Lithuanian-Latvian interconnection congestion is managed using the capacity optimization method for the agreed available transfer capacity (ATC). This value is used for electricity trading at Lithuanian Power Exchange (BALTPPOOL UAB). As mentioned above, in future this will be done by NPS. Belarus-Lithuanian interconnection congestion is also managed by Lithuanian Power Exchange using the value agreed among Transmission System Operators. This value is determined under the methodology based on $n-1$ and emergency reserve maintenance in Lithuanian electricity system. Since 2011 capacities are to be allocated by NPS under the interconnection capacity optimization method set for energy trade with the third countries.

Under the Memorandum of Understanding on Capacity Allocation Mechanism between the Baltic States (PV-FIN-1011-15) signed by the Baltic Transmission System Operators on 16 December 2009, since 2011 the market-based overload management method (the implicit auction) should work throughout the Baltic States and apply to all the Baltic price areas and be controlled by NPS. NPS should also adapt and use the common market-based interconnection optimization method for trading with the third countries.

Under the Communication Policy Agreement signed by the Baltic Transmission System Operators, the Operators shall exchange information required for intersystem trading. This document provides for the work coordination scheme between the Operators and balancing energy suppliers, deadlines of trading schedule exchange, their approval and adjustment procedure for two days ahead, day-ahead and intra-day trading, etc.

In 2009 the Transmission System Operators did not encounter any major problems in calculating and establishing interconnection capacity.

3.1.2 The Regulation of Transmission and Distribution Companies

In 2009, the same as last year, licensed activities in Lithuania were carried out by one electricity transmission system, two regional and five local electricity distribution network operators indicated in Table 7.

Table 7. Data about grid operators

No.	Company	Licence type	Local or national network	Main shareholders
1.	Lietuvos Energija AB	Electricity transmission	National	LEO LT AB (State – 61.7%, private company – 38.3%) – 96.5%, others – 3.5%
2.	Rytų Skirstomieji Tinklai AB	Electricity distribution and public supply	Regional	LEO LT AB – 71.35%, E.ON Ruhrgas International AG – 20.28%, others – 8.37%
3.	VST AB	Electricity distribution and public supply	Regional	LEO LT AB (State – 61.7%, private company – 38.3%) – 98.2%, others – 1.8%
4.	Visagino Energija PE	Electricity distribution and public supply	Local	State-owned
5.	Achema AB	Electricity distribution and public supply	Local	Private company
6.	Akmenės Cementas AB	Electricity distribution and public supply	Local	Private company
7.	Prekybos Namai Giro UAB	Electricity distribution	Local	Private company
8.	Lifosa AB	Electricity distribution and public supply	Local	Private company

Source: NCC

Compared to 2008, last year the number of licensed independent suppliers has increased by 10 ones. The number of licensed independent suppliers is specified in Table 8.

Table 8. Number of electricity suppliers by year

Supply licenses issued in 2009		Engaged in licensed activities in 2009		Supply licenses issued in 2008		Engaged in licensed activities in 2008		Engaged in licensed activities in 2007		Engaged in licensed activities in 2006		Engaged in licensed activities in 2005	
PES	IES	PES	IES	PES	IES	PES	IES	PES	IES	PES	IES	PES	IES
6	30	6	8	6	20	6	8	6	6	7	5	7	5

Source: NCC

Line lengths by electricity network companies in 2009 are provided in Table 9.

Table 9. Line lengths by electricity network companies in 2009

No.	Company	Overhead line length, km	Cable line length, km
1.	Transmission System Operator (Lietuvos Energija AB)	6643	36
2.	Distribution System Operators:	98959	21009
2.1.	Rytų Skirstomieji Tinklai AB	51610	10537
2.2.	VST AB	47349	10472

Source: NCC

Network Tariffs

Since 2002, Lithuania has applied the principle of stimulating regulation or price caps in setting prices for electricity transmission, distribution (50/50 price and revenue cap combination) services according to voltage levels. Pursuant to the Methodology for Setting Prices for Electricity Transmission and Distribution Services and their Price Caps, price caps are set for a three-year period, with annual adjustment of the initial revenue level for respective activities by the following four correction coefficients:

1. indexation (consumer price index and efficiency);
2. unpredicted changes (external factors);
3. impact of electricity volume;
4. correction (assessing revenue surplus/deficit depending on the applied price differentiation structure in order to ensure the necessary revenue of the company, provided the company gives valid reasons behind the failure to collect the target amount).

When setting price caps and the initial revenue level, an assessment is made of the justification of costs, activity results during the previous regulatory period, market development forecasts, changes in the legal environment, etc. When setting state regulated prices, necessary expenses must be planned for the extraction of energy resources, energy production, purchasing, transmission, distribution and supply, and provisions must be made for the development of the energy sector and energy efficiency, the use of indigenous and renewable energy resources and the implementation of public service obligations, and the profit rate must be set.

Transmission, distribution and public supply service caps set by the NCC are recalculated each year, when forecasts or data on volumes of sold or transmitted energy change, when set electricity transmission reliability and service quality indicators, annual inflation rate, the NCC-set operational effectiveness, the NCC-approved and made investments, taxes payable by a service provider, and other factors change, which are out of the service provider's control but influence price caps calculation, the setting of which was based on these indicators, or in case the NCC-set normative profit was exceeded.

Taking into account the national micro- and macro-economic indicators and the methods applied in the international practice, efficiency coefficients are set for the abovementioned period of price caps. Lithuania has only 2 main distribution network companies; therefore half of the consumer price index is applied to identify operational efficiency which is assessed by setting a price cap.

Participation in making benchmarking analysis with other countries is also carried out. The comparative analysis of DNOs in the Central and Eastern Europe was implemented on the initiative of Energy Regulators Regional Association (ERRA). The Analysis showed that private distribution companies operated the most efficiently not only in Lithuania. The results of the company were twice as good. The NCC participates in the comparative analysis of the European TSOs arranged by the European Union regulators. Concluded results were presented in spring 2009, which were the basis to apply 2 percent efficiency rate for the transmission system companies

At the end of the financial year, corporate profit is corrected, where the average profit rate for the last two years exceeded the planned one.

The Electricity Transmission and Distribution Service Price and Price Cap Setting Methodology also sets the maximum technological electricity cost limits by grid voltage levels; and in 2009 these cost limits were reduced subject to historic data of the last three years.

Investments are encouraged by calculating depreciation and normative profit based on the asset market value, and moreover, the normative profit margin and regulated activity assets have been set by the Law on Electricity. With the amendments to the Law on Electricity passed at the end of 2009 and with the Government's approval of the valuation principles of assets used in the licensed activities in autumn 2009, the Electricity Transmission and Distribution Service Price and Price Cap Setting Methodology was modified accordingly. In 2010 electricity transmission and distribution service price caps were recalculated based on the un-revalued fixed tangible asset value.

With respect to the set minimum power supply reliability and service quality indicators, in 2009 methodologies included rates of penalties and incentives to ensure the quality of investment use.

Upon the approval of the price caps by the NCC, the specific prices and tariffs for transmission and distribution services shall be set and changed by service providers. The weighted average of the prices and tariffs set by service providers shall not exceed the respective price caps any year of the regulatory period. The NCC shall publish the prices and tariffs set by the service provider within 30 calendar days from the receipt of the application of the service provider, subject to prior verification whether the prices and tariffs are non-discriminatory for customers. At the end of every year of the regulatory period, the NCC shall control whether the weighted average of the prices and tariffs set by the service provider has not exceeded the price caps. Should the NCC ascertain that the weighted average of the prices and tariffs set by the service provider exceeded the respective price cap during the previous year of the regulatory period, it shall have the right to obligate the service provider to set accordingly smaller prices and tariffs.

It should be mentioned that setting up specific tariffs for transmission services, the component G is not applied i.e. all transmission system service costs are covered by consumers.

In 2009 the same as in 2008, there were no overloads in the Lithuanian transmission grid, thus none income was received.

However the Transmission Price Cap Setting Methodology singles out income related to overload management, the Transmission System Operator has developed a methodology on management, distribution and use of overload-generated income.

Other state institutions may provide comments and suggestions before approving various documents i.e. developing pricing, it has the advice function.

Pursuant to the forms set by methodologies for calculating electricity price caps, a Transmission System Operator and a Distribution Network Operator are requested to provide the following information on a *quarterly* and *annual* basis:

1. calculation of prices for electricity transmission and distribution services and their price caps;
2. efficiency indicators;
3. electricity balances;
4. electricity tariffs applied by companies, consumption and revenue;
5. electricity sales of companies by consumer groups;
6. other data required for adequate supervision of the electricity market.

Pursuant to the Rules for Licensing Activities in the Electricity Sector, the following documents must be produced on a quarterly basis:

1. financial statements of the licensed economic-financial activities;
2. report of the market operator (free form);
3. report on supply reliability indicators.

On an *annual* basis, the following documents must be submitted in addition:

1. annual audit report on the costs of the licensed activities;
2. annual analysis of the use of the electricity network system;
3. report on the development prospects for the electricity network system;
4. annual report on complaint investigation.

In 2009 a new version of the Energy Company Technological, Financial and Management Capacity Assessment Procedure was approved, being the basis to license regulated activities. Company assessment indicators have been reviewed, and their analysis procedure has been improved.

According to the Monitoring Report on Supply Security in the Lithuanian Electricity Market, technical and economic data must be collected and summarised *annually*, before 31 July, by drawing conclusions on electricity supply reliability as well as internal and regional electricity market development prospects. Such information covers forecasts for the three forthcoming years and reflects the following data from various aspects and in different periods:

- electricity generation, transmission and distribution capacities, intersystem connections with the neighbouring energy systems;
- electricity capacity balances;
- electricity generation, consumption, exports and imports;
- market concentration;
- volumes of electricity purchases and sales;
- degree of market opening;
- market participants;
- dynamics of market prices;
- degree of eligible customer activity;
- forecasted volumes of electricity purchases, sales and exports;
- forecasted capacity balances;
- needs for new power capacities;
- planned development and renovation of electricity transmission and distribution networks, possible weak spots.

Energy Company Information Provision Rules and the Procedure of Approval of Energy Company Investment Projects by the Commission have been modified in 2009. These changes obliged companies to provide reports on implementation of annual investments by project implementation phases and by financing structure and project types in appropriate voltage level grids.

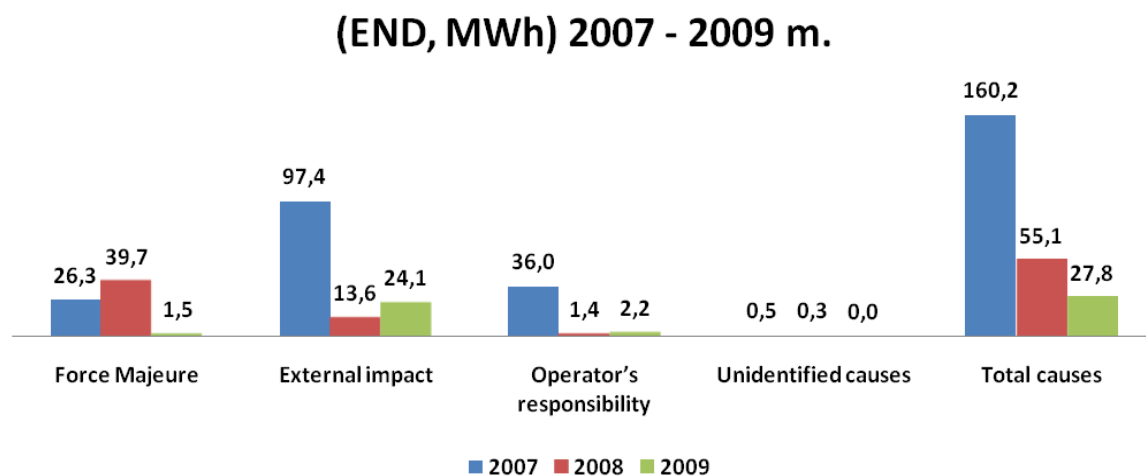
Under the Law on Electricity the NCC is obliged to set quality requirements for electricity reliability of supply and service quality, criteria for companies' efficiency for operations and monitor their fulfilment. The NCC annually inspects major electricity companies, analyzes and evaluates how they register data on reliability of electricity supply and service quality, calculate indicators and outline reports submitted to the NCC. Under the Quality Requirements, already this year the change over the indicators will be compared with the minimum level fixed by the NCC and shall be

taken into account when calculating price caps for transmission and distribution services thus motivating DSOs and TSOs to assure relevant level of electricity transmission reliability and service quality to all consumers

Reliability of electricity supply by a transmission networks (the system operator Lietuvos Energija AB) is estimated by two indicators – END (the electricity quantity not delivered by the transmission network, which shows the electricity quantity not supplied by transmission network due to interruptions within a reporting period) and AIT (the average interruption time which shows the average interruption duration within a reporting period).

In 2009, the electricity quantity not delivered by the transmission network (END) reached 27.8 MWh, and the majority of interruptions- more than 25.5 MWh happened because of “force majeure” and external impact, i.e., causes not attributed to the company responsibility. In 2008, the electricity quantity not delivered by the transmission network was twice higher than in 2009 (55.1 MWh) therefore this year the majority of electricity (53.3MWh) was not delivered due to other causes but not attributed to operator’s responsibility.

Figure 1. Average energy not delivered (END) by the Transmission System Operator Lietuvos Energija AB in 2007 – 2009 by interruption causes

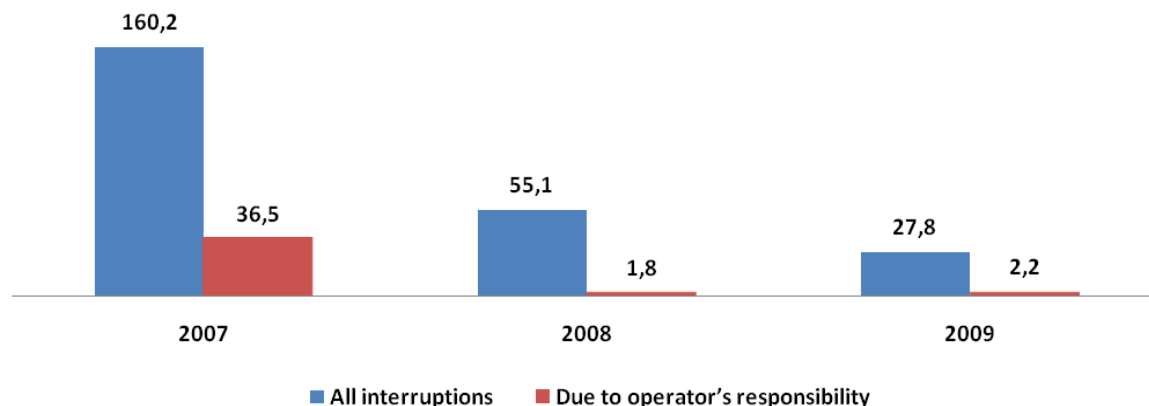


Source: NCC

The attention should be drawn that a similar ratio is significant within the entire period of 2007-2009 (Figure 3). In comparison with the annual quantity of not delivered electricity, electricity quantity not delivered due to causes attributed to the operator’s responsibility accounted for a relatively small share.

Figure 2. Average energy not delivered (END) by the Transmission System Operator Lietuvos Energija AB in 2007 – 2009

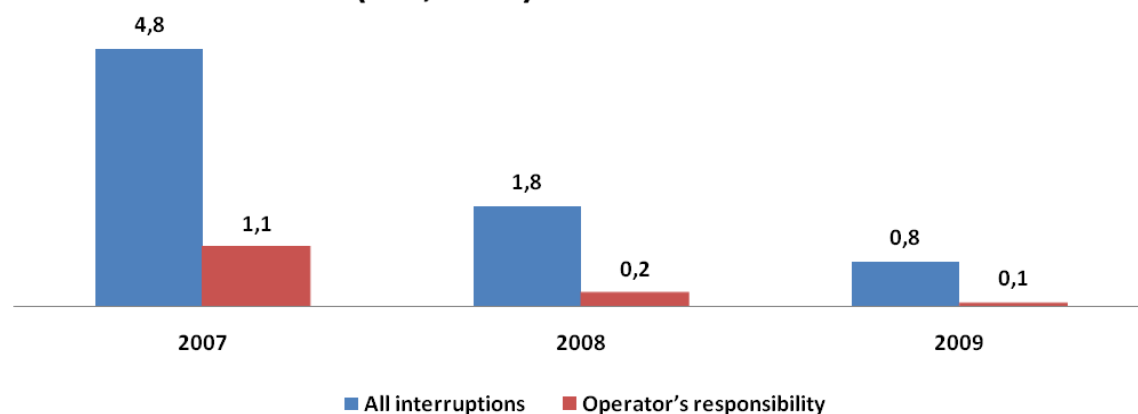
(END, MWh) 2007 - 2009 m.



Source: NCC

In 2007-2009 (Figure 4), the average interruption time (AIT) reached 4.76; 1.85 and 0.82 minutes respectively, the majority of which happened because of "force majeure" and external impacts.

Figure 3. Average Interruption Time (AIT, min) of Lietuvos Energija AB in 2007 – 2009
(AIT, min.) 2007 - 2009 m.



Source: NCC

Data in Figure 3 and 4 shows that last year both the electricity quantity not delivered (END) and average interruption time (AIT) due to causes attributed to the operator's responsibility changed insignificantly and in comparison with the annual quantity (time) formed a relatively small share (on an average - about 8 percent).

Following the provisions of the Quality Requirements, the minimum level of electricity transmission reliability for TSO is fixed taking into account the average END and AIT indicators in 2006-2008 (only for long-term and not planned interruptions attributed to operator's responsibility). Due to the said indicators, the fixed minimum reliability level for Lietuvos Energija AB amounts to $END_{MPL} = 14$

MWh, and $AIT_{MPL} = 0.49$ min. Lietuvos Energija AB did not exceed the fixed minimum level of the reliability of supply.

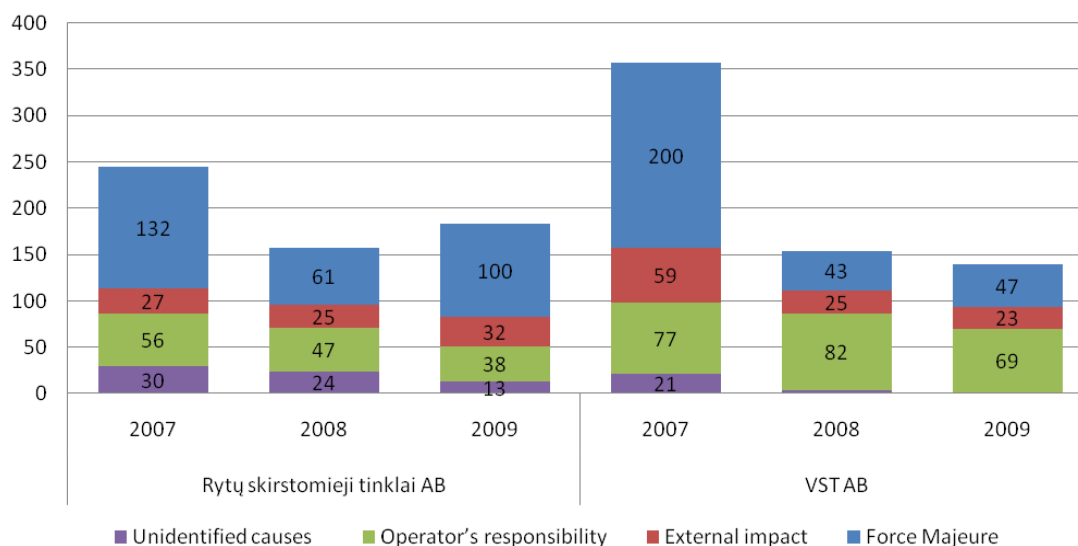
In terms of reliability of electricity supply by the distribution network, the key indices are as follows: system average interruption duration index (SAIDI) and frequency index (SAIFI, MAIFI) per customer.

The reliability of electricity transmission and service quality analysis is done by comparing reliability of supply indicators of Rytų Skirstomieji Tinklai AB and VST AB.

In 2009, the system average interruption duration index (SAIDI) of Rytų Skirstomieji Tinklai AB (Figure 5) was 183 minutes (in 2008-157), and SAIDI of VST AB per customer - 140 minutes (in 2008-155). SAIDI related to the operator's responsibility was 51 minutes (Rytų Skirstomieji Tinklai AB) and 70 minutes (VST AB). Interruptions totalled to 32 minutes by Rytų Skirstomieji Tinklai AB and 23 minutes by VST AB.

Figure 4. System average duration of unplanned long-term interruptions per user (SAIDI, min) by interruption causes in 2007 – 2009

(SAIDI, min.) 2007 - 2009 m.



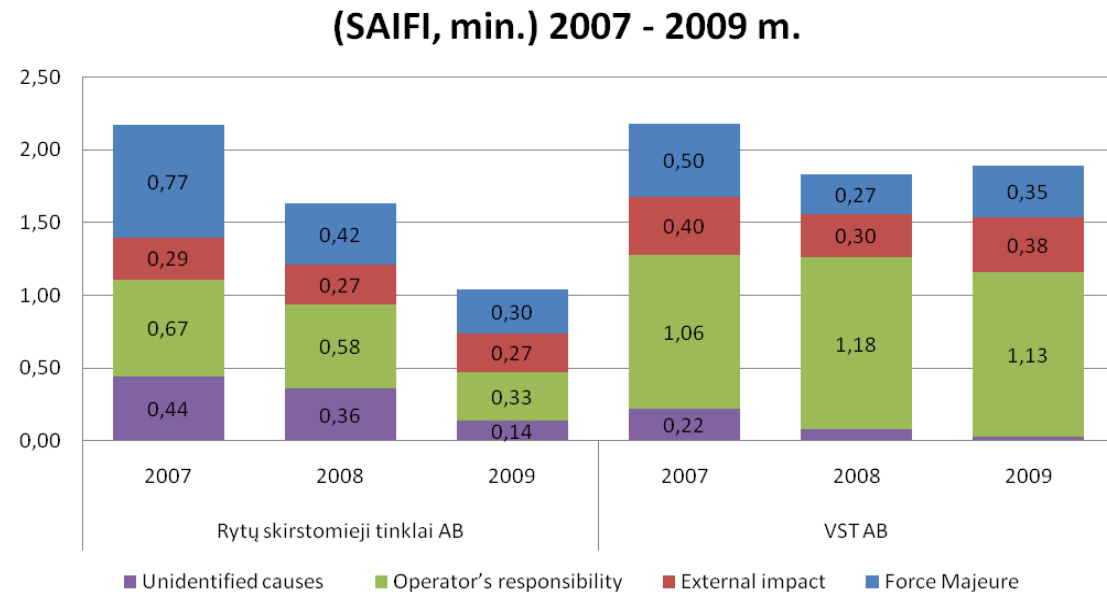
Source: NCC

For the purpose of measuring the average frequency of unscheduled interruptions per consumer, two indices are calculated: for sustained interruptions lasting 3 minutes and longer (SAIFI), and for momentary interruptions lasting longer than network automation switch-on, but shorter than 3 minutes (MAIFI).

The SAIFI and MAIFI indicators specify the system average frequency of the system interruptions i.e., the average number of electricity supply interruptions per reporting period per system user. Thus in 2009 the system average interruption frequency index (SAIFI) of Rytų Skirstomieji Tinklai AB (Figure 6) was 1.04, and that of VST AB totalled – 1.89, of which 0.94 (Rytų Skirstomieji Tinklai AB) and 1.26 (VST AB) were attributed to the operator's responsibility. The system average

interruption frequency index attributed to the external impact of Rytų Skirstomieji Tinklai AB was 0.47, and that of VST AB totalled 1.16.

Figure 5. System average interruption frequency index (SAIFI) by interruption causes in 2007 – 2009



In 2009 the momentary average interruption frequency index (MAIFI) in comparison with 2008 changed insignificantly and totalled to 0.07 (in 2008-0.05) for Rytų Skirstomieji Tinklai AB and 0.5 for VST AB (in 2008- 0.3) respectively.

Following the provisions of the Quality Requirements, the minimum level of electricity transmission reliability for TSO is fixed taking into account the average SAIDI and SAIFI indicators in 2006-2008 (only for long-term and not planned interruptions). According to the preliminary reliability indicators of SAIDI and SAIFI given by the DSOs, it has been defined that in 2009 Rytu Skirstomieji Tinklai AB and VST AB did not exceed the fixed minimum level of the reliability of supply.

When changes are made to electricity prices and tariffs of the regulated network operators and public suppliers as well as the procedure for their application, a new procedure is published in the supplement *Informaciniai pranešimai* to the official gazette *Valstybės žinios*. The applicable electricity prices, tariffs and procedure for their application are placed on the websites of respective companies. Customers may also find information about planned changes to electricity prices, tariffs and procedure for their application, as well as make customer inquiries to companies. Furthermore, companies operating in the electricity sector are obliged by the Law on Electricity to notify household customers of the increase of prices and tariffs in writing or by other means at least one month prior to such increase.

The fees for connection to the existing electricity grids are set by the NCC. The rates of the fees are published when the NCC takes a decision on their approval. The rates of the applicable fees are also made available on the website of the respective company or by phoning the numbers given on the website of the company.

Since 2009, when the Law on Electricity included the provision that new electricity customers shall pay 20% costs of power installation connection, and aiming for transparency, Tariff Setting Methodology for Electricity Customer Installation Connection to Power Grids was approved. Lower connection tariffs were approved under the above Methodology, i.e., their values were reduced for the second time, as in mid-2009 they had been reduced after the NCC had verified actual data and identified incompliance with the planned data.

Companies must make public to market participants the following information:

- electricity tariffs for customers, their changes, new plans, etc.;
- commercial losses and technological costs;
- terms and procedures for the connection of new customers applied by the company based on existing legal acts (required documents, applications, etc.);
- terms and conditions of payment for electricity, rates of charges, etc.;
- various promotions and discounts.

As mentioned before additional information according to the requirements of Regulation No. 1228/2003/EC and approved guidelines, and other information useful for market participants is published in the website www.litgrid.eu of the Transmission System Operator. When the NPS-based Power Exchange started operating since 2010, the hourly electricity market price, the balancing energy price and other related information is public and posted on Lithuanian Power Exchange website www.baltpool.lt. When the Baltic Regulators coordinate data volumes and regularity on the regional scale, information is to be published based on the Guidelines of Good Practice on Information Management and Transparency established by the European Energy Regulators.

Customers may obtain relevant information not only in official and media publications and on websites, but also in all customer service departments, over information and general phone lines, as well as in information leaflets.

Prices for the electricity transportation service vary depending on the voltage of the grids supplying electricity to customers. Major industrial customers consuming about 24 GWh electricity per year with the maximum allowed capacity of 4000 kW receive electricity from medium and high voltage electricity distribution grids, whereas households with the annual consumption of about 3500 kWh and business customers with the annual consumption reaching 50 MWh and with the maximum allowed capacity of about 50 kW are usually supplied with electricity from low voltage electricity distribution grids. Respective average prices for electricity transportation are presented in Table 10.

Table 10. Average prices for electricity transportation services in 2009

Title	Ig	Ib	Dc
Average prices for electricity transportation services in the country, EUR/MWh	27.51	63.69	63.69

Source: NCC

Municipal charges, costs of public service obligations or similar costs are not included in prices for electricity transportation services.

Table 11 shows electricity tariffs by regions served by two main distribution networks.

Table 11. Prices for electricity distribution services provided by companies in separate regions in 2009

Indicators/Company	VST AB	Rytų Skirstomieji Tinklai AB
Price for electricity distribution through medium voltage electricity grids, EUR/MWh	20.24	17.84
Price for electricity distribution through low voltage electricity grids, EUR/MWh	23.31	22.53

Source: NCC

Balancing

After the start of electricity auction from the second quarter of 2002, and thus hourly trade between producers, procedures for balancing electricity trade and fixing of purchase–sale price have not changed. Therefore the Baltic Regional Initiative Balancing Harmonization Working Group carried out discussions on possibilities to equalize balancing mechanism between the Baltic countries. In the beginning of 2009 this Group finished the work and consistent with the completed study, the work on balancing issues to be continued with non EU countries.

The balancing energy price is calculated in accordance with the average weighted price of each uninterrupted trading hour corrected by coefficients 0.8 and 1.2 respectively in purchasing or selling electricity at the auction. In 2009 the average annual auction price amounted to 37.53 EUR/MWh (the lowest price was 19.4 EUR/MWh, the highest price - 41.42 EUR/MWh).

In preparation for the shutdown of Ignalina NPP and hourly energy trading and energy market development since 2010, a new version of *Procedure on Balancing Energy Price Regulation* was approved at the end of 2009. It included the following material changes:

1. With respect to the new version of Electricity Trading Rules various provisions were adjusted by eliminating differentiation of balancing energy prices for producers and suppliers;
2. With respect to the electricity market and its player responsibility to develop since 2010, balancing energy price buy and sell coefficients were clarified;
3. The electricity transmission service price cap reduction was prescribed for the Transmission System Operator and Distribution Network Operators by revenue generated by applying the buy and sell coefficients, i.e., by 0.8 and 1.2 to 0.98 and 1.02 respectively.

Companies provide information to the NCC on balancing energy volumes, revenues and prices.

The Procedure on Balancing Energy Price Regulation is to be adjusted since 2011 by harmonizing definitions with the ones used in international practice and by changing the balancing energy price setting for buy or sell transactions by the maximum or minimum system balancing energy price respectively. The aim of this would be to harmonize balancing energy price-setting principles for producers and suppliers in the Baltic States, which would have the same pricing applicable by setting two prices for setting the system imbalance.

In mid-2010 there were 16 balancing energy suppliers publicly listed on the Regulator's and the Transmission System Operator's websites.

3.1.3. Effective Unbundling of Activities

The NCC ensures effective competition, non-discrimination of customers and suppliers and provision of services of the established quality to all customers on the electricity market. The NCC controls the effective unbundling of accounts with a view to avoiding cross-subsidies between generation, transmission, distribution and supply activities.

The Law on Electricity provides that a distribution network company which, in addition to distribution activities, is also engaged in the activities of the public supplier must unbundle these activities. Distribution and supply activities shall be considered as unbundled also in the case when the activities of the public supplier are carried out by the sales (electricity supply) division of a distribution network company, provided that the unbundling of economic transactions is ensured. Electricity companies shall record, group and aggregate their transactions related to transmission, distribution, supply or other non-electricity activities in separate accounts and ledgers.

Public suppliers supplying electricity not only to customers that are not eligible to choose a supplier but also to eligible customers shall register, group and aggregate information relating to customers not eligible to choose a supplier and eligible customers in separate accounts and ledgers.

The Transmission System Operator, distribution network operator and public suppliers fulfilling public service obligations shall keep separate accounts and ledgers specifying the revenue and costs related to these obligations.

The Rules for Licensing Activities in the Electricity Sector establish that a separate licence is issued to engage in each type of licensed activities in the electricity sector. A company must keep separate accounts for every licensed activity. The costs of the licensed activities of electricity companies must be audited and the auditor's report must be submitted to the NCC within four months after the end of the previous year.

The Regulator checks the breakdown of costs by separate activities when setting price caps for their services.

Lithuania has one Transmission System Operator LITGRID UAB and two main Distribution Network Operators: Rytų Skirstomieji Tinklai AB and VST AB.

After the reorganisation in 2002 of the vertically integrated company Lietuvos Energija SPAB by founding four new legal entities, i.e. two distribution network companies and two power plants (Lithuanian Power Plant and Mažeikiai Power Plant), it has retained two hydro-power plants: Kaunas Hydro-Power Plant and Kruonis Pumped Storage Plant used for ensuring the national balance. Units of Kruonis PSP are also used as synchronic compensators. This is a significant tool in regulating voltage levels in the 330 kV voltage electricity network. Therefore in 2011 it is planned to separate the above mentioned generation companies under the scheme provided in Chapter 1.1.6.

The Transmission System Operator is not engaged in supply activities, but there is a market operator department in the company, which is responsible for the organisation of electricity trade, including auction. In the end of 2009 the market Operator department was separated and became Lithuanian Power Exchange functioning under the principles of Nord Pool Spot AS.

The costs of the electricity distribution service and the public supply service are unbundled; therefore it is considered that by the end of 2010 a public supplier could become the last resort supplier and function as a separate company in the future.

Since 2002, the Transmission System Operator (TSO) and Distribution System Operators (DSO) have been functioning as completely separate legal entities. These companies have different names, trademarks, administrative buildings and websites:

- Lietuvos Energija AB (TSO) – www.le.lt
(since 2010 LITGRUD UAB – www.litgrid.eu);
- Rytų Skirstomieji Tinklai AB (DNO) – www.rst.lt;
- VST AB (DNO) – www.vst.lt.

Access to information about the activities of these companies, the energy sector, the electricity market, etc. is provided by the following means: website, leaflets, brochures, annual reports, multimedia presentations, documentaries/information films, events (organised or supported), press releases, informative articles, etc.

Companies place their annual reports, financial statements, economic and technical indicators on their websites.

The shares of Lietuvos Energija AB, Rytų Skirstomieji Tinklai AB and VST AB are traded on the National Stock Exchange of Lithuania; quarterly reports of these companies are made public in compliance with the stock exchange requirements.

In accordance with the procedure for profit and loss accounts for separate activities established by Lietuvos Energija AB, economic transactions related to the activities of the Transmission System Operator are recorded, grouped and aggregated in separate accounts and ledgers. After the end of each financial year, audits of consolidated financial statements as well as revenue and costs broken down by licensed activities are conducted by independent auditors in regulated electricity network companies. Financial statements and auditor's reports are submitted to the NCC. A report according to separate activities is publicly released together with the company's annual report. Companies must publish their audited financial statements approved by independent audit companies.

Pursuant to the methodologies for setting price caps and the licensing rules in the electricity sector, the NCC establishes forms of reports the electricity transmission and distribution operators are obliged to follow in submitting quarterly reports to the NCC on their costs, indicators of electricity supply quality and reliability, electricity balances, prices and other actual and target indicators. The costs of the electricity distribution service and the public supply service are unbundled in accordance with the cost unbundling Methodology approved by the NCC. Since transmission and distribution activities are legally unbundled, the NCC checks the principles of the unbundling of costs of distribution and public supply services approved by distribution network companies and serving as the basis for calculating respective prices.

Pursuant to Article 34 of the Law on Electricity, generation, transmission, distribution and supply companies are subject to mandatory independent audit. These companies, whose activities are regulated in accordance with the procedure established by this Law, submit their financial statements and auditor's report to the NCC. Audit companies carry out audits using the forms established in the NCC-approved Energy Company Rules for Provision of Information.

The NCC sets detailed requirements for preparing accounts and imposes responsibility for any breach of such requirements. The NCC may impose penalties, suspend or revoke licences for violations relating to the licensed activities. When suspending a licence, the NCC must set a time period during which the undertaking concerned must eliminate its violations of the requirements for licensed activities. If violations are not eliminated by the established deadline, the licence may be revoked. Upon committing violations, the Manager of the Company is held liable to administrative proceedings in accordance with the procedure laid down in the Code of Administrative Offences. The Code of Administrative Offences provides for liability for any breach of the procedure for the transmission, distribution, storage, supply or use of energy resources or energy, for failure to provide data on economic and financial activities and/or provision of knowingly inaccurate data by suppliers of energy resources or energy, as well as for any violation of or non-compliance with resolutions of the NCC or failure to comply with orders of the NCC, etc. It should be noted that legal entities are not held liable to administrative proceedings. Instead, responsible officials and natural persons are held liable for respective violations. Two main types of penalties are provided for in the Code of Administrative Offences, namely, a warning and a pecuniary penalty the amount of which depends on the nature of the violation. In 2010, to unify the unbundling of accounts in two unbundled energy sectors, the drafting of principles and rules of cost distribution and activity accounts unbundling for electricity, gas, and heat and water companies has started. They should clarify and make requirements for the accounts unbundling more transparent and facilitate intersectoral comparison.

3.2. Competition Issues [Articles 23(8) and 23(1) (h)]

3.2.1. Wholesale Market

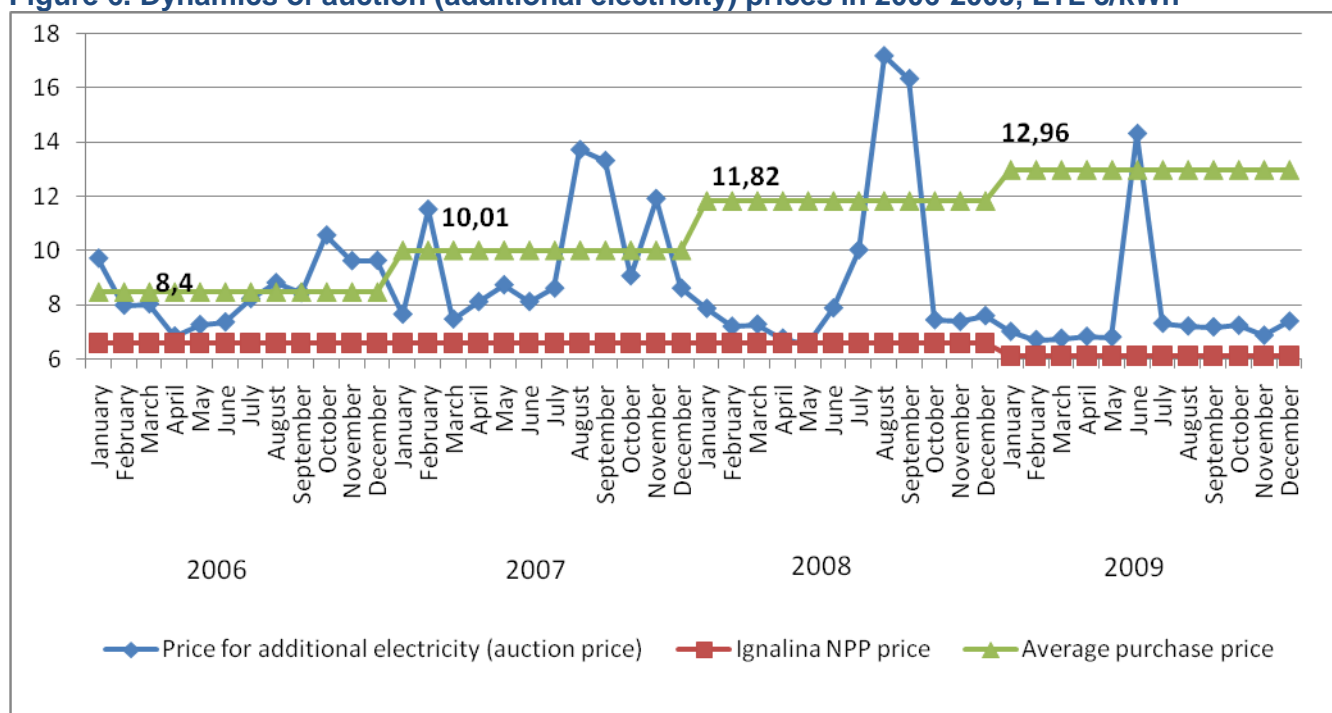
Upon the reorganisation of the electricity sector, generation and supply activities are not regulated, except in the cases of a 25% share in the electricity sales market. The generation structure and wholesale market model given in previous reports did not see any changes in 2009.

There were 8 active independent suppliers out of 20. It should be mentioned that in 2009 under preparation for the shutdown of the largest producer and electricity market development, suppliers became active thus the number of licences of independent suppliers increased to 30.

As it was mentioned the hourly electricity trade was carried out only between producers, while electricity purchased by suppliers was accounted for on monthly basis. Having harmonized trade principles with Nord Pool Spot AS, since 2010 the hourly trade could be active on behalf of suppliers in due course.

Dynamics of hourly auction electricity price is showed in Figure 6

Figure 6. Dynamics of auction (additional electricity) prices in 2006-2009, LTL c/kWh



Source: NCC

The diagram shows that the auction price mainly fluctuated and reached the peak during the repair period of Ignalina Nuclear Power Plant. The average arithmetic auction price last year totalled to 22.07 EUR/MWh

Electricity consumption in 2009 was 9.8 TWh and peak load was 1.9 GW. The total installed capacity of Lithuanian power plants was 4.8 GW and electricity supplied to the grid was 13.5 TWh

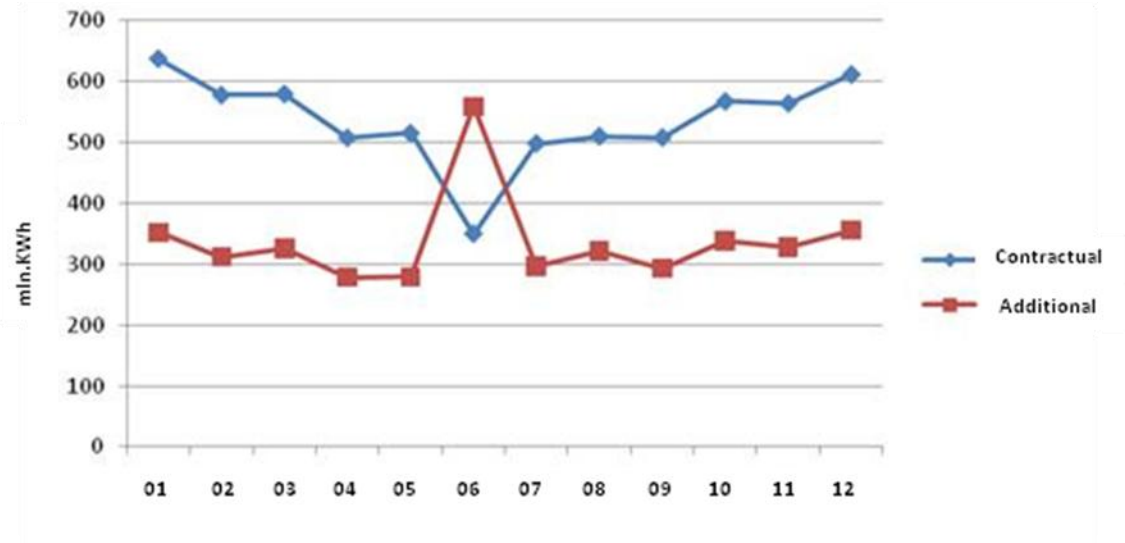
In 2009, Lithuania had 3 power plants with the capacity of at least 5% of the installed capacity: Ignalina Nuclear Power Plant, power plant Lietuvos Elektrinė AB and Vilnius Energija UAB. The share of the three largest power plants in 2009 accounted for 70% of the installed capacity. According to the produced volumes there were two power plants with the share of more than 5% in the production market: Ignalina Nuclear Power Plant and power plant Lietuvos Elektrinė AB. The share of the largest production companies amounted to 78.1 percent.

With the view of satisfying the national electricity needs, the basic electricity system load is ensured by Ignalina NPP. With the medium system load, electricity is supplied by Ignalina NPP and thermal power plants. During electricity consumption peaks, the system is supported, apart from Ignalina NPP and thermal power plants, by Kruonis PSP to ensure operational reserve.

From 2008 electricity under public service obligations (PSO) is not excluded i.e. the trade is carried out only in two types of energy – contractual and additional electricity at auction. Electricity at auction is divided into support electricity and non-support. In 2009 the support electricity consisted of electricity purchased under quotas and from renewable resources.

There have been five active suppliers (producers) in the auction. There are no long-term contracts between producers and suppliers. Figure 8 shows the dynamics of electricity purchased by market participants by electricity type.

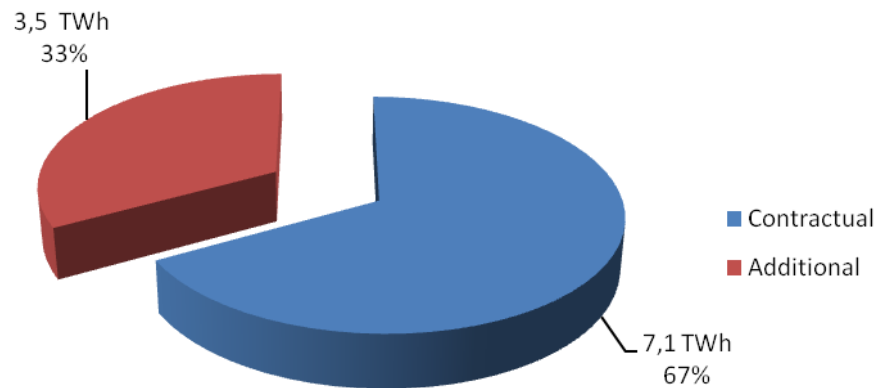
Figure 7. Dynamics of electricity purchased by market participants by electricity type in 2009



Source: NCC

Electricity sales to domestic electricity customers are shown in Figure 8.

Figure 8. Structure of electricity sold in 2009



Source: NCC

As it was mentioned it is forecasted that starting 2011 all Baltic countries will have market prices established in line with zones relating to Nord Pool Spot AS principles.

The participation of suppliers or purchasers in the wholesale market and volumes of their purchases are indicated in Table 12.

Table 12. Volumes of contractual electricity trade between suppliers and producers in 2009, MWh

Supplier	Producer							IN TOTAL
	Ignalina Nuclear Power Plant	Lithuanian Power Plant	Vilniaus Energija UAB	Kauno TE	Mažeikių Elektrinė AB	Other		
		Supported generation amount	Supported generation amount	Supported generation amount	Above-supported generation amount	Supported generation amount	Above-supported generation amount	
Rytų Skirstomieji Tinklai AB	2.215.956	256.000	401.958	0	0	109.218	2.682	2.985.814
VST AB	2.066.783	252.817	216.600	200.015	0	86.688	425	2.823.328
Prekybos Namai Giro AB	2.480	0	0	0	0	0	0	2.480
ORLEAN Lietuva AB	496.567	0	0	0	192.853	0	0	689.420
Achema AB	153.256	0	0	0	0	0	0	153.256
Korelita UAB	19.894	0	0	0	0	0	0	19.894
Visagino energija	46.061	0	0	0	0	0	0	46.061
Akmenės cementas UAB	54.825	0	0	0	0	0	0	54.825
Enefit UAB	93	0	0	0	0	0	0	93
Latvenergo prekyba UAB	8	0	0	0	0	0	0	8
In total	5.055.915	508.817	618.558	200.015	192.853	195.906	3.107	6.775.171

Source: LITGRID UAB

The share of the major suppliers in the market shown in Table 13.

Table 13. The Share of Purchased Electricity in the Market by Suppliers in 2009

Suppliers	Quantity, MWh	%
Independent suppliers	1020.7	10.9
VST AB	4012.2	42.9
Rytų skirstomieji tinklai AB	4254.6	45.5
PI Visagino energija	67.1	0.7
In total	9354.6	100

Source: NCC

The Lithuanian transmission network is fairly well integrated with Belarus, Latvia and Kaliningrad Region, which allows electricity exports. There is no current connection with the neighbouring energy system of Poland. Hourly trade related to exports/imports was started in November 2003

In 2009, foreign electricity sales by Lietuvos Energija AB amounted to 3.6 TWh. Compared with the previous year, electricity exports increased by 38%. In 2009 export to the Russian Federation totalled to 5.48 %, to the Republic of Belarus – to 8.21 %, to Latvia – 11.04 %, to Estonia –64.36% and to Scandinavian market -10.91 % of the total electricity export.

In 2009, imports totalled to 0.7 TWh, i.e. 2.4 times less than in 2008. The main periods for import are spring tide period in Latvia and maintenance period of Ignalina NPP.

Electricity trade volumes between countries are presented in Table 14.

Table 14. Electricity Export – Import in 2009 , mln. kWh

2009	Export to						Import from			
	Latvia	Belarus	Scandinavia	Russia	Estonia	In total:	Russia	Latvia	Estonia	In total:
In total:	401.2	298.3	406.1	199.0	2327.7	3632.2	417.7	212.9	69.6	700.3

Source: LITGRID UAB

Prices are contractual, and contracts are mainly concluded between transmission system operators.

Baltic Sea Region Initiative Working Groups solved relevant issues in order to implement regional electricity market. Basically preparatory works have been carried out for realistically to be opened markets, because Estonian electricity market to be fully opened in 2013, while in Lithuania operated a huge producer, supplying more than 70 percent of electricity to the national market. Starting 2010 the situation has changed because in the end of 2009 Ignalina NPP was shut down and this would allow increase of competition in the region gradually.

In QIV 2009 electricity generation prices in the neighboring Baltic States were higher than in Lithuania. This situation was caused by the fact that during the last year of operations of Ignalina NPP, which was the largest electricity producer, efforts were made to better use the available Ignalina NPP capacities and optimize electricity balance.

3.2.2. Retail Market

The total consumption of end users amounted to 8.9 TWh (excluding consumption by autoproducers). Electricity consumption by sectors is presented in Table 15.

Table 15. Electricity consumption by sectors in 2009

No.	Sector	Consumption, TWh
1.	Industry	2.4
2.	Services	0.6
3.	Household customers	2.7
4.	Other customers (transport, agriculture, etc.)	3.2
5.	Total	8.9

In 2009, in the electricity supply sector, 6 companies held licences of public suppliers, 30 companies were licensed as independent suppliers, whereas 8 companies were actually engaged in the activities of the independent supplier. The main public suppliers supplying energy upon request to all customers within their territory are Rytų Skirstomieji Tinklai AB and VST AB. Independent suppliers supplying energy to eligible customers are as follows: ORLEAN Lietuva AB, Achema AB, Akmenės Cementas AB, Enefit UAB, Prekybos Namai Giro, Korelita UAB, Fortis Energy UAB and Energijos Realizacijos Centras UAB. In 2009, only 6 eligible customers chose independent suppliers. Korelita AB, Achema AB and Akmenės Cementas AB, having the status of eligible customer, were granted licences of the independent supplier and traded on the market as suppliers.

Public suppliers Rytų Skirstomieji Tinklai AB and VST AB have the major supply market share. In 2009 it accounted for 87.2 % of electricity sold to domestic customers.

In 2009, an active independent supplier with the market share amounting up to 5% was ORLEN Lietuva AB. The share of three independent suppliers that purchased the largest amount of electricity accounted for nearly 10%.

Proposals of alternative suppliers are useful to customers due to lower electricity price. This should notably be more appropriate to major customers with more stable electricity consumption schedules, thus these customers benefit from the electricity market advantages since the very opening of the electricity market in 2002.

The largest producer holding the licence of independent supplier was ORLEN Lietuva AB.

As soon as the electricity market was opened, 6 major industrial customers receiving electricity from electricity transmission grids changed their supplier and this number remained the same in 2009.

Eligible customers may choose and change their electricity supplier without any charge. Distribution network operators also perform the public supplier's functions and must supply electricity upon request to all customers who have not chosen an independent electricity supplier at the pre-set and announced public electricity price. Since July 2010 the public supplier will be obligated to supply only the customers that in line with the requirements set forth in legal acts i.e. to customers whose allowed capacity are lower than 400 kW. Every year this value will decrease and more and more customers will be obliged to purchase electricity from independent suppliers under non-regulated prices.

The actions and duties of customers and suppliers when customers change their electricity supplier are defined in Article 28 of the Law on Electricity, Independent Supply of Electricity. Before concluding or withdrawing from the electricity supply contract with the independent supplier, an eligible customer located in the territory specified in the public supplier's licence must communicate a written notification thereof to the public supplier 30 calendar days in advance. The same applies to the independent supplier; before concluding or terminating the electricity supply contract with an eligible customer located in the territory specified in the public supplier's licence, the independent supplier must communicate a written notification thereof to the public supplier 30 calendar days in advance. When purchasing electricity from an independent supplier, eligible customers whose equipment is connected to the distribution network must pay the distribution network operator for electricity transportation through the transmission and distribution networks, for system services

and for public service obligations. Eligible customers whose equipment is connected to the transmission network must pay the transmission system operator for electricity transportation through the transmission network and for public service obligations in the electricity sector when purchasing electricity from an independent supplier.

In 2009, the same as last year, there was no single household customer to switch a supplier

The data presented in Table 16 do not consider the prices agreed under direct contracts with independent suppliers in the market.

Table 16. Electricity prices by components in 2009, EUR/MWh

Item/Customer group	Ig	Ib	Dc
Prices of transportation services (excluding fees)	27.51	63.69	63.69
including: price for transmission service	6.98	6.98	6.98
Fees included in the price of transportation services	-	-	-
Prices of electricity and supply service *	38.18	38.17	18.24
Taxes (VAT – 19%)	12.48	19.35	15.64
Total (including all taxes)	78.17	121.21	97.57

Note: * Since 1 January 2008 this component has become the price for transmission service component and in 2009 it amounted to 18.48 EUR/MWh

Source: NCC

Table 16 provides prices calculated under regulated final or public prices for customers. These prices are applicable due to non-existent competition in the electricity market, as it is dominated by a single producer (Ignalina NPP) with the market share of about 70%. The above public prices are set by service suppliers (public suppliers) without exceeding these price caps set by the NCC for one year. The situation should change after the shutdown of Ignalina NPP in 2010 and no public tariffs to be applied for customers gradually. Public electricity prices are set for 3 customer groups: customers with the permissible site power capacity up to 30 kW, the ones exceeding 30 kW and household customers, i.e., prices are not differentiated by the average heaviness and heavy industry.

Paragraph 3 of Article 26 of the Law on Energy stipulates that the NCC shall hold preliminary extra-judicial hearings of complaints concerning acts or omissions of energy undertakings in supply, distribution, transmission, storing of energy, failure to grant them a right to use networks and systems, connection, balancing of energy supply flows, application of prices and tariffs.

Complaints not in compliance with the requirements of this procedure shall be considered under the Procedure of NCC Services to Citizens and other Entities.

In 2009, 27 complaints out of 343 addressed to the NCC concerned electricity. This amounted to 8% of total complaints received. In the electricity sector consumers predominantly contacted the NCC regarding calculation of new customer connection fees, application of electricity supply prices and tariffs, disconnecting from and renewing electricity supply. Many inquiries were received about contractual prices applicable to sub-subscribers, which are out of the NCC regulatory remit. Section 1.1.3. (b) discusses other problems related to the electricity sector.

3.2.3. Measures to Avoid Abuses of Dominance

3.2.3.1 Production

The Law on Electricity provides that prices of electricity and reserve capacity sold by producers and independent suppliers are not regulated, except in the cases where a producer or independent supplier has a share of over 25% in the market. The mechanism for regulating prices of electricity and reserve capacity sold by producers and independent suppliers having a market share of over 25%, as well as the mechanism for regulating the price of balancing electricity are determined by the NCC.

Transparency

Pursuant to the Rules for Trade in Electricity, the market operator must submit information about the amount of electricity consumed and/or supplied by each market participant by the hour during a trading day, as well as about imports, exports and regulating instructions given by the dispatch office of the transmission network operator during a trading day; establish the results of trade in balancing and regulating electricity and grant access for every market participant to relevant information; establish the results of every day of a month and issue respective references to all market participants necessary for invoices for balancing and regulating electricity. The said data is published in website of the Transmission System Operator and since 2010 in website of Power Exchange.

The documents regulating transparent activities in the electricity generation sector were indicated in the previous reports to the European Commission.

Bidding

Auction procedures are defined in the Rules for Trade in Electricity at Auction.

Market Supervision

The NCC controls and publishes information relating to the situation on the electricity market in the Monitoring Report on Supply Security in the Lithuanian Electricity Market before 31 July of each year. Dominating producers and independent suppliers or such companies having a market share of over 25% are subject to regulation

Pursuant to the Rules for Licensing Activities in the Electricity Sector, the market operator must conduct annual analyses of electricity transmission, the operation of the electricity distribution system, electricity supply to customers (electricity market) and provide the Ministry of Energy and the NCC with information about development prospects for the electricity transmission and distribution systems and the electricity market.

In the light of the upcoming shutdown of the largest electricity producer in 2010 and with the start of the Power Exchange operations, approval of the Electricity Market Supervision Rules is planned. Under the amendments to the Law on Electricity it has been provided that the NCC shall supervise and monitor the electricity market and supervise the Transmission System Operator's trade in balancing and regulating energy. The NCC shall make the electricity market monitoring reports public in line with the terms and procedure prescribed by the NCC. The NCC will supervise competition in the electricity market, except the cases of anti-competitive arrangements and concentrations, when competition surveillance is done by the Competition Council under the Law on Competition.

Under the Electricity Trading Rules the market operator supervises electricity trading. In line with their remit the market operator and the Transmission System Operator inform the NCC and the authority authorized by the Government about violations of activity terms set for license and/or permit holders.

Under exceptional circumstances (when efficient competition is unavailable and/or service customer interests are not ensured in proper manner) the NCC shall be entitled to undertake proportionate temporary measures, i.e., set electricity auction price caps or set regulated electricity generator and independent supplier prices, identify or not identify economic entities with major influence in a respective market and/or establish obligations for such economic entities or cancel the NCC-established obligations to them, and suspend validity of licenses issued by the NCC. These temporary measures may be established for no longer than 6 months. In this case the NCC must immediately notify the Ministry of Energy about such measures and justify them.

3.2.3.2 Supply

Transparency

Distribution network companies must, on a quarterly basis, submit electricity balances specifying amounts of contractual electricity purchased, amounts of electricity under public service obligations, amounts of additional electricity, amounts of electricity purchased from small hydro power plants, etc. Companies also submit other reports on amounts of electricity sold and tariffs to the Department of Statistics.

The documents regulating transparent activities in the electricity generation sector were indicated in the previous reports to the European Commission.


Rules Governing the Structure of Contracts

Relations between energy companies, as well as relations with customers of energy resources or energy are based on contracts. Energy supply, transmission and distribution contracts are public. Electricity is supplied, transmitted and distributed to regulated customers and natural persons under contracts concluded in accordance with the mandatory standard conditions. When carrying out State management of the energy sector, the Government or the institutions authorised by it shall approve the mandatory standard conditions of contracts for electricity transmission, distribution and supply to regulated customers and natural persons. Standard conditions of electricity purchase-sale contracts with household customers shall be approved by an institution authorised by the Government on the proposal of suppliers, upon agreement with the State Consumer Rights Protection Authority under the Ministry of Justice.

Contracts with household customers are concluded for an indefinite period, unless these contracts provide otherwise. Contracts also set out quality parameters, responsibility for their implementation and other conditions. Lithuania does not encounter any problems relating to long-term contracts. No restrictions or penalties in that regard have been set.

Provision of Information

Pursuant to the *Law on Electricity*, the NCC has the right to request from generation, transmission, distribution and supply companies whose activities are regulated under the Law, as well as from the market operator the information necessary for proper supervision of the electricity market. Generation, transmission, distribution and supply companies as well as the market operator must provide the said information in accordance with the procedure established by legal acts.



With the current structure of the electricity sector, where one producer has a 70% share of the electricity supply market, the promotion of competition in the country so far is hardly possible. As already mentioned, with the view of developing the regional Baltic electricity market, meetings were held with the neighbouring countries on development and pricing issues. When the last unit of Ignalina Nuclear Power Plant is going to be decommissioned at the end of 2009 the electricity market may be expected to change.

4. Regulation and Performance of the Natural Gas Market

4.1. Regulatory Issues

4.1.1. Assessment and Management of the Transmission System Capacity

The Lithuanian natural gas system is interconnected with the gas systems of Belarus, Latvia and the Russian Federation. Interconnections with the Russian Federation, the Republic of Belarus and the Republic of Latvia are regulated under contracts

Capacities located at the Lithuanian-Belarusian border ensure full capacities required by Lithuanian customers, for transit to the Russian Federation (Kaliningrad Region) and to Latvia. Natural gas transits the territory of Lithuania to be delivered only to the Russian Federation Kaliningrad Region, i.e., by crossing the external the European Union borders.

Natural gas is supplied to Lithuania from Russian gas fields through Belarus using Minsk–Vilnius gas mainline. The second interconnection with Belarus, Ivancevici-Vilnius is currently not in use (due to unsatisfactory gas line status, it has no gas metering station installed).

In the North, Lithuanian gas transmission system is connected to Latvian gas lines. Gas metering takes place in Kiemenai gas metering station. The metering station was installed in 2005 with the purpose of metering gas volumes going to the Latvian gas transmission system and vice versa. The gas metering station capacity is 5 mln. m³/day. Due to technical capacity of Latvian gas lines Lithuania may be supplied with gas pressurized up to 40 bar and the pressure of gas supplied to Latvia may reach 55 bar. When supplying gas via the bypass line without gas metering installed, the station capacity may reach up to 10 mln. m³/day. However the actual maximum throughput capacity was 2 mln. m³/day, and as stated by Lietuvos Dujos AB, in winter, at the peak of gas consumption Latvian gas system capacity would allow supplying 1 mln. m³/day. Reserves meant for household gas customers are kept in Latvian Underground Gas Storage Facility.

Table 17 provides natural gas capacities at cross-border points, and Table 18 provides average yearly gas flows (thous. m³/day).

Table 17. Capacities at cross-border points

Connection	Capacities, thous. m ³ /day
Lithuania - Latvia	5 200
Latvia - Lithuania	5 200
Lithuania – the Russian Federation (Kaliningrad Region)	11520

Source: NCC

Table 18. Average yearly gas flows (thous. m³/day)

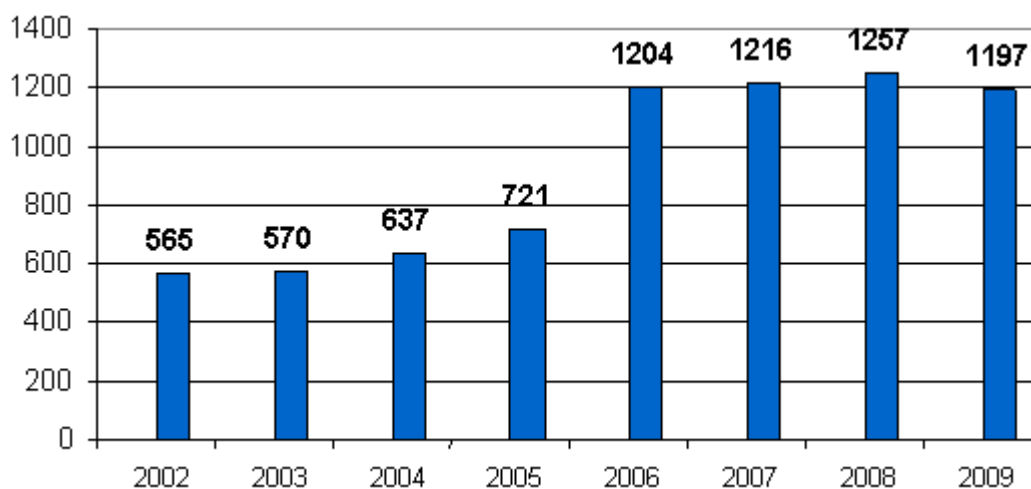
	2007	2008	2009
To Lithuania	0.00	424.37	80.30
To Latvia	164.38	59.81	102.54

Source: NCC

Lithuanian gas companies have not concluded a gas transit contract under the Article 3 (1) of the Directive 91/296. Gas transit to Kaliningrad Region is based on a long-term agreement between Gazprom RAB and Lietuvos Dujos AB signed in 1999 and valid until 1 January 2016. Under the transit agreement the transit transmission capacities reserved in 2009 amounted to 4.1 mln. m³/day.

In 2009, 1197.3 mln.m³ gas transited Lithuania to Kaliningrad Region. Compared to 2008, transit volumes reduced by 4.7%. Figure 9 presents natural gas transit volumes in 2002-2009.

Figure 9. Natural gas transit volumes to the Russian Federation (Kaliningrad Region), mln. m³



Source: NCC

In 2009 Lithuanian customers needed 2.68 mln. m³ natural gas per year, and long-term reservation of standard capacities causes no system overloads in domestic or international connections. The maximum import gas pipeline use was 64.9%. The unused import gas pipeline capacity was 35.1%. Long-term reservation of standard capacities in domestic or international connections has caused no transmission system overloads. System users may access unused (available) capacities based on interruptible capacity contracts.

The general principles of the organisation of the natural gas sector and natural gas-related activities as well as relations with customers and system users in the country are regulated by the Law on Energy and the Law on Natural Gas. The Law on Energy sets forth the requirement for a transmission system operator to provide information to customers within the territory of its operation on the activities carried out, the prices of services and the services provided to gas consumers. The Law on Natural Gas provides that gas undertakings shall inform customers about efficient gas consumption, the services provided by the gas undertaking, the conditions of the provision of services, the prices of gas and services, the prices and terms for connection to the systems as well as the intended modifications to contractual conditions. The information of gas

undertakings regarding the costs of regulated activities, system operation, modernisation and development, investments into system development, the structure of prices and tariffs, as well as conditions of the provision of services is public. Article 13 of the said Law contains a provision prohibiting a transmission system operator from discrimination between system users and customers falling within different categories in favour of other customers or undertakings related to the Transmission System Operator.

One of the most important priorities in the natural gas market - the provision of information and transparency. The requirements of the Regulation (EC) No 715/2009 of the European Parliament and of the Council on conditions for access to the natural gas transmission networks (further-Regulation) natural gas transmission operator Lietuvos Dujos AB on its website www.dujos.lt must publish the information about the relevant points of the system, indicating:

- a) the maximum technical capacities of the system, thousand m³/day;
- b) the maximum (minimum) pressure, kg/cm²;
- c) the contracted and interruptible capacities, thousand m³/day;
- d) the available capacities, thousand m³/day).

The relevant points are approved by the NCC.

System users and customers are provided with the timely information about:

- provided services;
- natural gas prices ;
- natural gas transmission and distribution service prices (subject to the gas delivery points);
- quality of the natural gas.

The system users are notified of scheduled maintenance works two months in advance and additionally informed 48 hours beforehand – by coordinating (defining) the consumption mode of natural gas. All other consumers shall be informed one month in advance and 48 hours beforehand repeatedly. In case of not planned events (emergencies, extreme situations and other urgent works) consumers shall be informed as soon as possible. Information sources should be press releases, official letters and communication means.

Declaration of free capacities in the transmission system is to be carried out once in the beginning of a month. Capacities additionally ordered by system users to be coordinated every week.

When concluding new contracts on natural gas transit and distribution or renegotiating prolongation of the existing ones, capacity requests are allocated under the following priorities:

- The system users having applied 60 days before the beginning of the year are first served;
- All other system users are served afterwards based on their application date.

Upon conclusion of a natural gas transmission, distribution contract, regular (long term) or short term capacities are set for the system user for the contract validity time. The contractual customer capacities are not modified during the contract validity time.

System users have a possibility to book (clarify) capacities (the maximum gas volume needed per day) on a weekly basis. They can do this electronically (over the internet) or in writing under the contract terms. When booking capacities for a respective time period the system user must have a

gas volume bought (the supply schedule must be coordinated with the supply company under the sale contract terms).

Prohibition to abuse a dominant position is regulated by Article 9 of the Law on Competition of the Republic of Lithuania (Official Gazette, No.30-856). Under provisions in this Article, direct or indirect imposition of unfair prices or other conditions of purchase or sale; application of unequal (discriminating) conditions to equivalent transactions with certain undertakings, thereby placing them at a competitive disadvantage; the conclusion of contract subject to acceptance by the other party of supplementary terms, or other acts that violate the interests of consumers are prohibited.

Under provisions of Article 6 the Natural Gas Law, relations of natural gas undertakings with customers and system users shall be based upon contracts; it shall be prohibited to transmit, distribute, store, supply and use natural gas without a contract or without adhering to the conditions of the contract. Gas undertakings shall inform system users and customers about contract terms in advance, no later than with one month's notice before the contract conclusion or modifying the contract terms.

Public contracts with household customers are concluded under standard terms obligatory to both parties. Natural gas sale contracts with household customers are concluded in line with the Description of Standard Terms of Natural Gas Sale Contracts with Household Customers approved by the Order No. 4-89 of 12 March 2008 of the Minister of Economy of the Republic of Lithuania (Official Gazette, 2008, No. 33-1194).

Under the Natural Gas Law, transmission and distribution system operators shall annually draft yearly activity and security reports and submit them to the NCC and the Ministry of Energy, and the supply undertaking shall draft yearly activity and security ensuring reports and information on key effective contract terms to monitor gas supply reliability, and have to submit them to the above authorities. The summary gas supply security report is submitted to the European Commission.

In line with the National Energy Strategy (Official Gazette, 2007, No. 11-430), gas undertakings draft yearly and long term (minimum 3-yearly) plans for transmission and distribution system development with respect to supply reliability, regularity, quality, consumer protection and environmental requirements.

4.1.2. The Regulation of Transmission and Distribution Companies

Natural Gas Transmission and Distribution System Operators

Pursuant to the Law of the Republic of Lithuania on Natural Gas, natural gas transmission, distribution, storage, liquefaction and supply are considered to be licensed activities. Licences are issued and licensed activities are controlled by the NCC. In 2009, Lithuania had one main natural gas transmission system operator and six distribution system operators. The total length of all natural gas systems is 9945.17 km, including 1864.87 km of the gas transmission system length, and 8080.3 km of total distribution grid length. Natural gas transmission and distribution system operators are listed in Table 19.

Table 19. Natural gas Transmission and Distribution System Operators

No.	Company	Type of licence	Local or national network	Main shareholders
1.	Lietuvos Dujos AB	Natural gas transmission and natural gas distribution	National	E.ON Ruhrgas International AG, Russian company Gazprom RAB, State
2.	Achema AB	Natural gas distribution	Local	Private company
3.	Druskininkų Dujos UAB	Natural gas distribution	Local	Private company
4.	Intergas UAB	Natural gas distribution	Local	Private company
5.	Fortum Joniškio Energija UAB	Natural gas distribution	Local	Private company
6.	Agrofirma Josvainiai AB	Natural gas distribution	Local	Private company

Source: NCC

Under the Natural Gas Transmission, Distribution, Storage, Liquefaction and Supply Licensing Rules approved by the Government of the Republic of Lithuania, gas transmission or distribution licenses are issued to undertakings, which in the defined territory own or hold on other lawful basis a natural gas transmission or distribution system installed under the requirements of the law, which must be connected to the operating transmission or distribution system.

In line with Article 11.3 of the Law on Energy, the NCC approves planned investments of energy undertakings engaged in activities with regulated prices. On 10 July 2009 the NCC approved a new Investment Appraisal and Approval Procedure for Energy Company under which energy companies engaged in activities with regulated prices shall coordinate planned investments into construction of new or development of the existing energy sites. This procedure has come into force since 1 January 2010. The purpose of the Procedure is to establish assessment criteria for investments planned by energy companies and principles and procedure of investment approval by the NCC. Investments made by energy companies shall be grouped as follows, by the original investment purpose:

- Investments made under the Government-approved Measure Implementation Plan to implement energy priorities set in the National Energy Strategy, and ensure supply security and reliability;
- Investments made into system development (including new customer connection);
- Investments made to reconstruct the existing system;
- Investments made to reconstruct, modernize, etc., the existing system.

Beside this, the new procedure clearly defines effective and ineffective investments. Having taken gas company comments into account, the NCC modified investment payback time, as well: 15 years for non-household customers, and 20 years for connected household customers

Gas companies serving 100000 and more customers shall coordinate with the NCC their investment needs with the value of 1 million or more LTL. The NCC is entitled to request that an energy undertaking approves a lower volume investment by developing a separate investment

project with respect to the importance of the planned investment to the overall system, the investment purpose and the site invested into.

This Procedure prescribes that during the last year of price caps being in force these undertakings shall submit a Long Term Program on Regulated Activities together with documents and data supplied for regulated price-setting. This Program shall be drafted with respect to provisions of the National Energy Strategy and requirements for energy supply reliability, regularity, quality, consumer and environmental protection. The Long-Term Program shall specify planned regulated activity investments during the price regulation period, as well as funds required to implement the Program and financing sources. When setting regulated prices the NCC shall take into account the need for funds, costs and other indicators regarding the investment planned in the Long Term Program on Regulated Activities. Every year, together with documents and data for regulated price-setting or adjustment, companies shall draft and submit for the NCC approval an Annual Investment (Development) Plan with a specific list of sites to match the Long-Term Program on Regulated Activities, deviations from which shall be duly justified by the company. While coordinating the Annual Investment (Development) Plan the NCC shall take into account the impact of planned investments on regulated prices. If the Annual Plan includes investments aiming to implement objectives of the National Energy Strategy, or measures to ensure security set forth by legislation or the Government or an authority authorized by it, or measures to ensure the system security and supply reliability, then their impact on regulated prices shall be assessed separately from all other investments specified in the Annual Plan.

Under the new Investment Approval Procedure companies submitting an investment project for approval shall have sufficient financial capacity in line with evaluation criteria established in the NCC -approved Energy Company Technological, Financial and Management Capacity Assessment Procedure Description. The NCC shall be entitled to approve investment projects of energy companies with insufficient financial capacities, if the project improves financial company indicators.

Before approving a company investment project the NCC shall establish financial capacity of the company. A new Energy Company Technological, Financial and Management Capacity Assessment Procedure was developed in 2009. Based on this Procedure nine new relative financial indicators shall be calculated: four of them are revenue protection indicators, four others - financial leverage, and one - commercial activity indicator. The above indicators shall be used as the basis to calculate the company financial capacity indicator which shall be compared with limit values of the normative indicator of the gas sector. The company financial capacity shall be rated sufficient for performing licensed activities, if its total financial capacity indicator (within the last two years) exceeds the NCC -set bottom threshold for the normative indicator of the sector.

Gas companies shall supply data to the NCC under the NCC - approved Energy Company Information Provision Rules. In July 2009 these Rules were supplemented, improved and specified. At the end of the reporting year a balance-sheet and profit (loss) statement data shall be submitted for audit, and shall be used to assess financial company capacity. Beside this, at the end of the year gas companies must submit annual investment statements made by gas companies, as well as statements of fixed asset change, provided service quality indicator statement, activity and security ensuring statement and reports on contracts concluded for the upcoming year. At the end of each quarter gas companies shall submit quarterly economic - financial activity statements including a breakdown of costs and revenue for all company activities, quantities of supplied and transported gas, actual investments made, and a number of new connected customers.

The Rules provide that officers of energy companies may be made liable for failure to provide information or for providing knowingly misleading information in accordance with the procedure laid down in the Code of Administrative Offences, and an energy company may have a financial fine imposed against it under the procedure set forth in the Law on Energy.

Transportation Tariffs

When the Seimas passed amendments to the Natural Gas Law in 2009, principles based on which gas company profits are calculated have been clearly listed: the profit margin shall be no lower than the arithmetic weighted average of the annual interest percentage rate of auctions of 10-year Government bonds within the last 36 calendar months, which shall not exceed 5% (the-then effective gas company profit margin was 8.1%). The Law also prescribed that the Government shall set pricing principles related to the value of assets used for the regulated activities. Therefore the NCC developed and submitted for the Government's approval the Asset Valuation Principles Used in the Regulated Activities of Natural Gas Companies:

1. The value of assets used for the natural gas licensed activities shall be established by calculating gas company profit and depreciation costs, using non-revalued (historic) asset value of companies.
2. The value of assets used for the licensed activities shall exclude the asset value change, if not approved by the NCC, unrelated to the regulated activities (including assets for transit gas transportation), unused, conserved assets, as well as assets procured for subsidies received, and the share of investment made using EU Structural Fund money, grants, revenue generated for connecting new customers.
3. The value of assets ascribed to the gas transit shall be established analogously to that of the transmission system dedicated for Lithuanian customers; this is the value reducing the value of assets used in the transmission activity.

Upon taking legal changes into account, the NCC adjusted the Natural Gas Price Cap Calculation Methodologies. Besides the above principles of profit margin calculation and pricing, related to value of assets used in the regulated activities, and their methodologization, the NCC, aiming to prevent abrupt natural gas price fluctuations specified the gas volume adjustment coefficient of the Methodology by establishing the following: when the actual imported gas volume is by more than 10% different from the basic gas volume, the NCC may make a decision to assess the revenue lost (exceeded) by a gas company due to the volume deviation by adjusting transmission or distribution price caps for the subsequent time periods (up to 3 years). This decision facilitated mitigating gas transmission, distribution and supply price rise by establishing price caps for these services for 2010.

Moreover, the Methodology has a different household customer grouping since 2010. The Methodology fully separates customers using natural gas for cooking only (up to 500 m³) and the ones using natural gas for cooking and heating or hot water making (500 m³ to 20 000 m³). Customers are similarly grouped in Latvia, as well, and such grouping-based data is provided to Eurostat, the statistical office of the European Union.

Gas transmission and distribution prices are applicable according to the "postage stamp" principle irrespective of the transmission and distribution distance. When setting transportation price caps, gas transportation volumes are calculated by taking into consideration the actual transportation volumes of the gas undertaking during the last year preceding the regulation time period, as well as forecasts for the forthcoming five years and causes having determined changes in gas volumes.

Changes in volumes due to investments planned in the Long-Term Activity Program of the gas undertaking shall be specified separately.

The NCC sets annual basic costs for a five-year period based on the costs of the last year before the regulation period and their forecasts for the forthcoming five years.

Specific transmission price differentiation principles for gas companies are included in the Transmission Price-Setting Methodology. It prescribes that gas companies may differentiate gas prices by customer categories or groups, gas consumption volumes, gas pressure, capacity, duration, consumption purpose, gas consumption purpose, gas supply reliability and other objective features chosen by a gas company enabling to strive for higher operational effectiveness. Customer discrimination and cross subsidizing between customer groups is prohibited when setting and differentiating prices. Natural gas price differentiation methodologies developed by gas companies are supplied to the NCC. Having established that price differentiation principles established by gas companies discriminate customers, the NCC points out their errors to gas companies, and the latter have to correct them. If they fail to follow the instruction, the NCC is entitled to unilaterally set gas prices.

In 2009 transmission, distribution and supply price caps of Lietuvos Dujos AB were adjusted. Transmission and distribution price caps were reduced due to the modified asset valuation principles (by 3.29% and 7.4 % respectively) from 8.1 % to 5% due to the lower profit margin based on the value of assets used for the licensed activities and lower technological costs. When adjusting the supply price cap, factors determining price rise and price fall levelled each other out, therefore the supply price cap remained the same.

Since 2010 Lithuanian gas sector has a new company, Fortum Heat Lietuva UAB. In June 2009 this company bought all the assets related to natural gas distribution and supply from Fortum Joniškio Energija UAB, and, having been licensed as a natural gas distribution and supply company, it started licensed activities since 1 January 2010. In 2009 natural gas distribution and supply price caps were set for the company for 2010-2014. Compared to the price caps of the previously operated Fortum Joniškio Energija UAB, the distribution price cap reduced by 13.1% and the supply one – by 26%. The distribution price lowered due to the reduced profit margin and lower technological costs, and the supply one went down because of higher gas volumes supplied, as being a district heating supplier Fortum Joniškio Energija UAB did not ascribe the gas quantity meant for heat production to the supply activity.

In 2009 validity of the distribution price cap of Intergas UAB expired in Druskininkai municipality. Beside Druskininkai municipality, this company distributes and supplies gas in Mazeikiai district, where the distribution price cap was established for 2008-2013 and was much higher than the one in Druskininkai Municipality. Under the request of Intergas UAB the single distribution price cap for the entire territory of the company activities was set since 2010.

In 2009 distribution and supply price caps of Agrofirma Josvainiai AB, supply price caps of Dujotekana UAB and Haupas UAB were adjusted. Distribution and supply price caps of Agrofirma Josvainiai AB increased due to reduced volumes of distributed and supplied gas. The supply price cap of Dujotekana UAB remained nearly the same. The supply price caps of Haupas UAB went down as the NCC did not recognize depreciation and remuneration costs calculated by the company.

The price caps of Druskininku Dujos UAB were not adjusted, as, upon significant reduction of supplied and distributed gas volumes, thus income, the financial company situation became

critical. Under the company-submitted data the natural gas distribution price cap should increase 3.3 times compared to the one of 2009. However, the price increase for services provided would not be a solution to the company financial problems having built up. Therefore the NCC decided to prolong the prices of 2009 and postpone the price cap adjustment issue up to when the company specifies measures allowing improvement of its financial situation and continuing the licensed activities.

Table 20 presents comparison of all transportation price caps of all natural gas companies in 2009 and 2010.

Table 20. Gas transportation price caps in 2009 and 2010

Company	Price, EUR/MWh		Change %
	2009	2010	
Lietuvos Dujos AB			
Transmission	1.25	1.21	-3.2
Distribution	5.66	5.24	-7.42
Fortum Joniškio Energija UAB*			
Distribution	4.81	4.18	-13.11
Intergas UAB in Druskininkai Municipality			
Distribution	1.97	2.88**	-
Intergas UAB Mažeikiai Municip.			
Distribution	18.18	2.88**	-
Druskininkų Dujos UAB			
Distribution	37.74	37.74	0
Agrofirma Josvainiai AB			
Distribution	1.47	1.64	11.56
Achema AB			
Distribution	0.42	0.42	0

* Fortum Heat Lietuva in 2010 purchased from Fortum Joniškio Energija UAB all the assets in relation with natural gas supply and distribution

** since the year 2010 one distribution price was set up both in Druskininkai and Mazeikai municipalities.

Source: NCC

Natural gas transportation prices of the major system operator Lietuvos Dujos AB for different customer groups are presented in Table 21.

Table 21. Average transportation tariffs for different customer groups in 2010

Customer group	Transportation price, EUR/MWh		
	Transmission	Distribution	Total
D3 (83.7 GJ)	1.56	7.96	9.52
I1 (418.6 GJ)	1.50	7.96	9.46
I4-1 (418.6 TJ)	1.50	4.04	5.54

Source: NCC

Table 22 shows the natural gas price structure for customers.

Table 22. Structure of natural gas price for customers, EUR/MWh

Price	Customer group	Price from 1 January 2010			Price from 1 July 2010		
		D3	I1	I4-1	D3	I1	I4-1
Natural gas import		23.67	24.07	24.07	29.95	30.05	30.05
Natural gas transmission		1.56	1.50	1.50	1.56	1.50	1.50
Natural gas distribution		7.96	7.07	4.04	7.96	7.96	4.04
Supply		1.21	0.33	0.33	1.21	0.33	0.33
Equity		1.05	1.05	1.05	1.05	1.05	1.05
	Total:	35.45	34.01	30.98	41.72	40.88	36.96
Taxes (VAT – 21 %)		7.44	7.14	6.51	8.76	8.58	7.76
	Total:	42.89	41.15	37.49	50.48	49.46	44.72

Source: NCC

Due to major differences in company sizes and activity conditions making comparative analysis of gas companies' activities is complicated in Lithuania, if costs of individual gas companies per production unit are compared. The NCC analyzed gas company activity effectiveness by comparing dynamics of actual and the NCC-set operational expenditure (OPEX) in 2005 to 2009. As gas transportation is the major company cost item, the cost dynamics in gas transmission and distribution activity was analyzed. To establish the effectiveness comparison was made between costs per production unit per each year, i.e., costs per 1000 m³ gas transportation by mainline and distribution systems and costs set by the NCC during price adjustment.

Supply Security Indicators

Lithuanian natural gas system is developed in line with market principles and provisions of the European Union directives and other legislation, and also by taking into account realistic possibilities to implement these provisions, and Lithuanian obligations to the European Union. In order for the gas market and system objects to operate reliably and qualitatively, gas company service quality has to always be sufficient. Thus in line with the Natural Gas Law and Resolution No.725 of 11 July 2007 of the Government of the Republic of Lithuania, by Order No. 4-348 the Ministry of Economy of the Republic of Lithuania approved the Quality Requirements for Gas Company Provided Transmission, Distribution and Supply Services. The Quality Requirements prescribe a service quality evaluation procedure for natural gas transmission and distribution system operators and supply companies, the services being directly related to their licensed activities. These Requirements specify that gas company services of transmission, distribution, supply and connection of new customer systems to transmission or distribution systems shall be regulated. These requirements shall be obligatory for natural gas transmission and distribution operators and supply companies

The NCC shall evaluate and control quality of gas company-provided services. Gas companies shall submit quarterly and annual quality indicator statements to the NCC.

The following are quality indicators for reliability: System average interruption duration index (SAIDI), and System average interruption frequency index (SAIFI) per reporting period. These indicators shall be calculated separately for planned and unscheduled interruptions. SAIDI and SAIFI for unscheduled interruptions shall be calculated by groups of interruption reasons. Specified calculation principles of quality requirements were approved in the end of 2008; according to the new procedure the natural gas companies' submitted data from the beginning of 2009 thus there is no possibility to compare the submitted data with the previous year. In 2009 the largest natural gas

supplier Lietuvos Dujos AB's SAIDI was 22.436 for planned interruptions in the distribution system and SAIFI was 0.2623 for planned natural gas interruptions.

The average unplanned interruption duration and frequency per customer due to the operator's responsibility in the distribution system of Lietuvos Dujos AB was: SAIDI – 0.1678; SAIFI – 0.00195. Other distribution and supply companies had no interruptions.

In 2009 the rate of customer applications timely analyzed and responded to by Lietuvos Dujos AB was in 98.6%. Other companies timely analyzed 100% applications (including household and non-household customers). Emergency services of all companies 100% timely arrived to household customers' premises to verify their information about gas leakage.

In 2009 the natural gas supply continuity rate for household customers was 0.266 for Lietuvos Dujos AB, and other companies supplied household customers without interruptions. The average interruption duration per interrupted customer was 84.54 min.

For new customers the Transmission System and distribution system operators provide the service of customer system connection to operating transmission or distribution systems. There are 2 requirements applicable in this case:

- Consideration of a new customer application to connect their system to an operating transmission or distribution system;
- Connection of the new customer system to an operating transmission or distribution system under a connection contract.

The rate of timely (i.e., within 45 calendar days) sent replies to new customers for Lietuvos Dujos AB was 97.9%. Other companies replied about connection in time. The share of new customers with delayed connection due to the operator's responsibility was 6.7% for Lietuvos Dujos AB. Other companies timely connected new customers.

Balancing

The key legislation regulating balancing activities of the natural gas transmission system is the Natural Gas Law and the Natural Gas Transmission, Distribution, Storage and Supply Rules approved by an order of the Minister of Economy. The key requirements and procedures of the gas system balancing are defined in standard natural gas transmission, transmission-distribution contracts, natural gas supply (Purchase-sale) contracts and contracts signed with Gazprom RAB.

Article 3 of the Law on Natural Gas defines balancing as equation in the transmission and/or distribution systems of the delivered and received amount of natural gas. Balancing is ascribed to gas company services provided to system users. This law prescribes that transmission or distribution system operators shall set system balancing rules upon approving them with the NCC. The rules shall be objective, transparent and non-discriminatory. Requirements of system balancing rules shall be mandatory for customers and system users, except household customers. System balancing rules shall be published in the supplement *Information Announcements (Informaciniai pranešimai)* of the *Official Gazette (Valstybės žinios)*. Chapter VI of the Law entitles the NCC to set system balancing and use rules, if draft rules developed by system operators are incompliant with requirements of this law and other legislation. Article 25 also provides that the NCC shall consider complaints about system balancing under an extra-judicial preliminary complaints handling procedure.

Natural Gas Transmission, Distribution, Storage and Supply Rules specify that gas flow balancing in the transmission and distribution system shall be ensured. The transmission system operator

has an opportunity to request a supply company to conclude a gas transmission contract with a gas transmission company for gas transmission customers, or a tripartite contract with a gas transmission company and an eligible user.

Chapter IX of these Rules is about system balancing. A gas company with a transmission license shall be responsible for the balanced activity of interconnected transmission systems located throughout the territory of Lithuania. Its instructions regarding gas flow balancing shall be obligatory to distribution, storage and supply companies, the ones transporting gas in transit and system users (customers). The gas company responsible for balancing shall draft gas flow balances based on contracts concluded and gas quantities supplied to the gas system.

Balancing rule and applicable principles in 2009 remained the same. The gas system shall be balanced on a daily basis in line with gas quantities received, transferred and distributed. The gas balance shall not exceed $\pm 8\%$. An hourly consumption (transfer, distribution) of gas by a customer (system user) at the place of delivery shall not exceed the contracted maximum permissible gas quantity. If the contracted maximum permissible gas quantity is exceeded, the gas company shall be entitled to limit gas supply (transmission, distribution).

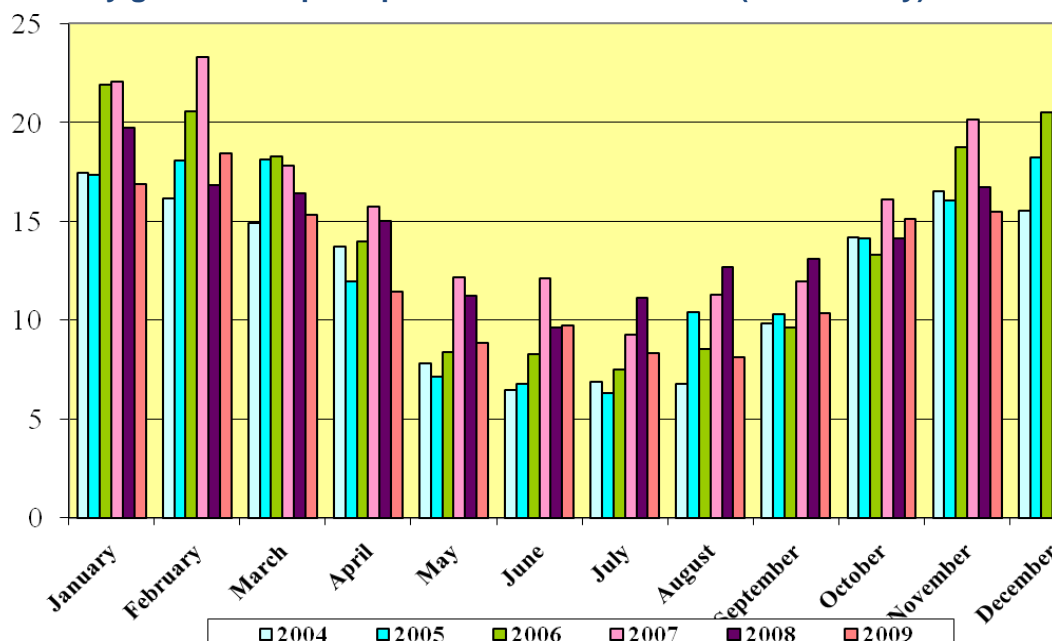
The gas company with a transmission license, i.e., Lietuvos Dujos AB, shall be responsible for the activity of interconnected transmission systems located throughout the territory of Lithuania. Instructions of this company shall be obligatory to the system users. The transmission system balancing time shall be one 24-hourly period. The 24 hour-based balancing is acceptable to all the market players. As long as balancing methodologies are neither drafted, nor approved, gas balancing issues shall be addressed in customer gas transmission/distribution contracts. Quantities required for the gas system balancing shall be established by the transmission/distribution operator based on the planned need and capacities ordered by customers, and specified in gas supply contracts, as well as the existing reserve in the pipeline or the Storage Facility.

Gas system balancing procedures in Lithuania are quite liberal. System users and customers may simply and quickly agree about modifying gas quantities bought and consumed as provided for in contracts. Gas companies, including the gas seller Gazprom RAB are flexible and pay attention to changing needs of gas system users and customers. So far Lietuvos Dujos AB have not received gas system user and consumer complaints about the system balancing.

Capacity Distribution Mechanism and Overload Management

Taking into account that transmission system is not in full use the transmission system operator applies simplified overload management mechanism. Small customers use gas without any restriction; no individual capacity fee is applied to these customers. Small customers with the annual consumption of up to 20.000 m³ do not participate in system overload management mechanism. Medium customers participate passively, i.e. gas consumption limitations are specified in their contracts, but no specific balancing charges have been set. Other system users actively participate in the system balancing process and therefore must pay charges for exceeding the established capacity. The highest natural gas consumption per month is indicated in Figure 10.

Figure 10. Daily gas consumption per month in 2004 – 2009 (mln. m3/day)



Source: NCC

The transmission system operator has set the following charges for system users, which are applied if the established capacity is exceeded:

- charge for exceeding unapproved capacity;
- charge for exceeding approved capacity;
- charge for unused capacity.

The charge for exceeding unapproved capacity is paid when a system user exceeds daily gas consumption without agreement in advance with the system operator in accordance with the established procedure. The charge does not depend on the season of the year

The charge for exceeding the approved capacity is paid when a system user exceeds daily gas consumption upon agreement in advance with the system operator in accordance with the established procedure. A gas undertaking must have a 24-hour telephone line or any other means of communication that would enable immediate reception of information on gas supply interruptions, limitations, variations from the usage mode or emergency situations from gas transmission and distribution undertakings and its communication to customers. The service of gas pipeline storage is not provided to customers, as the transmission system is not adapted to pressure and store pipeline gas.

Unbundling

Activity unbundling is regulated by Article 12 of the Natural Gas Law. It provides that in gas undertakings transmission, liquefaction, storage, distribution activities must be unbundled. Unbundling shall be done by establishing a subsidiary or a separate undertaking. An integrated gas undertaking supplying gas to less than 100 000 customers must not unbundle the activities and establish a subsidiary or a separate undertaking. The Law prescribes that employee managing transmission, storage, distribution or liquefaction activities shall act independently and may not take part in the management of the integrated gas undertaking

By Resolution No. 585 (Official Gazette 2010, No. 61-2996) of 19 May 2010 the Government of the Republic of Lithuania approved the Concept of Amendment of the Natural Gas Law of the Republic of Lithuania (hereinafter – the Concept).

It has been developed to implement Directive 2009/73/EC of the European Parliament and the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC.

The purpose of the concept is to enforce key legal regulation provisions and structure of the Law Amending the Natural Gas Law of the Republic of Lithuania. Aiming for the goals set forth in the Concept this Law will improve the following gas market areas: the proper gas transmission activity unbundling from extraction and supply; consumer protection to develop the competitive gas market; the remit, independence, international cooperation and acts of the National Regulator ensuring the proper gas supply reliability level; Transmission System Operator cooperation at the regional and the European Union level. The Concept provides for the first alternative proposed in the Directive 2009/73/EC concerning common rules for the internal market in natural gas, the full ownership unbundling of transmission and supply activities.

The Government assigned developing the draft Law Amending the Natural Gas Law of the Republic of Lithuania and the draft Implementation Law of the Natural Gas Law of the Republic of Lithuania to the Ministry of Energy.

Lietuvos Dujos AB is the largest natural gas Transmission System Operator in the Baltic States. This company is the only one in Lithuania providing services to more than 100000 customers. The company is a vertically integrated undertaking. Since 1 January 2008 Lietuvos Dujos AB modified its organization management structure in line with the European Union legal requirements on functional unbundling of the company transmission, distribution and supply activities. The company implemented the functional unbundling of transportation and supply activities. Five company natural gas distribution branches operate in different regions of Lithuania. To more effectively manage the company resources, the branch organization management structure was optimized in 2009: branch management was centralized by leaving only four city divisions within branches. This company has not legally unbundled its activities, which are unbundled just internally. On its website this company is presented as a single integrated company, Lietuvos Dujos AB having one logo, address and website www.dujos.lt.

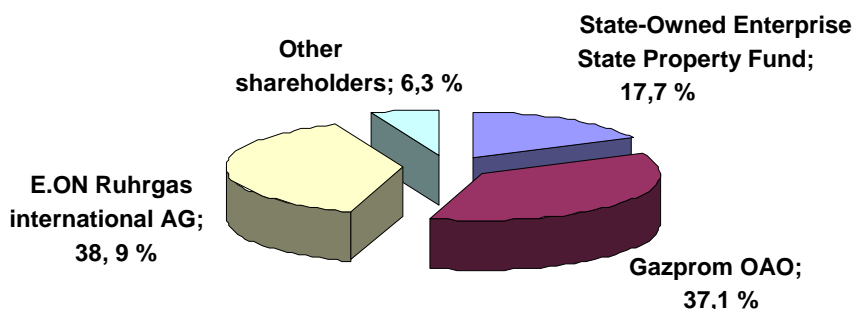
Activities of Lietuvos Dujos AB have not been legally unbundled; however the company keeps individual book-keeping records and does individual financial statements for each such activity. The General Manager of the company approved the accounting procedure for activities. Statements on income and costs of the regulated activities are audited, by activities, and approved by an audit company. Amendment to the Law on Natural Gas passed on 20 March 2007 provides that financial statements of company transmission, distribution and supply activities are public.

To clarify the capacity fee component in 2010 the NCC plans to approve the principles of cost and bookkeeping unbundling to serve as a clear basis for justification of the capacity fee.

Moreover, the shares of Lietuvos Dujos AB are traded on the regulated market; they are listed on the Stock Exchange NASDAQ OMX Vilnius. The company quarterly reports are published in line with the Stock Exchange requirements. The company shareholders are E.ON Ruhrgas International AG, Gazprom RAB and the State-Owned Enterprise State Property Fund. These shareholders have the controlling share portfolio and have a decision vote when decisions are

passed at the General Shareholder Meeting. The shareholder structure of Lietuvos Dujos AB is provided in Figure 11.

Figure 11. Shareholders of Lietuvos Dujos AB



Source: NCC

System operator's activity at Lietuvos Dujos AB is arranged as if it functions as a separate company: separate decision making, daily management, accounting and contracts with customers. Deeper (legal) unbundling of activities to be carried out in accordance with legal acts.

In 2009 there were two gas supply companies not engaged in other licensed activities – Haupas UAB and Dujotekana UAB (Table 23) in Lithuania

Table 23. Unbundling of natural gas companies in 2009

Activity	Number of gas companies	Legally unbundled	Legally not unbundled	Gas companies which may be covered by the rule of 100.000 customers
Transmission	1	0	1	0
Distribution	6	0	6	5
Supply	8	2*	6	5

* - a gas company engaged in a single type of activity – supply.

Source: NCC

Liability for Violations of Requirements for Licensed Activities

The Natural Gas Transmission, Distribution, Storage and Supply Licensing Rules regulate gas company licensing for the natural gas transmission, distribution, storage, liquefaction and supply activities, license modification and suspension, unsuspension and termination for gas companies

The NCC may impose penalties, suspend or revoke licences for violations relating to the licensed activities. When suspending a licence, the NCC must set a time period during which the

undertaking concerned must eliminate its violations of the requirements for licensed activities. The licence may be revoked if:

- emerged that data provided in application to issue a licence is incorrect;
- the company twice or more per year makes violations relating to the licensed activity;
- companies technological, financial or managing capacities fails to carry out the licensed activities;
- the company fails to eliminate violations by the NCC-established deadline.

Licence validity could be revoked if the company concerned fails to eliminate the indicated violations during the set period of time or violates the licensing activity conditions repeatedly.

Upon committing violations, persons responsible for the performance of licensed activities are held liable to administrative proceedings in accordance with the procedure laid down in the Code of Administrative Offences. The Code of Administrative Offences provides for liability for any breach of the procedure for the transmission, distribution, storage, supply or use of energy resources or energy, for failure to provide data on economic and financial activities and/or provision of knowingly inaccurate data by suppliers of energy resources or energy, as well as for any violation of or non-compliance with resolutions of the NCC or failure to comply with orders of the NCC, etc.

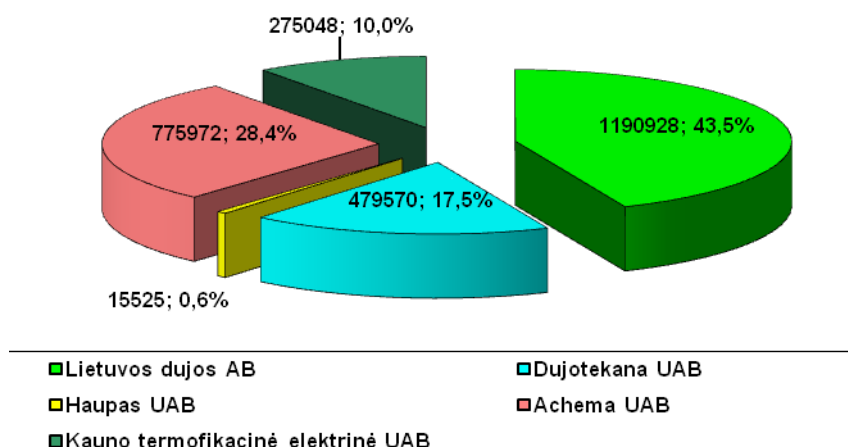
4.2. Competition Issues

4.2.1. Wholesale Market Overview

Lithuanian Market

Lithuanian natural gas wholesale market is hardly in existence. In 2009 trade in natural gas among gas companies amounted only to 0.3% of total imported gas volume. Local gas distribution companies buy and sell small gas quantities to customers: in 2009, Intergas UAB and Agrofirma Josvainiai AB purchased gas from Dujotekana UAB, Fortum Joniškio Energija UAB – from Lietuvos Dujos AB, and Druskininkų Dujos UAB – from Haupas UAB. Natural gas suppliers traded in gas only under long-term contracts. No other types of contracts have been concluded by supply undertakings. Pursuant to the Law on Natural Gas, the NCC has the right of access to contracts concluded between gas undertakings and customers. Gas undertakings submit the main conditions of their gas purchase and sales contracts and annual activity reports to the NCC. The quantities of imported natural gas by the companies and their share market are presented in Figure 12

Figure 12. Natural gas import components in 2009 (thous. m³)



Source: NCC

The annual natural gas consumption in Lithuania in 2009 totalled to 25.3 TWh (2.7 billion m³). The average calorific value of imported natural gas was 9.339 kWh/m³. In 2009 the maximum daily consumption of natural gas was 0.196 TWh. Natural gas is not produced in Lithuania; the entire volume of gas is imported from Russia. In 2009 import of natural gas totalled to 36.2 TWh (2736.9 billion m³). Out of them 11.2 TWh (1197 billion m³) was transmitted to Kaliningrad Region by transit. Maximum technical import capacities are presented in Table 24.

Table 24. Maximum technical import and export capacities

Connection	Capacities, TWh/h	Out of them: not reserved capacities, TWh/val
Latvia – Lithuania (Kiemėnų DAS)	0.002	0.002
Belarus –Lithuania (Kotlovkos DAS)	0.011	0.003
In total:	0.013	0.005
Lithuania – the Russian Federation (Šakių DAS)	0.004	0.002

Source: NCC

Import capacities reserved for long-term contracts totalled to 0.008 TWh/h, while export amounted to 0.002 TWh/h.

Two gas supply undertakings having over 5% of the gas supply market, namely, Lietuvos Dujos AB and Dujotekana UAB, supplied gas to Lithuanian customers. Gas quotas to the latter undertakings are allocated by a single external supplier Gazprom RAB

The Lithuanian gas transmission network is not interconnected with the Western European natural gas system. The transmission system has a single connection with Latvia. However, natural gas from Latvia may be transported only in the event of interrupted gas supply through the Republic of Belarus.

To sum up, there is no competition on the gas supply market, either on an international or national level.

Baltic Market

Currently the Baltic States gas market is dysfunctional. This is caused by two reasons: an isolated gas transportation system of the Baltic States (including Finland) and the fact that all the countries are dependent on a single gas supplier, Gazprom RAB.

Gas supply source diversification is one of the key preconditions of the gas market functioning. This purpose may be achieved by implementing strategically important infrastructure investment projects: interconnection of Lithuanian and Polish natural gas systems, finding a solution of the issue of Latvian gas system capacities and the use of Inčukalnis underground natural gas storage facility in Latvia, and construction of a liquefied gas terminal.

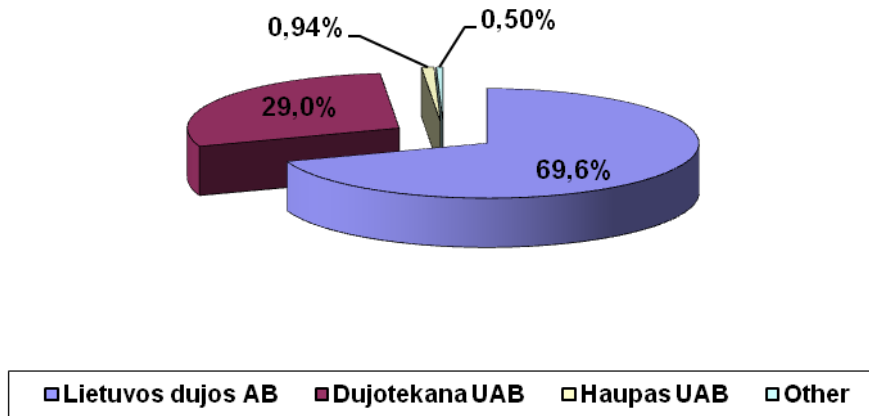
Diversification and liberalization of the gas market would ensure gas supply security and reliability and make it possible for every gas user to freely choose a gas supplier and buy cheaper gas on the market. However it should be noted that though Lithuania has opened its natural gas market this has been a mere formality which currently generates no benefits whatsoever to natural gas users due to the above mentioned circumstances.

4.2.2. Retail Market Overview

In the end of 2009 there were 549 thous. natural gas consumers (users), out of them 547.092 thous. household users and 5.816 thous. industrial users. Natural gas was supplied to customers by seven supply undertakings: Lietuvos Dujos AB, Dujotekana UAB, Haupas UAB, Fortum Joniškių Energija UAB, Druskininkų Dujos UAB, Agrofirma Josvainiai AB and Intergas UAB. In 2009, the total sales of natural gas on the national gas supply market amounted to 15.41 TWh (1.65 billion m³).

Two suppliers occupying over 5% of the gas supply market are dominant on both the retail and wholesale gas supply markets. These are Lietuvos Dujos AB and Dujotekana UAB. The remaining gas supply undertakings represent only 1.5% of the total gas sales.

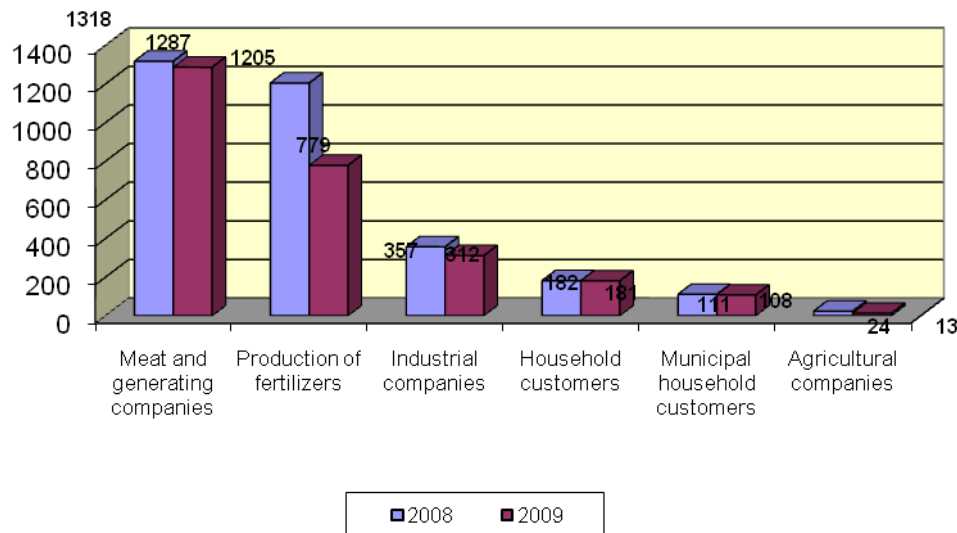
Figure 13. Retail market share of gas companies



Source: NCC

The total volume of natural gas sold by the largest gas company **Lietuvos Dujos AB** in 2009 amounted to 10.75 TWh (1.151 billion m³), of which 1.69 TWh (181.390 billion m³) was sold to household consumers, 9.05 TWh (969.454 mln. m³) – to non-household consumers. The amount supplied to Lithuania through the gas system managed and operated by the said company accounts for more than 99% of the total demand of Lithuanian customers for natural gas. Figure 14 presents the structure of natural gas consumption by the consumption purpose, mln. m³.

Figure 14. Structure of natural gas transmission to customers, mln. m³



Source: NCC

Dujotekana UAB supplied 4.464 TWh (479.569 million m³) of natural gas. All gas was sold only to non-household consumers, of which 26.68 GWh (2.857 million m³) was sold to other gas undertakings (Agrofirma Josvainiai AB and Intergas UAB). Dujotekana UAB has 15 consumers in total; the largest share of them consists of gas power plants.

Haupas UAB sold 144.99 GWh (15.525 million m³) of natural gas. The company supplied natural gas only to two non-household consumers. One of them is a gas supply company Druskininkų Dujos UAB

Fortum Joniškio Energija UAB purchased 44.74 GWh (4.791 million m³) of natural gas from Lietuvos Dujos AB, of which 26.49 GWh (2.836 million m³) were used for its own needs (heat generation) and 17.74 GWh (1.9 million m³) were sold to other customers. From January 1, 2010 natural gas activities were sold to Fortum Heat Lietuva UAB.

Druskininkų Dujos UAB purchased from Haupas UAB 2.33 GWh (0.25 million m³) of natural gas. In 2009 it hold 2656 of household consumers and 18 of non- household consumers. In 2009 1.29 GWh (0.139 mln. m³) of natural gas was sold to household consumers and 0.99 GWh (0.107 mln. m³)- to non-household consumers and supplied it to household consumers.

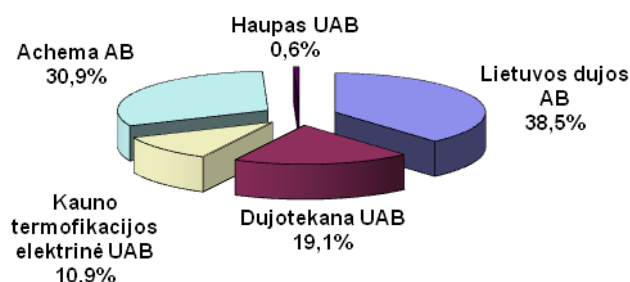
Agrofirma Josvainiai AB purchased from Dujotekana UAB 23.17 GWh (2.481 million m³) of natural gas and supplied it to household and non household consumers

Intergas UAB engaged in supply activities only in Mažeikiai Region Municipality. In 2009 the company sold 2.65 GWh (0.285 million m³) of natural gas to both household and non-household consumers.

The main natural gas supplier to residential consumers is Lietuvos Dujos AB. This company in 2009 supplied 99.9 percent of natural gas consumed by household consumers.

In the non-household market there two main suppliers: Lietuvos Dujos AB and Dujotekana UAB. A market share in the non-household consumer market is presented in Figure 15.

Figure 15. Non-household consumer market in Lithuania in 2009



Source: NCC

As from 1 July 2007, all natural gas customers are eligible customers, i.e. consumers may choose their supplier. To purchase gas, customers must file an application with a gas supply undertaking two months prior to the beginning of a calendar year. A customer must file a prior written request, no later than 14 calendar days before the commencement of gas supply, to a supply undertaking to conclude a gas supply (sales and purchase) contract. Upon the evaluation of whether the requested gas quantity can be supplied, the supply undertaking shall, within 14 calendar days from the receipt of the request, notify the applicant of full or partial approval of the requested quantity or refusal to meet the request. Refusal to meet the customer's request must be objective, non-discriminatory and well-grounded. The NCC must also be informed of such refusal to meet the customer's request.

Though Lithuanian gas supply market is fully open, in 2009 there were no retail customers having changed their gas suppliers.

4.2.3. Anti-dominating Measures

Energy Company Information Provision Rules regulate data and report submission on regulated energy company activities in the natural gas sector to the NCC. These Rules are applicable to companies licensed by the NCC. To improve consumer protection and transmission and supply service requirements of gas companies, at the end of each year companies submit annual reports on received complaints analysis to the NCC. In 2009 Lietuvos Dujos AB received and analyzed 41 complaints. Table 25 provides data on complaints (applications) settlement by Lietuvos Dujos AB.

Table 25. Lietuvos Dujos AB report on Complaint (Application) settlements in 2009

Complaint (application) subject	Complaints
Discrimination	
Prices and tariffs	6
Contract conditions	3
Connection to the grid	4
Supply reliability and service quality	3
Others	25
IN TOTAL:	41

Source: NCC

To improve customer service and reduce the number of inquiries and applications, since 1 July 2009 Lietuvos Dujos AB implemented its plan to use a single short telephone number 1894 to provide customer information throughout Lithuania. Before 1 July it was used only by Vilnius and Panevezys county gas customers. The implemented „one stop shop” principle has ensured effective customer service. The majority – approximately 95% of all the received inquiries are answered during the first contact. Customers may call this number to find out gas tariffs, the payment procedure or clarify other issues.

Customers may also find their full gas payment balance during days off or weekends, i.e., 24/7. This information is provided by an automatic voice system. Using this system is simple and convenient: one just needs to use one's telephone to key in the number of a gas customer's payment book and the first seven numbers of one's personal code. Topical information SMS texting services also started.

Lietuvos Dujos AB continued works related to simplifying, convenience and flexibility of payments for natural gas. Though direct debit payments are for customers paying against invoices, since 2009 this payment method has been adapted to household customers, as well. For non-household customers electronic VAT invoice delivery was offered since 2009. The key advantage of this payment method is shorter and cheaper invoice delivery time.

Article 25.1 of the Natural Gas Law prescribes that the NCC, under the preliminary extra-judicial procedure, settles complaints on gas company acts or omissions in natural gas transmission, liquefaction, re-gasification, distribution, supply, buying and storing, access to the system, the procedure of customer system connection (methodologies, prices), system balancing, price application, investment and contract terms.

The increasing public activity and interest in energy issues and the need to protect their interests is demonstrated by the NCC receiving increasing loads of consumer questions, requests and complaints.

In 2009 the Gas Department received 44 written complaints and applications and 16 requests by e-mail. Emailed questions predominantly concerned the subscription fee, the price payable for gas and since when it has to be paid, the documents needed to connect to a gas company system.


At the beginning of 2009 the majority of written complaints and requests were about the increased natural gas tariff for household customers. For residential customers it was unclear why the gas tariff for household customers was increased while the gas import price slumped since 2009. The NCC explained that the import price calculated into the gas tariff in 2008 was significantly lower than the actual one, and the revenue lost by Lietuvos Dujos AB was compensated through calculation of 2009 tariff.

Some customers clarified the reasons for the price growth and asked to explain the structure of the natural gas tariff for household customers and differences between tariffs applied to various customer groups. Beside this, like in 2008, some customers were unclear on why the fixed part of the gas tariff was set, i.e., they thought paying for gas though not consumed at all was illogical. The NCC replied to these questions providing explanations with specific numbers and graphs.

Residential customers using gas to heat apartments complained that for small apartments they consume less than 800 m³ gas per year, therefore have to pay a higher gas tariff set for the first subgroup of household customers. With respect to these complaints the NCC analyzed the existing situation and submitted proposals regarding regrouping of household customer subgroups. Since 2010 household customer sub-grouping was modified: residential customers consuming up to 500 m³ gas per year are qualified as Subgroup 1 customers, and residential customers consuming above 500 m³ gas per year are qualified as Subgroup 2 customers, i.e., residential customers using gas to heat small apartments will have Subgroup 2 gas payment tariffs applicable.

New customer connection terms were also complained a lot about to the Gas Department. Customers complained about the procedure prescribed in the Fee Setting Methodology for New Natural Gas Customer Connection under which for three years in turn the connection fee for newly gasified house blocks is calculated by taking into account the number of gas line meters built per customer. After the three years the fee is calculated based on the gas line length from the point of the new customer connection to the existing gas system. Therefore some customers try to wait for the three years to get cheaper access to gas. With respect to this situation the Fee Calculation Methodology for New Natural Gas Customer Connection was modified to eliminate the three year time for the new customer connection. Gas companies have to estimate all the potential customers at once. The key principle is that all new household customers in newly gasified blocks shall have the same connection service price applied

Complaints were received that when customers connect to the gas system later than since the beginning of the year and consume less gas than set forth in the contract, the gas price is recalculated according to the actual volume of gas consumed that (less than calendar) year according to the customer subgroup consuming this gas volume. The NCC submitted a proposal to the Ministry of Energy that when adjusting The Rules of New Natural Gas System Installation in a Newly Gasified Territory and Connection of New Customer Gas System to Transmission or Distribution Systems, it should be provided that customers should not pay a higher price for gas used per less than a calendar year.



Some companies contacted the NCC about harmonization of the Natural Gas Transit and Transmission Tariff Setting Methodologies and high transportation prices applied to companies.

As many as 11 complaints and inquiries were about liquefied gas prices and the subscription fee recently applied. The NCC does not regulate liquefied gas prices; therefore it contacted the Ministry of Economy requesting to analyze the problem of liquefied gas used for household needs within the Ministry remit. In case the number of liquefied gas customer increases, the possibility of liquefied petroleum gas price regulation may not be ruled out.

5. Security of Supply

5.1. Electricity (Article and 2005/89/EC Article 7)

In 2009, the total installed electricity generating capacity (nuclear and non-nuclear) amounted to almost 3800 MW (Table 26) and more than twice exceeded the domestic needs of Lithuania (Table 27).

The main source of electricity in the country is Ignalina Nuclear Power Plant, which generates cheaper electricity than thermal power plants using fossil fuel

Table 24. Installed/Available capacity of Lithuanian Power Plants as of 2010 01 01, MW

Power Plants	Installed/Available Capacity
Ignalina NPP	0 / 0
Lithuanian Power Plant	1800 / 1732
Mažeikiai Power Plant	160 / 148
Vilnius Power Plant	360 / 342
Kaunas Power Plant	170 / 161
Kaunas Energija	8 / 7
Klaipėdos Energija	11 / 9
Panevėžys Power Plant	35 / 33
Companies' Power Plants	110 / 107
Thermo Power Plants, in total:	2654 / 2539
Kaunas Hydro Power Plant	101 / 50
Kruonis PSP	900 / 760
Small hydro power plants	27 / 26
Hydro power plants, in total:	1028 / 836
Biomass power plants	38 / 37
Wind power plants	91 / 89
Biomass and wind power plants, in total	129 / 126
In total:	3811 / 3501

Source: LiTGRID UAB

Table 25. Maximum capacity demand (gross) in 2009, MW

Month	Maximum demand
January	1917
February	1860
March	1705
April	1587
May	1470
June	1444
July	1454
August	1464
September	1495
October	1687
November	1745
December	1936
Per year	1936

Source: LITGRID UAB

Table 26. Planned capacity balances of the Lithuanian Energy System at peak demand times in 2010-2012, GW

Indicator	2010	2011	2012
Installed/available capacity at power plants	3811/3501	3971/3706	4027/3474
System maximum demand capacity under the maximum growth of demand	1694	1725	1760
Real available capacity at the system	1750	1880	1834
Export	0	0	0
Mandatory long-term reserve	373	404	419
5% reserve to assure system adequacy	175	185	174
Capacity balance (overcapacity)	-119	-31	-99

Source: LITGRID UAB

As data provided show, during the 2010-2011 winter peak it may possibly experience a capacity deficit, namely first time after many years Lithuanian power system becomes not over.

With respect to the planned decommissioning of Ignalina NPP and the obligation of Lithuania to the European Union to increase electricity generation in thermo power plants and from renewing energy sources, it is forecasted to increase electricity generation capacities to 500 MW using renewable energy sources. In 2010 there are plans to approve the following updated development strategy and stimulus procedure for the generation capacities.

Jointly with the neighbouring states there were plans to build a new nuclear power plant up to 2020. Therefore, joint stock company Visaginas Power Plant (www.vae.lt) was incorporated.

The Law of the Republic of Lithuania on Electricity stipulates that generation of electricity, expansion of electricity generating capacities, electricity export and import, as well as construction of direct lines are subject to authorisations. Authorisations for electricity undertakings and eligible customers to engage in non-licensed activities in the electricity sector are issued and revoked in accordance with the Rules for Issuing Authorisations for Activities in the Electricity Sector

Authorisation to generate electricity is mandatory for every undertaking which was engaged in electricity generation according to its registered Articles of Association or other equivalent documents adopted before the entry into force of the Law of the Republic of Lithuania on Electricity and wishes to continue this activity using its available technological facilities upon the entry into force of the new Law; or wishes to restart suspended electricity generation using its available technological facilities if the previous authorisation was revoked; or has built new technological electricity generating facilities in accordance with the authorisation to expand electricity generating capacities.

Authorisation to expand electricity generating capacities is mandatory for every undertaking wishing to construct a power plant in a new location and/or to increase its existing generating capacities by reconstructing (replacing) its current or constructing additional technological electricity generating facilities.

Electricity production subject to energy resources is presented in Table 29.

Table 27. Electricity supplied to the grid by Lithuanian Power Plants in 2009.

Ignalina NPP	10025.3
Lithuanian Power Plant	859.7
Mažeikiai Power Plant	168.1
Vilnius Power Plant	525.9
Kauno energija	0.3
Kaunas Thermo Power Plant	546.7
Klaipėda Power Plant	14.2
Panevėžio Thermo Power Plant	181.5
Other power plants	234.34
Thermal power plants, in total:	2530.1
Kruonis PSP	714.8
Kaunas HPP	345.1
Small hydro-power plants	74.3
Hydro-power plants, in total:	1134.2
Other power plants using renewable energy resources	251.8
Out of them wind power plants connected to distribution network	15.4
Out of them wind power plants connected to transmission system	141.4
Out of them biomass power plants	95
In total, power plants using renewable energy resources:	1386.0
In total:	13941.4

Source: LITGRID UAB

General criteria, conditions and requirements for the promotion of the generation and purchase of electricity generated from renewable energy sources in the Republic of Lithuania are laid down in the Procedure for Promoting the Generation and Purchase of Electricity Generated from Renewable Energy Sources approved by Resolution No. 1474 of the Government of the Republic of Lithuania of 5 December 2001 (as amended by Resolution No. 897 of the Government of the Republic of Lithuania of 18 September 2006). This Procedure is mandatory for natural and legal persons generating or planning to generate electricity in a power plant using renewable energy

sources, as well as for persons connecting electricity facilities of producers to the electricity system and/or purchasing electricity generated by producers into distribution and transmission networks. The provisions of this Procedure promote electricity generation by wind, biomass and solar power plants, as well as small hydro power plants with the maximum capacity up to 10 MW. Since the costs of electricity generation from renewable energy sources are higher than using conventional energy resources, such electricity is purchased at higher tariffs approved by the NCC. Electricity generated from bio fuel is purchased at the price of 86.9 EUR/MWh, from hydro-power – at the price of 75.3 EUR/MWh and from wind power – at the price of 86.9 EUR/MWh. In order to promote the variety of energy resources in 2009 electricity prices from solar power plants were set forth. The said prices were established referring to peak energy capacity: up to 100 kW- 472.1 EUR/MWh, from 100kWh to 1 MW - 451.8 EUR/MWh, from 1 MW - 437.3 EUR/MWh. Purchasing prices may change due to the increase of equipment and maintenance costs. Power plants are connected to the existing systems of energy undertakings in accordance with the procedure established by law at a 40% connection fee discount applied to producers.

Electricity Forecasts

After the decommissioning of the second unit of Ignalina Nuclear Power Plant at the end of 2009, the current generating capacities, including small capacity co-generation plants that are planned to be constructed, will be sufficient to meet the national demand until 2013 in all cases of the growth in national economic needs and supply with systemic services necessary for the functioning of the system. Nevertheless, there is an urgent need to modernise the Lithuanian Power Plant and the existing co-generation plants with the lowest electricity generation cost during the heating season. Furthermore, with the increasing capacity demand and subject to economic feasibility, new co-generation plants able to generate electricity at a price that would be competitive on the open electricity market

Pursuant to the Procedure for Promoting the Generation and Purchase of Electricity Generated from Renewable Energy Sources, the share of electricity generated from renewable energy sources in the total electricity consumption in the country should amount to 7.7% at the beginning of 2009. At the beginning of 2009, the planned output of electricity from renewable energy sources should reach 572.7 GWh (of which 320.4 GWh – by wind power plants, 122 GWh – by hydro-power plants, and 127.1 GWh – by biomass power plants), and at the beginning of 2009 the output should amount to 995.2 GWh (of which 320.4 GWh – by wind power plants, 452 GWh – by hydro-power plants, and 219.5 GWh – by biomass power plants).

The Transmission System Operator posts the Register of Guarantees of Origin and reports on its website. According to this data in 2009 wind farms generated 157.1 GWh, hydroelectric power plants up to 10 MW above 10 MW - 74.5 GWh and 350 GWh respectively, biomass power plants – 84.1 GWh, biogas power plants – 12.1 GWh.

Forecast for changes in the installed/available capacities are presented in Table 30.

Table 28. Forecast for changes in the installed/available capacities of Lithuanian Power Plants, MW

	2010	2011	2012	2013
Ignalina NPP	0/0	0/0	0/0	0/0
Lithuanian Power Plant	1800/1732	1800/1732	1500/1448	1955/1888
Mažeikiai Power Plant	160/148	160/148	160/148	210/196
Vilnius Power Plant	360/342	360/342	360/342	360/342
Kaunas Power Plant	170/161	170/161	170/161	170/161
Kauno Energija	8/7	8/7	8/7	8/7
Klaipėdos Energija	11/9	11/9	11/9	11/9
Panevėžio Energija	35/33	35/33	35/33	35/33
Šiaulių Energija	0/0	0/0	0/0	11/10
Companies' power plants	110/107	157/154	157/154	157/154
Thermal power plants, in total:	2654/2539	2701/2586	2401/2302	2917/2800
Kaunas HPP	101/50	100/90	100/90	100/90
Kruonis PSP	900/760	900/760	900/760	900/760
Small hydro-power plants	27/26	30	30	31
Hydro-power plants, in total:	1028/836	1030/880	1030/880	1031/881
Biofuel power plants	38/37	40	62/59	64/60
Wind power plants	91/89	200	233	267
Total in biofuel and wind power plants:	129/126	240	295/292	331/327
Total:	3811/3501	3971/3706	4027/3474	4279/4008

Source: LITGRID UAB

The maximum capacity demand in 2010–2013 is given in Table 31.

Table 29. Forecasted maximum capacity demand in 2010–2013, MW

Year	Maximum demand (net)*
2010	1694
2011	1725
2012	1760
2013	1798

Source: LITGRID UAB

Table 30. Forecasted sales and purchases balance in 2008-2013

Power plants/ sales, thous. kWh	2008	2009	2010	2011	2012	2013
Ignalina NPP	9.140.038	9.745.531	-	-	-	-
Lithuanian Power Plant	779.708	935.651	2.500.000	2.120.000	2.000.000	2.000.000
Vilnius Power Plant	581.130	613.438	604.100	644.200	591.000	535.000
Kauno Energija (Petrašiūnų Power Plant)	-3.971	9.907	0	0	0	0
Kaunas Thermo Power plant	658.213	412.707	455.100	298.000	270.000	245.000
<i>Panevėžio Energija</i>	109.740	181.100	187.700	144.000	130.000	286.812
Wind power plants	117.131	122.100	229.900	352.800	469.000	115.000
Mažeikių Power Plant	125.682	143.430	700	0	0	0
Import	1.279.788	559.000	5.768.500	5.763.200	5.809.500	5.875.300
Kauno HPP	325.716	273.096	398.000	334.000	379.600	385.300
Kruonis HPSP	586.361	463.653	777.400	777.500	789.200	801.000
Other power plants	129.186	180.569	31.600	30.000	30.500	30.900
In total	13.931.041	13.695.768	10.953.000	10.503.700	10.468.700	10.615.000

Suppliers/purchase s, thous. kWh	2008	2009	2010	2011	2012	2013
Rytų skirstomieji tinklai AB	4.638.522	4.417.116	4.066.600	4.058.100	4.079.900	4.115.800
VST AB	4.384.861	4.195.996	3.877.900	3.893.600	3.924.70	3.954.300
Independent suppliers	1.298.871	1.202.559	1.033.000	1.108.000	991.400	1.042.700
Visagino Energija PS	66.031	66.031	70.600	76.300	78.400	79.900
TN technological costs	351.912	350.413	266.500	257.000	267.000	278.000
Export, regulation, balancing	2.370.956	3.000.000	0	0	0	0
Kruonis HPSP demand	819.888	463.653	1.107.300	1.110.700	1.127.400	1.144.300
Demand in total:	13.931.041	13.695.768	10.953.000	10.503.700	10.468.700	10.615.000

Source: LITGRID UAB

Planned Development and Renovation of the Transmission System

Technical status of the main transmission system elements, the electricity transmission lines (ETL) and transformer substations (TS), has a major impact on operational reliability of the electrical system. Though Lithuania has a quite well developed 110 – 330 kV electricity transmission network, the bulk of electricity network was built more than 25 – 30 years ago, and operational service time has already reached or even exceeded the design service time. This is a major concern of the reliable electricity system operations. To ensure the reliable transmission network operations TS and ETL are regularly reconstructed by replacing the old equipment with the new one and by installing modern equipment security and control technologies, and new and TS and ETL are installed.

In terms of reliability the weakest is the Western Lithuanian part of 330 kV transmission network. Klaipėda 330 kV TS is connected to the system only by two 330 kV inter-system lines Klaipėda – Sovetsk (Russia) and Klaipėda – Grobinia (Latvia). Telšiai 330 kV TS connected to the energy system only by one 330 kV branch line to the line Šiauliai – Jelgava (Latvia). To increase the 330 kV transmission network reliability the new 330 kV lines Klaipėda – Telšiai and Panevėžys – Mūša will be installed with a new 330 kV distribution station (switch-board) on the line Šiauliai – Jelgava (in Joniškis area) and Klaipėda and Telšiai TS will be expanded. Upon building the line Panevėžys – Mūša, the transit via Latvian energy system will be reduced, thus the dependency on the neighbouring countries and Lithuanian energy system reliability will improve.

With the electricity demand growing in Vilnius a new 330 kV transformer substation (TS) in Naujoji Vilnia and a new 330 kV power transmission line Vilnius-“Neris“ connecting it to the TS in Naujoji Vilnia are needed to ensure better reliability.

The development of the 110 kV transmission system is predominantly related to the development of major cities and construction of large-scale industrial sites. In the nearest future the following new 110/10 kV TS will be installed (in some places the installation has started already) in Vilnius, Kaunas and other Lithuanian cities. New 110 kV substations are also under installation to connect wind power plants to the transmission network.

To improve the 110 kV throughput and reliability new 110 kV air and cable lines are planned.

The existing Lithuanian energy system is not connected to the neighboring Central European countries. To ensure electricity supply reliability, the operational system stability and energy source diversification on both Lithuanian and the Baltic region scale, possibilities of construction of a new power bridge between Poland and Lithuania are analyzed.

On July 31, 2008 a working group consisting of representatives of the Lithuanian energy company Lietuvos Energija AB and the Polish energy company PSE Operator (Poland) officially finalized updating of the feasibility study of the Lithuanian and Polish electric power system interconnection, *Report Summarizing a Study Assessing the Feasibility of the Project of Interconnection of Lithuanian and Polish Electric Power Systems*, and signed the final feasibility study document confirming the technical, legal and economical project justification, if minimum 75% of it is funded by the European Union. 154 km high voltage (400 kV) double-circuit power transmission line from Alytus to Elk (Poland) is planned to interconnect the energy systems. As estimated the project may be finalized in 2012 – 2018. EUR 237 million investments are needed to implement it – EUR 71 million in the territory of Poland and EUR 166 million in Lithuania. To ensure inter-system flows both Lithuanian and Polish domestic electric power systems need expansion. This needs extra

investment, EUR 371 million in Poland and EUR 95 million in Lithuania. Upon implementing this project the Baltic energy ring infrastructure would be completed and connect Lithuanian, Latvian, Estonian, Finnish, Swedish, Norwegian, Danish and Polish energy systems, and facilitate ensuring the functional security and reliability of the Baltic electric power networks. The project has been prioritized on the European Union project list, and a coordinator has been appointed to implement it. A joint venture implementing the energy system interconnection project has been established in Poland.

In 2006 Lithuanian and Swedish Transmission System Operators Lietuvos Energija AB and Svenska Kraftenät decided to continue a feasibility study on interconnection of Lithuanian and Swedish energy systems and in August they signed a cooperation agreement on the feasibility study development. A competition was announced to select a consultant to develop the feasibility study, under which the Swedish consulting company Sweco International AB was selected as the winner. On 6 February 2007 Lietuvos Energija AB and Svenska Kraftenät (the contracting parties) and Sweco International AB (consultants) signed a contract on the development of the Feasibility Study on Power Interconnection between Lithuania and Sweden.

During a meeting which took place on 5 February 2008 in Stockholm the feasibility study results and the final feasibility study conclusions were approved. The feasibility study was developed in two phases: During Phase 1 the initial feasibility study was done: on the basis of previous studies and other data the project was scoped, the power interconnection capacities and costs were estimated, the best route was selected, financial and economic interconnection feasibility was analyzed, the design terms of reference plans were developed for surveying the seabed, suitable financing options were assessed for the Lithuanian-Swedish project. During Phase 2 a more detailed technical analysis was performed, recommendations for the power cable technology selection and connection to Lithuanian and Swedish power systems were developed, the impact of a wind farm, if connected to the power interconnection, on the interconnection and Lithuanian and Swedish power systems was analyzed.

Lithuanian and Swedish power systems are to be interconnected with 700 MW capacity direct current cable of approximately 350 km length to be laid on the Baltic Sea bed. Subject to the selected cabling technologies the investment would amount to approximately 516-637 million Euro. The Lithuanian -Swedish interconnection operations should start at the end of 2015.

With respect to the shutdown of Ignalina NPP and the obligation of Lithuania to the European Union to increase electricity generation from renewable energy sources, the wind energy-based electricity generation capacities are to be increased by 500 MW.

In 2010-2013 a new unit of Lietuvos Elektrine (Lithuanian Power Plant) is to be installed. In Mazeikiai PP a new 50 MW unit (in 2013), and in Siauliai PP an 11 MW (in 2013) capacity units should be installed.

In 2009 bilateral relations with the third countries have not changed. Market integration issues are under negotiations due to energy structural changes in the third countries. No problem was faced due to social and environmental consequences of electricity trade and system use. No power grid overloads were faced.

5.2. Security of Natural Gas Supply

5.2.1. Natural Gas Supply Contracts

One of the main supply security elements is long-term natural gas supply contracts. The total natural gas consumed in Lithuania is extracted in Russia and delivered to Lithuania via pipelines. Since there are no alternative gas supply possibilities, Gazprom RAB is the single natural gas supplier to the Republic of Lithuania, with the exception of LT Gas Stream AG AB

Gazprom RAB and Lietuvos Dujos AB have signed long-term gas sales and purchase agreement for 2000-2015 (inclusive). The Agreement signed in 1999. From 1st October 2008 Dujotekana UAB broke a contract with Gazprom RAB and purchased natural gas from a company LT Gas Stream AG AB, with the main office in Switzerland. The said contract has been signed for 2008-2012.

Another important element of ensuring supply security is the increase of transit flows to Kaliningrad area. The total volume of natural gas is supplied to Lithuania through the territory of Belarus. There is a potential gas import (supply) disruption risk due third party acts. Such disruptions are hardly feasible as Gazprom RAB is a shareholder of Beltransgaz AAB (Belarus transmission system operator), and moreover, gas transits Lithuania to reach Kaliningrad area of the Russian Federation. In case of a gas import disruption through the territory of Belarus natural gas would be supplied to Lithuania through the territory of Latvia. Cooperation of Lithuanian, Latvian and Estonian transmission system operators is facilitated by the fact that in these countries operator functions are performed by companies with the same key shareholders.

Lithuanian gas transmission systems are not interconnected with the West European natural gas system. The transmission system has a single interconnection with Latvia. However natural gas from Latvia may be transported only upon disruption of gas supply via the Republic of Belarus. We believe that interconnection of Lithuanian and Polish gas systems should be aimed at to implement Lithuanian energy supply security improvement policy.

The stable supply of natural gas to Lithuanian consumers was provided in 2009, consumers demand was fully met.

The Procedure of Customer Supply with Energy and/or Energy Resources In Emergency Energy Situation approved by the Resolution No.12 of 13 January 2003 by the Government of the Republic of Lithuania (Official Gazette, 2003, No. 5-182) regulates customer supply with energy and energy resources in emergency energy situation and preparation for and management of an emergency situation. In line with this Resolution, the Order No. 1-41 of 23 April 2009 of the Director General of Lietuvos Dujos AB approved the Emergency Situation Preparedness Plan including responsible executives, measures, and actions to ensure customer supply with natural gas, limit customer supply with gas and renew gas supply.

The Description of Measures Ensuring Natural Gas Supply Security approved by the Government of the Republic of Lithuania by the Resolution No. 163 of 26 February 2008 (Official Gazette, 2008, No. 27-966) aims to ensure natural gas supply reliability. The Description sets minimum gas supply reliability requirements, their financing principles and duties of gas companies and other market players (system users and customers), the Commission, State Energy Inspectorate and other Government authorities to meet the Description requirements, which are applied in case of gas

supply disruptions or interruptions due to breakdowns or other external factors out of gas company control and influence. The Description sets the priority secure gas supply, including pipe reserves for household customers and customers in sites with lower than 5 MW energy production capacity (when this energy is sold or used to meet public or residential customer needs) without reserve fuel stocks, supplies to which may not be interrupted.

The set priorities shall be observed by gas companies, system operators, customers and system users. In case of gas supply interruption or major disruption gas shall be supplied to customers with respect to gas volumes available in systems, natural gas storage facilities and technical gas system capacities. Gas reserves shall be formed and stored for the continuous gas supply customers. Supply companies are responsible for the uninterruptible gas supply to household customers. They shall form and store gas reserves for household customers for this purpose.

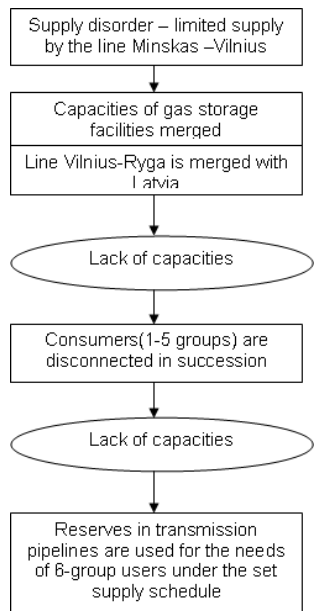
In line with the above priorities the Transmission System Operator shall develop and approve all customer gas supply limitation schedules during the heating and non-heating seasons and attribute customers to respective gas supply limitation sequence groups:

- Group 1 – customers with interruptible gas supply contracts;
- Group 2 – industrial companies able to use reserve fuel (obliged by law to have reserve fuel volumes);
- Group 3 – industrial companies without reserve fuel available;
- Group 4 – industrial companies using gas for uninterruptible technological processes and customers generating electricity and producing heat energy able to use reserve fuel;
- Group 5 – household customers and persons ensuring that staple needs of customers are met.

All customers shall be grouped into two main categories by gas supply reliability: the ones with continuous gas supply and ones with interruptible gas supply. Gas supply (sale) contracts shall specify customer gas supply groups (interruptible or continuous). Household customers shall be continuous gas supply customers. Non-household customers generating and supplying energy to residential or other customers to meet their staple needs and having no technical capacity to use reserve fuel, must choose the continuous gas supply group.

Ensuring natural gas supply under an energy emergency is illustrated in Figure 16.

Figure 16. Natural gas supply scheme under an energy emergency situation.



Source: NCC

Natural gas supply disruption or restriction over Minsk–Vilnius line or a threat of failure to supply customers with gas and a threat to the national economic activities would be the basis to declare an energy emergency. To ensure customer supply with natural gas, under the Emergency Situation Preparedness Plan approved by Lietuvos Dujos AB, the company would primarily agree with Gazprom RAB and Latvijas Gaze AS regarding natural gas supply from Latvian Incukalnis Underground Gas Storage Facility. Lithuanian and Latvian gas Transmission System Operators are in close contact, both companies have the same shareholders, and gas transmission between the two systems takes place from time to time. During the regional working group meeting Latvijas Gaze AS representatives informed that both Latvian and regional level emergency plans have been developed. They facilitate forecasting that in case of an emergency crisis management possibility in the plan will be used through cooperation of the Transmission System Operators.

In case of a major gas supply disruption when the country loses up to 20% of the supplied gas volume and there are no real measures to renew the volume, gas supply shall be limited for all the interruptible supply customers in proportion to their gas use.

In case of a major gas supply disruption when the country loses up to 20% of the supplied gas volume and there are no real measures to renew the volume, Lietuvos Dujos AB shall immediately (no later than within 1 hour) warn customers about this and after the warning start disconnecting them according to the gas supply limitation sequence groups. Interruptible gas customers must stop using gas no later than within 1 hour from receiving the warning. Other customers attributed to Groups 2-4 must stop using gas no later than within 2 hours from receiving the warning. In case of a gas supply disruption the transited gas volume shall be limited in proportion to the gas volume limitation for national customers. In case of a gas supply interruption gas transit shall be terminated

immediately. In case of a full gas supply termination pipeline gas reserves shall be used only to meet household customer needs.

In preparation for an emergency situation Lietuvos Dujos AB have developed lists of gas customers having contracts on gas supply, transmission, distribution with the following data collected:

- Customer names;
- Gas delivery place;
- Gas distribution station via which gas is supplied to the delivery places;
- Gas supply limitation, termination group;
- Gas volumes supplied, transported to gas delivery places;
- Contact customer and authorized representative information.

At the end of each year the company Dispatch Center develops a consolidated list of natural gas customers with set supply priorities and stated sequence of gas supply limiting and gradual termination in case of an emergency or gas supply disruptions. To disconnect customers a Work Organization Plan and Route shall be developed and a required employee and vehicle numbers shall be planned.

Under the requirements of the Procedure of Customer Supply with Energy and/or Energy Resources in Emergency Energy Situation Lietuvos Dujos AB is organizationally ready to arrange natural gas supply in case of gas supply limitation or disruption. Table 33 provides the natural gas use under various scenarios.

Table 31. General natural gas use under different scenarios (bln. m3)

Scenario	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<i>Low use</i>	3.36	3.38	3.35	3.33	3.31	3.29	3.26	3.24	3.21	3.18	3.15
<i>High use</i>	3.46	3.56	3.67	3.77	3.88	3.98	4.09	4.19	4.30	4.40	4.51
<i>The most likely scenario</i>	3.70	3.75	3.65	3.98	4.03	4.07	4.12	4.16	4.21	4.25	4.28

Source: NCC

As the natural gas importers buy natural gas from Gazprom RAB in line with allocated quotas, gas supply and demand volumes usually match as the booked gas volumes which are adjusted on a quarterly basis, and clarified on a monthly basis.

Article 24 of the Natural Gas Law of the Republic of Lithuania regulates ensuring natural gas supply security. The regulation implementing this law is the Description of Measures Ensuring Natural Gas Supply Security approved by the Resolution No. 163 of 26 February 2008 of the Government of the Republic of Lithuania aims to ensure natural gas supply reliability. The Description sets minimum gas supply reliability requirements, their financing principles and duties of gas companies and other market players (system users and customers), the NCC, State Energy Inspectorate and other Government authorities to meet the Description requirements, which are applied in case of gas supply disruptions or interruptions due to breakdowns or other external factors out of gas company control and influence. The Description sets the priority - secure gas supply, including pipe reserves for household customers and customers in sites with lower than 5 MW energy production capacity (when this energy is sold or used to meet public or residential customer needs) without reserve fuel stocks, supplies to which may not be interrupted.

5.2.2. Natural Gas Storage

There is no gas storage facility in Lithuania, thus services of a gas storage facility in Latvia are used. Based on applications submitted Latvijas Gaze AB distributes capacities of the gas storage facility in the Republic of Latvia. Required information is made available on a contract basis and is available on the website of Latvijas Gaze AB.

On 15 April 2008 to ensure the continuous gas supply to household customers, in case of a gas supply disruption, a gas storage agreement was concluded with Latvijas Gaze AB of the Republic of Latvia

Under the Description of Measures Ensuring Natural Gas Supply Security approved by the Government of the Republic of Lithuania every year a 10 day gas reserve shall be stored until the 60 day gas reserve is reached. In 2009 20 mln. m³ gas reserve was stored in Incukalnis Underground Gas Storage Facility in Latvia. This reserve would have ensured 20 day uninterrupted gas supply to household customers during the cold season. In 2010 to ensure the supply security for household customers 30 mln. m³ gas will be stored in the storage facility (the actual average daily gas consumption in the cold season in 2007-2009 was 1000 000 m³). In case of emergencies or extreme situations in 2010 the stored gas reserve will ensure the continuous gas supply to household customers for 30 days.

As the key gas supplier to household customers Lietuvos Dujos AB is responsible for the continuous gas supply to household customers. The company has a contract on the natural gas storage in Incukalnis Underground Gas Storage Facility in Latvia with Latvijas Gaze AB, the gas storage system operator of the Republic of Latvia. At the end of 2009 Lietuvos Dujos AB had the required 20 day gas reserve. Lietuvos Dujos AB received no refusal to accept gas in the Storage Facility. The company had no need to book natural gas for the system or supply balancing.

5.2.3. Technical System Maintenance: Quality and Degree

Lietuvos Dujos AB transmission system includes 1864.87 km gas lines, 275 gas tap sites, 65 gas distribution stations, 3 gas metering stations, and Panevezys Gas Compressor Station.

The gas transmission system is operated in line with the Gas Mainlines Operation Rules approved on 15 May 2003 by the Minister of Economy of the Republic of Lithuania. The company ensures the transmission system maintenance quality by drafting and implementing annual gas line equipment technical maintenance schedules, annual repair and reconstruction works programs, and, if needed, by outsourcing technical maintenance and repair works to other companies. The company has a Security Strategy including measures to ensure gas mainline security and reliability and urgent and effective response to emergency incidents.

The following are the key preventive measures implemented in 2009:

- Measures related to internal and external pipeline diagnostics (in 2009 cleaning works of a 170 km section of Panevezys-Vilnius (DN700) gas line started to prepare for internal diagnostics, and the overall technical status of a 115 km section of Siauliai-Klaipeda (DN325) gas line has been assessed using external methods);
- Hydraulic gas line tests (in 2009 hydraulic tests were done on a 32.3 km section of Panevezys- Siauliai (DN400) gas line);

- Gas line re-categorization as lower pressure lines to limit gas pressure (in 2009 a gas pressure limiting node was designed and installed on the gas line Ivacevici-Vilnius-Riga to ensure this line pressure down to 45 bar maximum, and if needed – to 25 bar).

On 24 October 2009 the gas mainline Vilnius–Panevezys–Ryga broke down and the gas line ruptured, gas erupted and flamed in Sirvintos district. There were no human victims, gas supply to customers was not interrupted and the environmental damage was insignificant during the breakdown.

The steel pipe rupture which caused the breakdown occurred due to a single working load impact in a local area of thinned pipe wall. Based on laboratory test reports and findings of the State Commission having investigated the breakdown, the thinning was caused by bacteria-caused biological corrosion. The NCC provided for some preventive measures to avoid similar cases. They were used as the basis to develop a measure plan which the company intends to implement within the upcoming two years. In 2010 internal cleaning and diagnostic works for the gas mainline Vilnius–Panevezys–Ryga are planned to rapidly detect potential defects and removed, if needed. The last gas main line breakdown had occurred in 1988.

The gas transmission system is operated in line with the Distribution and Building Gas System Operation Rules approved by the Order No.4-43 of 19 February 2004 of the Minister of Economy of the Republic of Lithuania. The company ensures technical maintenance quality of the distribution system by drafting and implementing annual system technical maintenance schedules. Deficiencies found during technical maintenance are removed immediately or included into gas distribution system repair or reconstruction programs under development, which serve the basis to put the gas system in order.

In 2009 there were no breakdowns in the gas distribution systems.

5.2.4. Technical Maintenance of the Distribution System

The sole Lithuanian company, Lietuvos Dujos AB, performs the functions of the Transmission System Operator and functions of the distribution system operator for the majority of systems.

In 2009 this company invested 78.3 mln. LTL into the development of a new gas transmission system construction and development. Jauniunai Gas Compressor Station construction in Sirvintos Region is among the critical investment projects: the majority of technological plant has been already installed, and construction works have started. They should end in 2010. In 2009 another important project was implemented, namely, Sakiai Gas Metering Station was expanded, and the second gas line leg was built from the Metering Station to the State Border with Kaliningrad Region of the Russian Federation. The purpose of this project was to ensure natural gas supply security and reliability for Lithuanian customers and increase natural gas transit volumes.

In 2009, investments into the distribution system reconstruction amounted to 19.4 million LTL, and in 2008 – 14.5 million LTL. To continue the Gas Distribution Station Modernization Programme, the major investment was made into their reconstruction (12.4 million LTL). 6 gas distribution stations were reconstructed. Another major reconstruction work has been commenced, namely, reconstruction of Rudamina Gas Distribution Station. The station throughput capacity will increase several times and will reach 105 000 m³/h. These works are to complete in 2010.

Two key gas line reconstruction works projects have been completed under the System Reliability and Security Measure Plan:

- A gas pressure limitation node was installed on the gas line Ivacevičiai-Vilnius-Riga. Thus the automatic working pressure control is ensured in 57 km length single gas line section;
- A control device launching chamber was installed on the gas mainline Vilnius–Panevėžys–Ryga. This device is necessary for internal cleansing and diagnosing of the gas line.

In 2009, 8 line tap control mechanisms were replaced, 18 metering points were reconstructed, Panevezys Gas Compressor Technological Parameter Control System was modernized.

5.2.5. Technical Maintenance of Distribution Grid

Lietuvos Dujos AB invested 19.3 million LTL into construction of new gas distribution systems and built 76.4 km of distribution gas lines.

2009 featured no significant scale projects. In 2009 the total number of new connected customers was 2.5 thousand. The lower development was caused by the economic slowdown.

In 2009 investments into the distribution system reconstruction amounted to 7.1 million LTL. Investments were predominantly made into renovation of distribution gas lines and gas regulation points.

Lietuvos Dujos AB have 8.1 thousand km of distribution gas lines. As the gas system owner the company guarantees proper technical maintenance of the gas systems: timely gas line leakage tests, system inspections and technical check-ups.

To increase the European Union energy security and accelerate the necessary projects the High level group dedicated to the Baltic energy market and BEMIP made a decision to form a new Gas working group which considered gas interconnection and market development issues. Based on the submitted working group information the High level working group developed a working report.

Lithuanian – Latvian gas interconnection

At the end of 2009 the European Commission, in line with the Regulation (EC) No 663/2009 of the European Parliament and the Council of 13 July 2009 establishing a programme to aid economic recovery by granting Community financial assistance to projects in the field of energy, made a decision to contribute to 4 Lithuanian and Latvian gas company projects aiming to increase the gas transmission system throughput between these countries both ways. In Lithuania under this Programme Panevezys Gas Compressor Station will be upgraded, the transmission system throughput to Latvia will be increased and networks will be upgraded. The total investment amounts to 5.88 mln. EUR, the European Union assistance amounts to 2.94 mln. EUR. Latvian transmission system requires heavier investments, therefore works for 20 mln. EUR will be done there, and the assistance amount will be up to 10 mln. EUR.

Lithuanian-Polish gas system interconnection

The report of the High level group notes that the role of Poland as the energy bridge with the common EU gas system should be increased to overcome the energy isolation and reduce Lithuanian, Latvian, Estonian and Finnish dependency on the sole natural gas supplier.

Annex I of the Decision No 1364/2006/EC of the European Parliament and the Council of 6 September 2006 laying down guidelines for trans-European energy networks provides for the following gas network measure: Gas Networks NG. 1. United Kingdom — northern continental Europe, including the Netherlands, Belgium, Denmark, Sweden and Germany — Poland — Lithuania — Latvia — Estonia — Finland — Russia.

In April 2010 Lithuanian and Polish Transmission System Operators Lietuvos Dujos AB and Gaz System S.A., supported by the Ministry of Energy of the Republic of Lithuania and the Ministry of Energy of the Republic of Poland submitted a joint application to receive financial assistance under the TEN-E Programme to develop the feasibility study of Polish-Lithuanian gas line connection.

Upon the shutdown of Ignalina NPP the country dependency on gas imported from the single source, Russian gas fields, has increased. Ensuring alternative gas supply routes is strategically important. Feasibility studies on surveying locations of building an underground gas storage facility have been previously done, however these surveys have not been affected.

In 2009 an international open tendering procedure was announced “Investigation of Syderiai geological structure eligibility to install an underground gas storage facility using seismic prospecting method.”

On 14 July 2009 Lithuanian and Latvian gas companies Lietuvos Dujos AB and Latvijas Gaze A/S submitted a joint proposal to the European Commission Directorate General for Energy and Transport to get funding for a jointly implemented project under the European Commission European Energy Programme for Recovery – the Baltic Energy Market Interconnection Plan. The joint project of the natural gas companies Lietuvos Dujos AB and Latvijas Gaze A/S aims to: increase natural gas interconnection throughput capacities between the two countries, achieve a better integration of gas markets in the Baltic States, and facilitate the development of the Baltic natural gas market and preparations to integrate into the European Union natural gas market. The project implementation would increase natural gas supply security in case of gas supply interruptions or limitations and stimulate domestic gas market development in the Baltic States. Under Articles 3 and 4 of the Directive 2004/67/EC natural gas supply reliability is regulated by the Natural Gas Law (Art. 24.3) providing the Government with the right to specify concrete security ensuring means, which are obligatory to gas companies, customers and the NCC.

6. Public Service Issues

6.1. Electricity Sector

The Law on Electricity defines public interests in the electricity sector as any act or omission in the electricity sector, directly or indirectly related to public security and environmental protection, as well as to electricity generation from renewable energy sources at combined heat and power generation plants.

The list of public service obligations in the electricity sector, their suppliers and supply procedure are established by the Government or an institution authorised by it. Market participants include the costs of the provision of the said services into their operating costs.

The expansion of the existing electricity generating capacities or installation of new generating capacities in a new location shall be subject to authorisation for the expansion of electricity generating capacities. Authorisations are issued to all applicants guaranteeing that their activities will satisfy certain conditions, one of them being the requirement to comply with public interests.

In 2009 the Ministry of Energy has approved the list of public service obligations in the electricity sector. Pursuant to the Order of the Minister of Energy, the following services are considered public service obligations in the electricity sector:

1. electricity generation:
 - 1.1. from renewable energy sources;
 - 1.2. in the co-generation mode at combined heat and power generation plants, where these plants supply heat to urban district heating systems;
 - 1.3. at specified power plants where electricity generation is necessary for ensuring reserves of the energy system;
2. ensuring nuclear operational security, waste storage and disposal;
3. connection of electricity generating facilities using wind, biomass, solar or hydro-power to transmission or distribution electricity networks.

The fulfilment of public service obligations specified in this list is regulated by the Rules on Public Service Obligations approved by the Ministry of Energy.

Labelling of primary energy sources

For the purpose of implementing Order No 4-346 of the Minister of Economy of the Republic of Lithuania of 7 October 2005 on the approval of the Rules for Issuing Guarantees of Origin of Electricity Generated from Renewable Energy Sources (*Official Gazette*, No. 122-4375, 2005), Lietuvos Energija AB, as the transmission system operator, is responsible for the issue of guarantees of origin of electricity generated from renewable energy sources and for the administration of the database.

A guarantee of origin database was created before 31 December 2005. The following information is recorded, collected and stored on the website of Lietuvos Energija AB <http://www.le.lt> the list of persons who were issued guarantees of origin; data on the facilities owned by the participant; the total volume of electricity generated from renewable energy sources broken down by energy sources from which the electricity was generated. Information is updated at least on a monthly

basis. Participants, i.e. producers and/or suppliers registered in the guarantee of origin database and given a code, have the right to view their data.

The volume of electricity generated from renewable energy sources is the total output of electricity produced by power plants using only renewable energy sources, as well as the proportion of electricity generated from renewable energy sources in hybrid power plants also using non-renewable energy sources. The proportion of electricity generated from renewable energy sources in these power plants is determined by subtracting the amount of electricity produced from non-renewable energy sources from the gross electricity output. The amount of electricity produced from non-renewable energy sources is determined on the basis of the consumed fuel balance and the normative consumption of conventional fuel for the generation of 1 kWh of electricity established by the Minister of Economy of the Republic of Lithuania.

The producer must, not later than within seven days after the end of each month, provide the following information to the institution issuing guarantees of origin (producers whose facilities are connected to the distribution network – to the distribution network operator of their relevant region) in respect of every facility registered in the database:

- 1) the amount of electricity generated from renewable energy sources during the previous month (in kWh), where this amount is measured by electricity metering devices complying with the requirements set by the Law of the Republic of Lithuania on Metrology and other legal acts, specifying the renewable energy source;
2. the amount of electricity generated from renewable energy sources and supplied to the network during the previous month (in kWh), specifying the renewable energy source;
3. the amount of electricity sold with guarantees of origin that were not used (in kWh), and the purchaser.

The distribution network operator must, not later than within seven days after the end of each month, submit the following information to Lietuvos Energija AB (the institution issuing guarantees of origin) in respect of each producer separately:

1. amounts of electricity supplied to the network during the previous month from producers generating electricity from renewable energy sources (in kWh);
2. amounts of electricity purchased from producers during the previous month under public service obligations (in kWh), and the amount paid (in LTL).

Participants shall be responsible for the accuracy and reliability of the data provided.

Implementation of the Criteria Set out in Annex A to the Directive

While carrying on their activities, companies operating in the electricity sector must inform customers about efficient electricity consumption, the services provided by the company, conditions of the provision of services, prices and tariffs of services and electricity, fees and terms for the connection of customer equipment to the grid and expected modifications to contractual conditions. Companies of the electricity sector must notify household customers of an increase in prices and tariffs in writing or by other means at least one month prior to such increase. Public suppliers are prohibited from discrimination between customers or categories of customers. Any customer receiving electricity from a public supplier is obliged to settle all payments with the public supplier for electricity and its transportation in a timely manner. A customer has the right to unilaterally withdraw from the contract with the public supplier without paying any charges, giving written notice 30 calendar days in advance and settling all payments for the supplied electricity and its transportation service by the day of withdrawal from the contract.

Household customers have the right to:

- 1) freely and without any charges choose a supplier;
- 2) receive information from suppliers concerning the supplier's name, registered address, company code and legal form, the services provided and conditions of their provision, prices and tariffs of services and electricity, the means of notifying about prices, the duration of the contracts, the conditions for conclusion and termination of the contracts, dispute settlement procedures;
- 3) unilaterally withdraw from the contracts without paying any charges, if contractual conditions are modified and they are not acceptable to household customers;
- 4) be offered a choice of payment methods by companies operating in the electricity sector and choose a payment method.

Under the Law on Electricity the Transmission System Operator or a distribution system operator may stop providing electricity to customers, operations of which cause failures or have a negative impact on electricity quality, if such customers continue such activities for 5 days after receiving a written notification. Operators may also stop providing electricity to customers having failed to pay bills for electricity consumed or for power transmission or the related services: for household customers, if the payment is delayed by 15 days, for other customers, if it is delayed for 10 days. Upon advance notification and specification of the effective date, operators may also stop providing electricity to customers not giving access to the Transmission System Operator or a distribution system operator to the customer areas and/or premises to install, maintain or replace electricity meters or record their readings.

In 2009 calendar year VST AB and Rytu Skirstomieji Tinklai AB failed to reach the planned revenue by 0.1% due to household customer insolvency. In 2008 there were 0.8% of such insolvent customers. However this indicator is estimated to be 0.7% in 2010.

Where electricity transmission and/or supply to a customer are interrupted or limited or where electricity quality parameters at the point of the provision of the electricity transmission service or the purchase and sales of electricity do not comply with the set requirements, the operator or public supplier must compensate the customer upon the customer's request for direct damages incurred through the fault of the operator or public supplier. Indirect damages are not subject to compensation. The customer must file a claim for compensation for direct damages within 10 calendar days after the damages have been incurred. The operator or public supplier must hear the customer's claim within 30 calendar days. Damages incurred due to electricity transmission and/or supply interruption or limitation must be compensated within 30 calendar days from the establishment of their amount and the validity of the customer's claim, unless otherwise agreed by the customer and the public supplier or operator.

Since an independent supplier was chosen by a very small percentage of eligible customers in Lithuania (all customers can become eligible customers from 1 July 2007), the majority of electricity customers purchase electricity from two main public suppliers according to the regulated public tariffs. The regulated public tariffs are applicable to all categories of customers, i.e. residents, small, medium and large businesses. Thus from 2010 the situation may change because there will be no large producer in the electricity market and end users gradually will be eliminated.

A public supplier is obliged to conclude contracts and supply electricity upon request to all customers within the territory specified in the supplier's licence, who have not chosen an independent supplier. This activity is carried out by customer service related separate departments of two main distribution companies.

A customer has the right to unilaterally withdraw from the contract with the public supplier without paying any charges. The customer must notify the public supplier in writing 30 calendar days in advance and settle all payments for the supplied electricity and its transportation service by the day of withdrawal from the contract.

Before concluding or terminating the electricity supply contract with an eligible customer located in the territory specified in the public supplier's licence, the independent supplier must communicate a written notification thereof to the public supplier 30 calendar days in advance.

Before concluding or withdrawing from the electricity supply contract with the independent supplier, an eligible customer located in the territory specified in the public supplier's licence must communicate a written notification thereof to the public supplier 30 calendar days in advance.

Customers may change their electricity supplier without paying any charges.

Price caps of public tariffs (Table 34) are set annually for each specific public supplier. The revenue level for transmission services through high voltage networks and distribution services, as well as for public supply services is set for a three-year period, with annual adjustment by the following coefficients: indexation, impact of electricity volume, unpredicted changes and correlation; price caps for distribution and supply services are calculated in respect of the amount of electricity planned to be transmitted, distributed or sold during that year. Price caps of public tariffs consist of the price caps of the generation cost, the price of transmission services, as well as the price of distribution services through medium and low voltage networks and supply services. The level of public tariffs depends on fluctuations of the generation cost. As the price of the main Lithuanian producer, which has a share of over 70% of the market, is regulated, and other producers sell the major share of their electricity as public service obligations, the NCC estimates the generation cost which is included in the calculation of price caps of public tariffs.

Table 32. Cap levels of public tariffs of Rytų Skirstomieji Tinklai AB and VST AB, EUR/MWh

Rytų Skirstomieji tinklai AB	2004	2005	2006	2007	2008	2009	2010
<i>High voltage (330-110 kV)</i>	35.45	36.00	35.88	39.91	50.1	57.84	69.43
<i>Medium voltage (35-6 kV)</i>	48.51	54.65	54.30	58.16	70.9	78.95	85.09
<i>Low voltage (0,4 kV)</i>	74.49	85.15	83.79	87.29	103.1	111.07	108.2
VST AB							
<i>High voltage (330-110 kV)</i>	35.51	35.97	35.83	39.85	50	57.81	69.37
<i>Medium voltage (35-6 kV)</i>	48.86	58.04	57.55	61.20	73.9	81.38	84.78
<i>Low voltage (0,4 kV)</i>	72.06	85.32	84.29	87.75	103.9	111.01	104.3

Source: NCC

The breakdown of all customers covered by public tariffs in 2009 is presented in Table 35.

Table 33. Share of customers paying according to public tariffs, %

Residents	Industry	Others
96.5	0.1	3.4

Source: NCC

Electricity is supplied to customers as a good. Electricity consumption is allowed only subject to a contract between a customer (including eligible customer) and a public electricity supplier, transmission or distribution network operator. The grounds for executing contracts are established in the Civil Code. Disputes are settled by mutual agreement or in court. Compliance with the mandatory requirements is stipulated in licences issued to energy companies.

The State Consumer Rights Protection Authority holds preliminary extra-judicial hearings of complaints lodged by natural persons concerning the application of unfair conditions in energy purchase-sale or service contracts.

The State Energy Inspectorate under the Ministry of Energy holds preliminary extra-judicial hearings of complaints concerning the malfunctioning and breakdowns of energy facilities, equipment and metering devices, breaches of requirements for maintenance, energy quality, accounting of energy and payment for the consumed energy, accidents, the interruption, suspension or restriction of energy supply.

The NCC holds preliminary extra-judicial hearings of complaints concerning acts or omissions of energy enterprises in supplying, distributing, transmitting, storing energy, refusal to grant them the right of access to networks and systems, connection, balancing of energy supply flows, as well as application of prices and tariffs.

Social electricity tariffs in Lithuania are not applicable. Social support is provided under legal acts approved by the Government.

6.2. Natural Gas Sector

The following public service obligations are established by legislation regulating activities in the national natural gas sector:

- a) Natural gas supply price regulation for all customers by setting supply price caps.


The obligation has been established under Article 23.1.5 of the Law. Article 23.1.5 of the Law prescribes that: *1. The following prices shall be regulated in the gas sector by setting their price caps: <..> supply*

- b) The requirement for supply companies to be the supplier of the last resort for household customers.

The obligation has been established under Article 16.3 of the Law:

3. The supply of the last resort may be provided to household customers and users to sites with the energy generation capacity less than 5 MW and having no fuel reserve stocks. Eligible customers shall be entitled to select another company than the company providing the supplier of the last resort services.

In 2009, 1132 customers were disconnected from the system due to outstanding debts (in 2008-144), out of them – 875 household customers and 257 – non-household customers.



Energy service providers must ensure quality and continuous service provision to customers. Therefore the NCC annually inspects technological, financial and management capacities of the licensed companies. Annual inspection results show if energy companies have sufficient complete capacities for secure and reliable service provision.

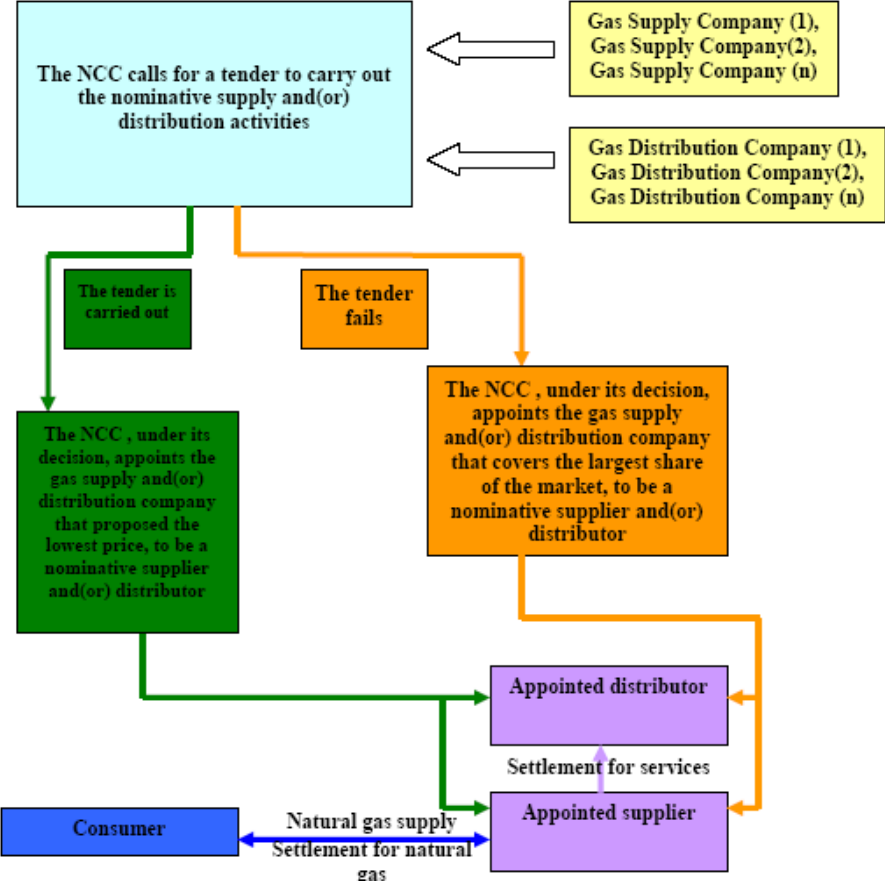
In the natural gas sector the NCC supervises the licensed activities and regularly checks gas company capacities. If due to any reasons a licensee becomes unable to continue its activities, the customers would face the risk of natural gas supply unavailability. To ensure a secure and reliable gas supply in all cases, the currently effective Natural Gas Law provides that the NCC shall be entitled to oblige a gas company to do the supply of the last resort. This activity aims to exclusively protect customer interests.

However the effective legislation fails to specify how to ensure secure and reliable gas supplies, if the company which is no longer able to continue gas activities in a specific territory has been licensed to engage both in gas supply (gas selling) and distribution (infrastructural) activities. Under the effective legislation the gas company of the last resort (or the supplier of the last resort) would be unable to really deliver gas to customers because it would have no access to any distribution network.

Therefore the NCC proposed to supplement the Natural Gas Law and provide for a mechanism of distribution of the last resort together with the mechanism of supply of the last resort. Thus clear procedures would be established under which the NCC would operate to ensure the continuous vital service provision and protection of infringed consumer interests.

The distributor of the last resort and the supplier of the last resort are to be selected under competition based on the lowest customer price proposal. If the competition fails the gas company with the largest market share would be obliged to ensure gas supply to customers. The price in any case may not exceed the existing customer price. The scheme of providing services of the last resort is provided in Figure 17.

Figure 17. The scheme of providing services of the last resort



Source: NCC

7. Report on the Pricing Structure and G Values

The electricity transmission service price has been applicable since 2002, following the splitting of the vertically integrated electricity company and the start of the functioning of the electricity market. Lithuania has one company holding the transmission system operator's licence, namely, Lietuvos Energija AB, the main company in the Lithuanian electricity sector, functioning as the owner of the electricity transmission grid (110-330 kV), system operator and market operator. It:

- maintains and develops the electricity transmission system;
- ensures a balance between electricity generation and consumption, as well as electricity transmission from Lithuanian power plants to distribution companies;
- co-ordinates the operation of the Lithuanian energy sector to ensure reliable electricity supply to consumers. Together with the neighbouring energy systems, it is engaged in electricity exports, imports and transit;
- organises trade in electricity.

The structure of the transmission system is shown in Figure 18.

Figure 18. Lithuanian electricity transmission system



Source: LITGRID UAB

The company owns 222 transformer substations and switchyards, over 6,000 km of 330 and 110 kV electric lines, Kaunas Hydro-Power Plant and Kruonis Pumped Storage Plant, the Dispatch Centre and the ITT centre. Kaunas HPP and Kruonis PSP ensure capacity balances and the regulation of modes.

The transmission system managed by Lietuvos Energija AB is interconnected by four 330 kV electric lines with Latvia, five lines with Belarus and three lines with Russia (Kaliningrad). One of the primary objectives of Lietuvos Energija AB is the integration of the Lithuanian energy system into the Western European electricity market as well as the development of regional co-operation. The expansion of the transmission grid is planned in the near future by interconnecting it with the Polish electricity networks. The Lithuanian-Polish interconnection project is vitally important in developing a common EU electricity market and enhancing the reliability of energy supply. The exploitation of joint capabilities of the electricity systems of the Baltic States is aimed at creating a common Baltic electricity market ensuring successful integration of the Baltic States into Western European and Scandinavian electricity markets.

The general pricing principles applicable to electricity transmission services are defined in the Law on Electricity, i.e. prices for transmission services are regulated by setting the price cap. The specific procedure for calculating price caps for these services is established in the Methodology for Setting Prices for Electricity Transmission and Distribution Services and their Price Caps. It is described in the Section on *Network Tariffs in this Report*. The prices for electricity transmission services are calculated according to several voltage levels: 330-110 kV (high) and 35-6 kV (medium). The prices for lower voltage transmission services are close to those charged for the services provided by the twice higher voltage grid. However, the transmission system has only several medium voltage electric lines, which do not have particular importance to the system.

The transmission service price consists of the following components:

1. price for the transmission system operator's service;
2. price for additional (capacity reserve) services;
3. price for public service obligations (applicable from 1st January 2008).

The average transmission service price is differentiated into capacity and energy components according to voltage levels. The average price for additional services is differentiated only on the basis of capacity component.

Transmission service prices (excluding VAT) effective from 2009 by types of services provided to distribution networks and customers receiving electricity from the transmission grid are given in Table 36.

Table 34. Components of transmission service prices

No.	Tariff (1 LTL = 3.4528 EUR)	Tariff, excluding VAT	
		when the ownership boundary is between 330-110 kV voltage equipment	when the ownership boundary is between 35-6 kV voltage equipment
1.	Differentiated two-component prices charged by the transmission system operator:		
1.1.	capacity component	6.35 LTL/kW per month	10.98 LTL/kW per month
1.2.	energy component	1.23 ct/kWh	1.68 ct/kWh
2.	Differentiated price for the capacity reserve service – capacity component	7.69 LTL/kW per month	7.69 LTL/kW per month

Source: NCC

When paying for transmission services, distribution network operators and customers whose equipment is connected to the transmission grid make the following payments:

- A differentiated price of the transmission system operator's service in ct/kWh for the actual amount of electricity transmitted to them from the transmission grid and in LTL/kW per month for the maximum actual hourly demanded capacity per month (including electricity generated with own resources and received from producers, except for those using renewable and waste energy sources);
- A differentiated price of the capacity reserve service in LTL/kW per month for the maximum actual hourly demanded capacity per month (including electricity generated with own resources and received from producers, except for those using renewable and waste energy sources);
- A set price of public service obligations in LTC/kWh for the actual amount of electricity transmitted to them.

Public suppliers selling electricity to customers whose equipment is connected to the transmission grid apply public tariffs less the prices charged for electricity transmission and capacity reserve services.

Producers are not charged the transmission service price or a part thereof, i.e. G component is equal to zero. Furthermore, no charges are applied on the basis of the location of producers or customers.

The equipment of new customers and producers is connected to the grid in accordance with the Rules for the Connection of Energy Facilities (Networks, Equipment, and Systems) of Electricity Customers and Producers to the Existing Facilities (Networks, Equipment, Systems) of Energy Companies approved by the order of the Minister of Economy.

Pursuant to the Law on Energy and the Law on Electricity, the NCC approves connection fees (see Table 37).

Table 35. Effective fees for the connection of customer equipment to the grid, Excluding VAT.

Tariffs	Measurement unit	One-phase branch line	Three-phase branch line
1.1. Monomial tariff for allowed capacity	LTL/kW	108.0	142.8
1.2. Binomial tariff for:			
- allowed capacity	LTL/kW	108.0	142.8
- taxable distance	LTL/m	14.8	19.2

Source: NCC

These fees are set at the rates so as to cover 40% of the operators' costs needed to provide the services specified in the aforementioned Rules.

In 2009 after the NCC carried out the audit on the data regarding the connection of new customer equipment it was established that customers cover more than 40 percent of connection costs. In May 2009 the NCC issued the Resolution stating new connection fees of customer equipment to the grid.

Table 36. Effective fees for the connection of customer equipment to the grid from 1st July 2009, excluding VAT.

Tariffs	Measurement unit	One-phase branch line	Three-phase branch line
1.1. Monomial tariff for allowed capacity	LTL/kW	55.0	68.0
1.2. Binomial tariff for:			
- allowed capacity	LTL/kW	55.0	68.0
- taxable distance	LTL/m	11.1	14.4

Source: NCCPE

Having made amendments to the Law on Electricity it was established that fees for the connection of customers' equipments shall cover 20 percent but not 40 % of the operator's costs. The NCC has approved new connection fees.

Table 39. Effective fees for the connection of customer equipment to the grid from 1 August 2009, excluding VAT.

Tariffs	Measurement unit	One-phase branch line	Three-phase branch line
1.1. Monomial tariff for allowed capacity	LTL/kW	27.5	34.0
1.2. Binomial tariff for:			
- allowed capacity	LTL/kW	27.5	34.0
- taxable distance	LTL/m	5.6	7.2

Source: NCCPE

Connection does not entail any additional charges. However, privileges are granted to producers using renewable energy sources pursuant to the Procedure for Promoting the Generation and Purchase of Electricity Generated from Renewable Energy Sources. When paying for the services of the transmission system operator, such producers are not charged the capacity component of the transmission service and the price for the capacity reserve service.