

**ANNUAL REPORT ON ELECTRICITY AND NATURAL GAS  
MARKETS IN LITHUANIA  
PREPARED FOR THE EUROPEAN COMMISSION**

Vilnius, 2006

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## 1. FOREWORD

In 2005 there were no major changes in the legislative framework regulating the electricity and natural gas markets in Lithuania. Nevertheless, the Ministry of Economy has approved the Electricity Transmission and Distribution Reliability and Supply Service Quality Rules, setting the quality of service standards, and requirements for the monitoring of the consequent indicators. National Control Commission for Prices and Energy (NCC) is empowered by the Law on Electricity to monitor the transmission and distribution reliability and supply service quality standards and control the compliance of the network companies with the above standards. It is planned that the Commission will evaluate compliance with the quality of service standards setting the next price caps for the network companies in 2008.

Even with the closure of one unit (out of two) at the Ignalina Nuclear Power Plant competition in the electricity market did not increase, still about 70 % of electricity sold in the national market was produced at Ignalina. Therefore, only about 15 % of the electricity demand was covered by independent suppliers, the rest was covered by two public suppliers. More competitive market may be expected with the full closure of Ignalina and with development of the common Baltic market.

There were on-going discussions in Lithuania as for the natural gas market liberalization and regulation. Amendments to the Law on Gas were further discussed but not approved by the Parliament. Legally market was open at 90 %, but eligible customers were trying to stay at the regulated market as commodity (natural gas) prices in the free market were by 10-20 % higher. There were only two suppliers in the market both buying gas from Gazprom with fixed quotas, and despite the Commission has issued several supply licenses no other supplier has entered the market.

On the other hand, the national gas company *Lietuvos dujos* has made significant investments in improving security of supply: gas metering station on the Lithuanian – Latvian border was built and gas transit capacities to the Kaliningrad region were increased.

This report is prepared by the NCC and is based on the materials and data presented by the electricity and gas companies as also by the Ministry of Economy. It reviews the main developments in the gas and electricity markets, reveals the main issues and problems in the sector.

## 2. SUMMARY

In 2000 the Seimas (Parliament of the Republic of Lithuania) built the foundation for future liberal natural gas and electricity market. The Seimas passed the Law on Electricity and Law on Natural Gas, essentially in compliance with provisions of respective EU directives, which foresee gradual opening of power and natural gas markets by legitimizing eligible customers, ensuring non-discriminatory access by the third party to monopolistic networks and setting tariffs for the use of networks. According to the aforementioned laws, the Price Control Commission, which was in charge of pricing policies, price making and application only, was restructured into the National Control Commission for Prices and Energy to undertake energy economic regulation functions, similar to those by respective regulation institutions in major Western European (and not only) countries.

In 2000 new activities were ascribed to the competence of the NCC namely issue of licenses and control over activities of such licensed companies. As the Electricity and Natural Gas Laws provide that all operational activities within these sectors should be carried out under respective licenses, apart from being just permits to play on the market such licenses have become instruments ensuring service quality, continuity of supply and control of compliance with environmental as well as other standards. The aforementioned Laws also provide that the NCC is responsible for settlement of disputes related to the third party access, imposition of fines in cases of breach of law and approvals for eligible customers. A separate License Department has been established for performance of the aforementioned works.

On July 1, 2002, completely updated Law on Energy came into force clearly defining functions and duties of the NCC, responsibilities of its individual members, procedure of their appointment, etc. This Law has established a new role for the NCC, as the regulator of liberalized energy market. Specific tasks for the NCC have been formulated in its Regulations approved by the Government. The key objective for the NCC is to supervise the markets of electricity, natural gas, heating and water supply.

Before July 1, 2004, conditions of two European Community's directives, that of Electricity and Natural Gas, must have been implemented. The aforementioned directives foresaw rapid opening of the markets and more important role on the energy regulators' by supervising the market functioning, customers' rights protection, etc. The new edition of the Law on Electricity passed by the Seimas on July 1, 2004, in its essence is in line with the provisions of the EU Electricity Directive regarding market opening and supervision. Additional functions foreseen for the NCC cover the supervision of electricity transmission and distribution networks operators' activities (how such operators comply with the Throughput Distribution and Regulation Rules for Lines

Connecting Separate Systems, how fast new customers are connected, how effectively accounting on different activities is separated, etc.), implementation of the market monitoring and supervision, as well as controls over continuity of supply and service quality.

2005 saw no changes of laws in regulation of the electricity and natural gas sectors regulated by the NCC. Parliamentary discussions started in 2004 concerning the new editing of the Law on Natural Gas have been continuing. The draft Gas Law prepared in compliance with the EU Gas Directive 2003/55/EC has not been still ratified.

### **Functions of the NCC**

Basic legal enactment defining functions of the NCC is the Law on Energy. Part 5, Article 17 of the aforementioned Law provides that the NCC shall perform the following functions:

- (i) Approval of methods for setting the State-regulated prices;
- (ii) Setting the price caps for the State-regulated prices;
- (iii) Control over application of the State-regulated prices and tariffs;
- (iv) Approval of connection fees of energy objects (networks, systems, facilities, etc.);
- (v) Right to unilateral fixing of the State-regulated prices unless energy companies are in compliance with the requirements for setting such prices;
- (vi) Assessment of investment efficiency and validity of operational costs in setting the State-regulated prices;
- (vii) Approval of purchase prices for electricity produced with the use of renewable energy resources;
- (viii) Issue, suspend and revoke of gas and electricity transmission, distribution, storage and supply licenses, control over the licensed activities by energy companies;
- (ix) Approval of long-term asset depreciation (amortization) norms for energy companies engaged in activities related to regulated prices;
- (x) Right to submit proposals to the Government, Ministry of Economy and Municipalities regarding licensed activities of energy companies;
- (xi) Right to obligate energy companies to enter into energy transmission, distribution and/or supply contracts, where energy companies unreasonably refuse providing services to the third party or supply energy to customers; and
- (xii) performance of functions provided in other legal acts.

Functions of the NCC in more detail are defined in the Regulations of the NCC approved by the Government resolution. This legal act lists 21 function ascribed for the NCC, but still this list is not complete.

## **Independence and Accountability**

The independence of the NCC is ensured by several conditions:

- The NCC is related with no other institution by direct subordination relations;
- Chairman and four members of the NCC are appointed by the President of the Lithuanian Republic under the Prime Minister's offering;
  - Chairman and members of the NCC may retire only upon expiration of their office term; upon their own wish after incriminatory court judgment comes into effect; in cases of serious violation of requirements set forth to their position, as well as in other cases provided by the law;
- The NCC is financed by the Lithuanian State budget upon allocation of subsidies by a separate line.

Entirety of these legislation provisions ensures institutional, individual and financial independence for NCC members.

The Law on Energy provides for two forms of accountability, i.e. personal and institutional. Part 6, Article 17 of the Law on Energy says that the NCC is responsible for its decisions. Decisions are passed by roll-call vote. Decisions by the NCC may be appealed in compliance with procedures provided by the law.

Institutional accountability for the NCC activities is realized by annual activity reports. The NCC must prepare the annual activities report within four months by the end of each calendar year. The report must be released publicly and submitted to the President, Seimas and Government of the Republic of Lithuania.

## **Distribution of Competence with Other Public Institutions**

The Law on Energy provides that energy control on the state level in the Republic of Lithuania shall be carried out by the following institutions:

- (i) the Government and/or institutions authorized thereof;
- (ii) the Ministry of Economy;
- (iii) the Ministry of Environment; and
- (iv) municipalities.

By carrying out energy control on the national level, the Government develops and follows the state energy sector policy, submits the national energy strategy to the Seimas' approval, approves the plan of implementation and programs for the national energy strategy, regulates the principles of setting the state-regulated prices, as well as carries out other functions provided thereto by the law.

Apart from some other functions, the Ministry of Economy implements the state policy in the energy sector, prepares and ratifies legal acts in regulation of energy supply security,

construction and operation of energy objects and facilities, their technical security, effective use and other issues.

The Ministry of Environment tackles with the issues related with environment conservation and construction.

According to the competences provided by the law, Municipalities are in charge of regulation of heat supply to customers, issue of licenses for trade in liquefied oil gas in accordance with the Ministry of Economy approved procedure, as well as performance of other functions ascribed to their competence within their territories.

The key task for the NCC is to carry out supervision over the electricity, natural gas, heat and water supply markets.

According to its competence, the NCC is engaged in scrutinizing of complaints (claims) related to activities and/or acts of negligence of energy companies in supply, distribution, transmission and storage of energy, regarding withdrawal of any rights to use any networks and/or systems, regarding connection, compensation of energy supply flows and application of prices and/or tariffs in accordance with the preliminary complaint (claim) investigation procedure out of court.

Complaints produced by natural persons concerning the application to unfair conditions in energy sales- purchase agreements or service provision agreements are analyzed by the national Consumer Rights Protection Board at the Ministry of Justice.

Claims and complaints related to breakdowns and operation of energy objects, facilities and measuring units, fulfillment of requirements as set to the energy quality, violations in energy measuring and payment for consumed energy, emergency situations, failure in energy supply, interruptions or restrictions thereof are settled by the State Energy Inspectorate at the Ministry of Economy.

### **Development of Electricity and Gas Markets. Key Issues Falling within the NCC Scope of Activities**

With ratification of the new edition of the Law on Electricity as on July 1, 2004, prices for public supply of electricity services, as well as methods for calculation of prices for electricity transmission and distribution services and setting their price caps have been changed. The methods have been prepared taking into consideration the Recommendations in response to the Survey of the Legal and Regulatory Structure within the Lithuanian Energy Sector, issued in 2003. In compliance with the aforementioned legal acts, in 2004 the NCC set the price caps for electricity transmission, distribution and supply service charges for 3 years regulatory period. In 2005 the NCC approved the price caps of public electricity prices for the year 2006, passed other resolutions related to the

services provided by energy companies, electricity prices, tariffs and procedure of application thereof.

Application of competition principles within electricity production and supply sectors allows for seeking higher efficiency, as well as creates a possibility for customers to choose freely an electricity supplier (producer). As from July 1, 2004, all customers, with exception of household ones, may bargain with independent suppliers regarding electricity production and supply service charges.

In 2005, as in 2004, the most discussions were held concerning the new Law on Natural Gas, which had been prepared in implementation of the European Parliament and Council Gas Directive. Ratification of the law, however, was once again postponed for next year. In anticipation of the new Law on Natural Gas, in spring 2005, the NCC approved the corrected Methodology of Calculation of Natural Gas Price Caps. In compliance with the updated Methodology, the NCC set the price caps for natural gas transmission and distribution for the largest gas company in Lithuania, Lietuvos Dujos AB, as well as price caps to be applied to regulated customers for 2005-2008.

## INTRODUCTION

Although the legislation in regulation of electricity, natural gas, central heating, water supply and sewerage disposal activities has remained unchanged throughout 2005, the Lithuanian electricity sector faced new challenges in 2005: the year started with stoppage of the first unit in the Ignalina Power Plant, and the second unit had to work at the optimal mode in order to supply electricity in agreed quantities to power suppliers of the country and guarantee the same export volumes as they had been specified by respective international agreements. With a single unit functioning, the Ignalina Nuclear Power Plant produced 9.5 TWh electricity and supplied it to the market, and Lietuvos Energija AB exported 4 TWh of power. Due to successful export and import policy of Lietuvos Energija AB (cheaper electricity was imported from Russia during the reconstruction at the Ignalina Nuclear Power Plant) the country was able to avoid the growth of power production prices in 2005.

Electricity prices to the major part of customers, however, increased as from January 1, 2005 (to about 4.3 EUR/MWh in medium voltage networks and about 7.2 EUR/MWh in low voltage networks), as new tariffs for electricity transmission, distribution and supply services came into force due to recalculation of companies' assets by their market value (transmission tariffs grew insignificantly, as the NCC did not accept the necessity to increase depreciation expenses to a transmission network company). It is noteworthy that by increasing the distribution tariffs both distribution network companies also increased the scope of their investments seeking to replace the worn out devices and improve the supply reliability: VST AB up to EUR 37.7 MIO (planned EUR 23.2 MIO), and Rytu Skirstomieji Tinklai AB up to EUR 45.8 MIO (by EUR 7.2 MIO more than in 2004).

2005 was the first year within the new three-year price cap regulation period. In the second half of 2004 corporate inputs were analyzed and new initial income levels approved, as well as new price caps for electricity transmission, distribution and supply services and price caps for public tariffs were approved.

New price-making principles were established in the new wording of the Law on Electricity ratified in 2004. The price caps for transmission, distribution and public supply services in 2005 were fixed taking into consideration the changed profit calculation method and the fact that the value of assets used in the licensed activities was set in accordance with the service provider's financial accountability, where, according to the International Accounting Standards, assets had to be accounted for by their actual value. Taking into consideration the set price caps of services, electricity companies approved specific service prices and public tariffs for 2005. VST AB and Rytu Skirstomieji Tinklai AB have as well corrected their power tariff structures by applying a two-

part tariff and presenting 3 tariffs' plans to their customers receiving electricity from the medium and low voltage networks (Rytu Skirstomieji Tinklai AB has introduced the two-part tariff only to the those low voltage customers with 400 kW and more maximum allowed capacity).

2005 was the fourth year of free market functioning in the electricity sector. As it has been mentioned already, starting from July 1, 2004, equal conditions were ensured to all customers, except household ones, on entering into bargaining with independent suppliers for electricity production and supply service prices. This means that **74 %** of all power consumed in the country might have been purchased for negotiated prices and/or at an auction. Although similar to the previous year, the same market players used the aforementioned right, i.e. such consumption accounted only for **15 %** of all electricity supplied for the use in the country. This situation has been caused by relatively cheaper electricity sold by public suppliers in comparison to power prices offered under the market conditions by independent suppliers within the distribution network.

Electricity trade on the market is carried out in compliance with the Rules for Trade in Electricity. Market participants may be companies holding the public and/or independent supplier's licenses as established by the Law on Electricity or respective permits authorizations for production, imports and/or exports of electricity, and are registered by the market operator, the activities of which are carried out by a division of Lietuvos Energija AB.

### **3. REGULATION AND PERFORMANCE OF THE ELECTRICITY MARKET**

#### **3.1. REGULATORY ISSUES**

##### **3.1.1. GENERAL**

From 2002 on Lithuanian has an operational electricity market. A vertically integrated company has been divided into separate companies, in accordance with the stages of technology, namely: production, transmission, distribution and supply. This has made certain preconditions for suppliers to trade in electricity at an auction and/ or by entering into bilateral agreements with generators and consumers, thus making the electricity production and independent supply sectors non-regulated, with exception of 25 % share on the power sale market. Being treated as natural monopolies, power transmission, distribution and public supply activities have remained under the state regulation.

In compliance with Article 40 of the new wording of the Law on Electricity, power market has been developing in the country through certain stages, by gradual granting of a right for regulated third party participation and right for making direct power supply agreements with freely chosen independent suppliers to the following eligible customers:

(i) all customers except household ones – starting from the effective date of the aforementioned law, i.e. from July 1, 2007, on;

(ii) to all customers without any exceptions - starting from July 1, 2007.

The degree of opening the power market has been changing annually, to start from the functioning of this market. The declared and actual market opening last year is shown in Table 1 below.

Table 1. Market Opening Level

Indicator	2002	2003	Before 01-07-2004	Starting from 01-07-2004	2005	Starting on 01-07-2007
Electricity consumption by its eligible users in %, out of the total electricity consumption by all customers	20	23	25	74	74	100
Electricity consumption by its eligible customers from independent suppliers in %, out of the total eligible consumption by all customers	17	17	15	15	15	-

As it could be seen in the Table above, actual market opening remained unchanged as compared to 2004. This reflects the ability to maintain existing (current) customers by public suppliers (see table 2).

Table 2. The Suppliers' Share in the Purchased Electricity Market, 2005

Suppliers	Power amount, MWh	%
Independent suppliers	1,289,264	14
VST AB	3,837,283	41
Rytų Skirstomieji Tinklai AB	4,137,406	44
Public Enterprise Visagino Energija	61,958	1
In total	9,325.911	100,00

### **3.1.2. MANAGEMENT AND ALLOCATION OF INTERCONNECTION CAPACITY AND MECHANISMS TO DEAL WITH CONGESTION**

Lithuanian power transmission network is well-integrated into the energy systems of the neighboring countries:

- Four 330 kV and four 110 kV lines connect it to the Latvian energy system;

- Five 330 kV and seven 110 kV lines connect it to the Belarus energy system;
- Three 330 kV and three 110 kV lines connect it to the energy system in the Kaliningrad region.

So far, Lithuania has no interconnection with the energy system in neighboring Poland.

Table 3 shows maximum possible capacity flows into the neighboring states under normal network scheme.

Table 3. Maximum Possible Capacity Flows of Interconnections with the Neighboring Countries

Interconnection	Capacity, MW
Lithuania – Latvia	1540
Latvia – Lithuania	1170
Lithuania – Belarus	1850
Belarus – Lithuania	970
Lithuania – Kaliningrad’s Region	650

At the beginning of 2005, Lietuvos Energija AB engaged in the transmission system operator’s activities in Lithuania had:

- 110 kV lines covering 4970 km and 208 transformer substations and distribution points;
- 21 km 110 kV cable lines;
- 330 kV lines covering 1,670 km and 12 transformer substations and distribution points.

Table 4 shows the number and power of transformer substations and distribution points within the transmission network.

Table 4. Transmission Network Transformer Substations and Distribution Points, by Units and MVA Capacity:

330 kV TS	110 kV TS	330 kV Distribution points	110 kV Distribution points	330 kV TS power, MVA	110 kV TS power, MVA
21	6	12	207	3925	143

Presently, to calculate the transmission network interconnection capacity the operator of the transmission system applies the Calculation Methodology of Intersystem Section transfer capacity. In accordance with the Methodology, maximum flows, dynamic stability, emergency reserves and other network status parameters are taken into consideration (see Table 5).

Table 5. Planning and Network Interconnection Capacity Management Stages

Stage	Term	Parameters under Assessment
Preplanned	More than a week ahead	Import / export Scheduled repairs
Planning	A week ahead	Work schedule of the Hydro Pumped Storage Power Plant Work schedule of the Hydro Power Plant Network status
	A day ahead	Correction of the work schedule of the Hydro Pumped Storage Power Plant Correction of the work schedule of the Hydro Power Plant Correction of the Network status
Interconnection capacity management	Operation day	Power stations' operation Activation of reserves Network status

The European regulators' mini-forum held in Tallinn on April 21, 2006, stated that the Baltic States neither at present, nor within the nearest 5-10 years would have any problems due to congestion of networks. Although the foreseen interconnection of Estonian and Finnish energy systems by 350 MW power line by the end of 2006 have raised certain coordination issues, which are under adjustment at the moment. The regional coordination committee has been established to solve urgent issues on the common Baltic electricity market.

Transmission system operators from different Baltic States participated at the meeting and informed on their plans for construction of the following new interconnection lines:

1. Estlink II Estonia – Finland, 600 MW, before 2013;
2. Lithuania – Poland, 1000 MW, before 2010;
3. Lithuania – Sweden, 700 MW, before 2010;
4. Latvia – Estonia, 200 MW, before 2014.

Forecasts have been made also that electricity consumption and capacity needs in the Baltic Sea region will grow by at least 3 % within the nearest 10 years. The closure of unit II at the Ignalina Nuclear Power Plant should not cause any capacity shortage in the Baltic countries, although it has been marked out that generation of power in Lithuania will mostly depend on natural gas supply from Russia.

The mini-forum has also stated that there are no obstacles for implementation of the EU Regulation No. 1228/2003 regarding conditions for access to the network for cross-border trade in electricity. The Inter-TSO Compensation Mechanism will be applied in the Baltic States under the same principles as in other EU member states. The meeting participants have also recognized the need to agree on common Baltic States import regulations in respect of the third countries. They

have stressed out that formation of common balancing region would speed up the development of electricity market in the Baltic States.

### **3.1.3. THE REGULATION OF THE TASKS OF TRANSMISSION AND DISTRIBUTION COMPANIES**

Lithuania has a single national network company Lietuvos Energija AB carrying out the transmission system operator's function. It performs electricity transmission (110-330 kV voltage) network operator, system operator and market operator's functions. As the transmission network operator it works under the electricity transmission license issued by respective institution.

2 undertakings are basically engaged in electricity distribution activities in Lithuania, these are Rytų Skirstomieji Tinklai AB and VST AB. Public enterprise Visagino Energija is engaged in power distribution in the town of Visaginas located near the Ignalina Nuclear Power Plant. Other distribution undertakings are minor or industrial companies with internal networks directly interconnected to the transmission networks within their territories. These companies own low voltage (0.4 kV) and medium voltage (up to 110 kV) power distribution networks. All such undertakings also perform distribution network operator and public supplier's functions. A public supplier is obliged to supply electricity to all customers requesting this within the serviced territory. The costs of these activities are separated. Accounting must be handled for each licensed activity.

Rytų Skirstomieji Tinklai AB is in charge of maintenance, reliability and development of low and medium voltage networks located in the eastern part of Lithuania. VST AB is responsible for maintenance, reliability and development of low and medium voltage networks located in the western and middle part of Lithuania. Public enterprise Visagino Energija is in charge of maintenance, reliability and development of low and medium voltage networks in the town of Visaginas.

Pursuant to the Law on Electricity of the Republic of Lithuania, electricity market operator, electricity transmission, distribution and public and independent supplier's activities must be licensed by respective institution. The Rules for such licensing are approved by the Government of the Republic of Lithuania. Licenses are issued and control over such licensed activities is implemented by the NCC.

In 2005 one electricity transmission system's operator, 2 regional and 5 local electricity distribution network operators were engaged in licensed activities in Lithuania, as shown in Table 6.

Table 6. Data on the Network Operators

No.	Undertaking	Type of License	Local or National Network	Main Shareholders
1	Lietuvos Energija AB	Electricity transmission	National	State
2	Rytų Skirstomieji Tinklai AB	Electricity distribution and public supply	Regional	State
3	VST AB	Electricity distribution and public supply	Regional	NDX Energija UAB
4	Visagino Energija VĮ	Electricity distribution and public supply	Local	State
5	Achema AB	Electricity distribution and public supply	Local	Private company
6	Akmenės Cementas AB	Electricity distribution and public supply	Local	Private company
7	Ekranas AB	Electricity distribution and public supply	Local	Private company
8	Lifosa AB	Electricity distribution and public supply	Local	Private company

The Law on Electricity provides for two types of electricity supply licenses, that of public electricity supplier (PES) and independent electricity supplier (IES). Public electricity supplier is obliged to supply electricity to any customers and eligible users that have chosen no independent supplier within the territory specified in its license. Independent electricity supplier may supply electricity to eligible customers only. Table 7 provides for the number of licenses electricity suppliers.

Table 7. Number of Electricity Suppliers, by Years

Number of supply licenses in 2005		Engaged in licensed activities in 2005		Engaged in licensed activities in 2004		Engaged in licensed activities in 2003		Engaged in licensed activities in 2002	
PES	IES	PES	IES	PES	IES	PES	IES	PES	IES
7	20	7	5	7	4	7	4	7	3

From July 2004 on, after coming into effect of the new wording of the Law on Electricity, all customers (except household ones) were granted the third party's regulated participation right and a right to enter into direct electricity supply agreements with freely chosen independent suppliers in compliance with the aforementioned Law. After coming into effect of the Law these customers were granted with the eligible electricity customer's status automatically.

To begin with 2002, Lithuania has applied the principle of price cap for setting electricity transmission, distribution (50/50 price and cost cap combination) and public supply service prices as well as public prices according to voltage levels. In compliance with the methodology for setting electricity transmission and distribution service prices and their price caps, price cap is set for the

period of 3 years with annual correction of initial cost level for respective activities by the following correction coefficients:

1. indexation (consumer price index and efficiency);
2. of contingency changes (external factors);
3. impact of electricity amount;
4. correction (with assessment of over/under of revenue depending on price differentiating structure applied in order to ensure mandatory corporate revenue, where the company specifies reasonable causes impeding the collection of the planned amount).

In compliance with the Methodology for Setting Public Electricity Prices, Public Supply Service Price and the Price Caps thereof, the price caps for public prices are set for one year and corrected regarding the changes in electricity production (purchasing) cost.

In approving the price caps and initial revenue level, reasonable costs, results of activities within the previous regulatory period, market development forecasts, changes in legal environment, etc. must be estimated. In setting the state-regulated prices, mandatory expenses for generation of energy resources, energy production, purchasing, transmission, distribution and supply must be allocated, as well as development of the energy sector, use of indigenous and renewable energy resources, fulfillment of obligations in compliance with public interests and fixed profit rate considered.

Efficiency factors are set for the aforementioned price caps period with regards to the micro- and macro-economy indicators of the country and methods applied in the international practice. By the end of a commercial – financial year, corporate profits should corrected by 50 % and 100 %, where the average respective profit rate for the last two years increased by 2 and 6 percentage points respectively is exceeded, taking into consideration the electricity supply reliability and service quality coefficient, as well as use of investment to satisfy the quality requirements.

After the NCC approved the price caps, service providers shall set and afterwards change specific electricity transmission and distribution service prices and/or tariffs. The weighted average of prices and/or tariffs set by a service provider should never exceed respective price caps, each year within the regulatory period. The NCC publishes such prices and/or tariffs set by a service provider within 30 calendar days after the reception date of application from respective service provider. The NCC however has to check out whether by such setting of prices and/or tariffs users are not being discriminated. Upon expiration of each year within the regulatory period, the NCC must carry out control, whether the weighted average of prices and/or tariffs set by a service provider is in compliance with (i.e. has not exceeded) the price caps. Where it finds out that the weighted average of prices and/or tariffs set by respective service provider has exceeded the approved price caps within the previous year of the regulatory period, the NCC shall be entitled to

obligate the service provider to replace the prices/tariffs by respectively lower ones. Other state institutions make an advisory function in the price-making process.

Pursuant to the sheets of methodologies for calculation of electricity price caps, transmission system operator and distribution networks operators are required to deliver the following *quarterly* and *annual* information:

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

Pursuant to the Rules on Licensing of Activities within the Energy Sector, the following documents must be produced on a *quarterly basis*:

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

*On the annual basis*, it must be supplied in addition:

4. annual expenses audit report of the licensed activities;
5. annual analysis of use of respective power network system;
6. report on development prospects for respective power network system;
7. annual complaint investigation report.

Taking into consideration the Monitoring Report on Security of Supply on the Lithuanian Electricity Market, technical and economical data must be collected and summarized *annually*, before July 31, to produce conclusions on continuity of electricity supply and internal as well as regional electricity market development prospects. Such information shall cover forecasts for three forthcoming years and reflect the following data in different aspects and periods:

- electricity generation, transmission and distribution capacities, connections with neighboring energy systems;
- electricity capacity balances;
- electricity production, consumption, exports and imports;
- market concentration;
- electricity purchase and sales volumes;
- degree of market opening;
- market participants;
- market price dynamics;

- degree of eligible customers involvement;
- forecast electricity purchase, sales and exports volumes;
- forecast power capacity balances;
- needs for new power capacities; and
- planned electricity transmission and distribution network development and updating with possible weak points.

After the process of reorganization in the electricity sector within the last 4 years, the aforementioned data have been collected and revised. In the first year of reform, however, after the comparative analysis on transmission system operators in the Baltic countries had been performed, it occurred that the data were hardly comparable due to quite different corporate structure and reorganization stages.

Last year's distribution network operators' comparative analysis in Middle and Eastern European countries (members of the Energy Regulators Regional Association – ERRA) has revealed that this region also faces similar problems due to different structures of companies, types of ownership and currencies in different countries. Although comparison of effectiveness is possible in a specific country provided that the country has a sufficient number of relevant companies. Lithuania has only 2 basic distribution network companies therefore it applies different methods to assess the operational efficiency of such companies.

The NCC has always focused a lot on establishing continuity of electricity supply and service quality regulation to ensure the minimum quality standard to consumers and impose certain responsibility on licensed companies for their failure to follow the quality requirements. The Government-approved new edition of the Rules on Licensing of Activities within the Energy Sector that came into effect in May 2003 provided for additional functions to the NCC, namely, the control over the respective companies' compliance with the licensed activities quality standards set forth by the Ministry of Economy and approved by the NCC.

On July 15, 2005, the Continuity of Electricity Supply and Electricity Transmission, Distribution and Supply Service Quality Requirements were approved by the Order No. 4-265 of the Minister of Economy, where a list of service quality requirements to be applied on individual as well as collective basis, rules on continuity of electricity supply and service quality data registration, principles for indicator calculation, account making and procedure for their delivery to the NCC were presented. In compliance with the aforesaid Requirements, transmission system and distribution network operators were obliged to review and correct their databases on electricity transmission interruptions before January 1, 2006.

By respective legal acts, the NCC is obliged to control, how licensed electricity companies follow the aforementioned requirements, and carry out the continuity of supply and service quality

monitoring. The approved requirements, mentioned above, foresee for assessment of changes in continuity of supply level within the price caps of transmission and distribution service prices, in line with the procedure set forth by the NCC, from 2008 on.

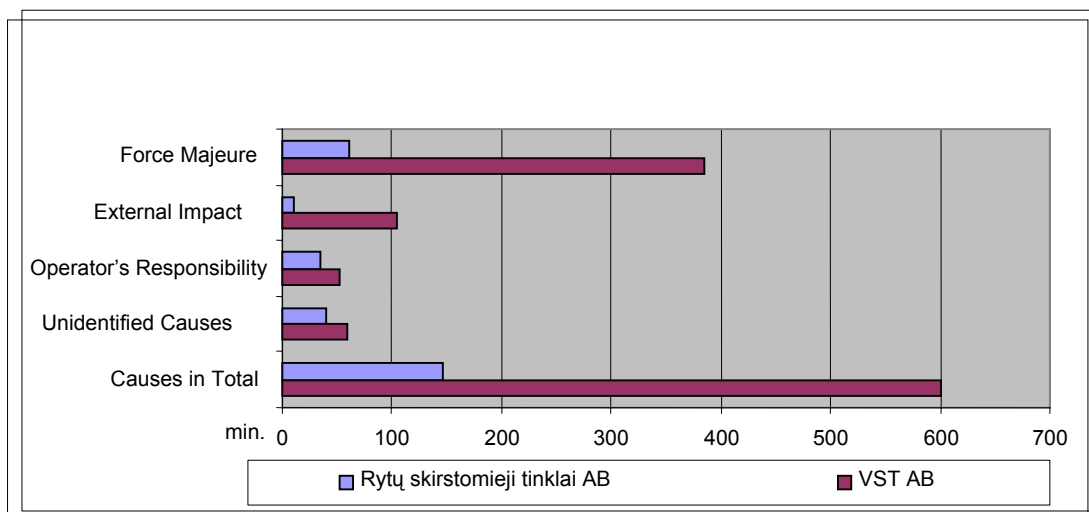
In evaluation of continuity of supply level, the basic indicators are unplanned System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) falling for a single system user. The aforementioned transmission indicators by Rytu Skirstomieji Tinklai AB and VST AB are compared in Figures 1-3.

In 2005 the SAIDI for a single VST AB user reached 600 minutes, and for single Rytu Skirstomieji Tinklai AB user – 147 minutes. The major part of interruptions within VST AB distribution operational territory was registered in the first quarter of 2005 (455 minutes) and this accounts for the hurricane Ervin's ravage Lithuania suffered in January of the aforementioned year. Within other three quarters of the year, the SAIDI for a single VST AB user was 145 minutes.

The SAIDI due to causes ascribed to the operator's responsibility for a single user was 52 minutes (VST AB) and 34 minutes (Rytu Skirstomieji Tinklai AB).

In analysis of the System SAIDI according to the territory distribution into urban and non-urban, it should be noted that the SAIDI for a single user in non-urban territory was by 3.2 time (Rytu Skirstomieji Tinklai AB) and 4.9 time (VST AB) higher than in the urban territory.

Diagram 1. The SAIDI by Interruption Causes in 2005 per customer



Due to the preplanned network maintenance works the SAIDI for a single user was 135 minutes within the territory of Rytu Skirstomieji Tinklai AB and 6.2 times higher than in the territory covered by VST AB (22 minutes).

In evaluation of unplanned System Average Interruption Frequency Index (SAIFI) for a single user, two indicators are calculated – for long-term interruptions (3 minutes and over, SAIFI) and short-term interruptions (longer than the network automation switch on time, but shorter than 3 minutes, MAIFI).

Diagram 2. The SAIFI for a Customer, by Interruption Causes in 2005

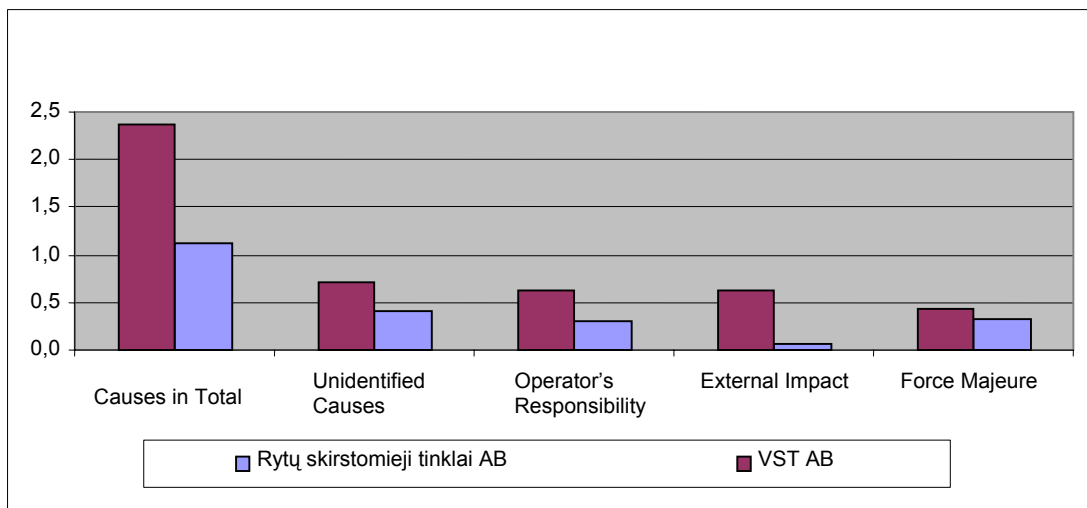
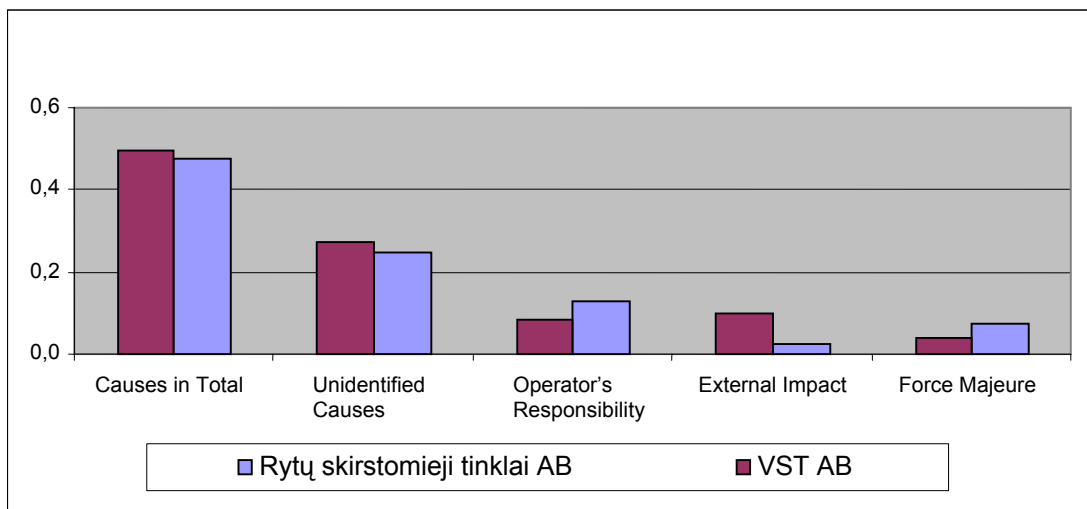


Diagram 3. The Short-term Unplanned MAIFI for a Customer, by Interruption Causes in 2005



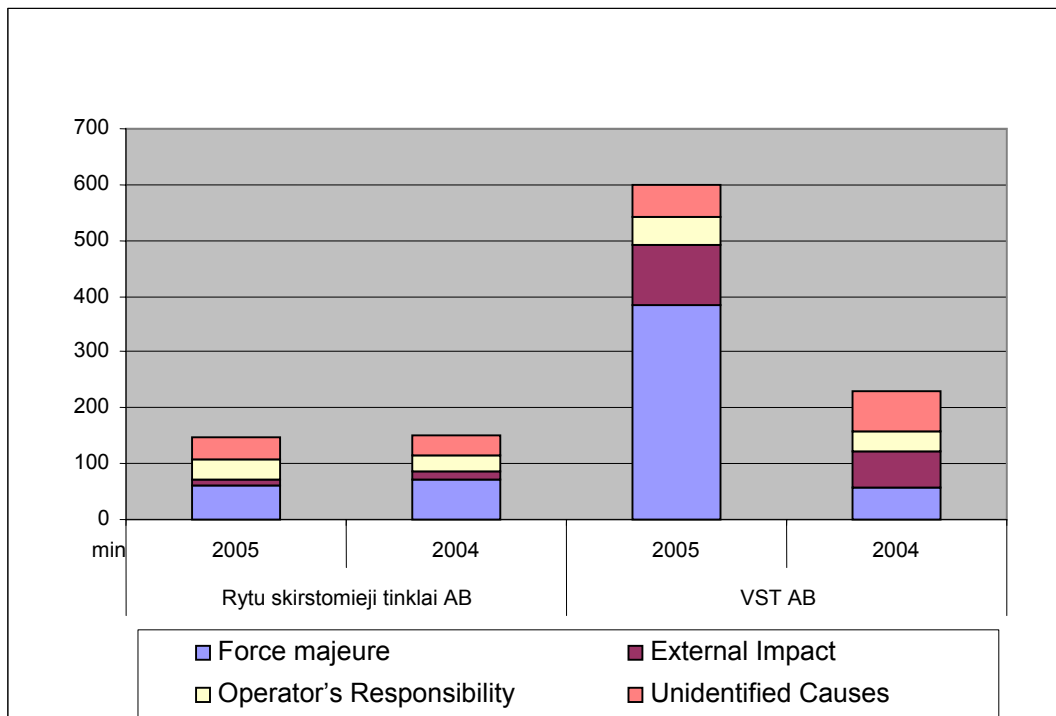
The unplanned long-term System Average Interruption Duration Index (SAIFI) for a single VST AB user was 2.4 and Rytų Skirstomieji Tinklai AB user – 1.1. The short-term Average Interruption Duration Index (MAIFI) for a single user was similar in both companies and reached out to 0.5 and 0.48, respectively. The major part of interruptions in both companies occurred due to unknown reasons.

Table 8 and Figure 4 show the SAIDI change in 2004 and 2005.

Table 8. SAIDI and Power Supply Interruption Causes

<b>SAIDI, for a single user, according to interruption causes, by minutes</b>				
Interruption causes	Rytų Skirstomieji Tinklai AB		VST AB	
	2005	2004	2005	2004
"Force majeure"	61	71	385	58
External Impact	11	15	105	64
Operator's Responsibility	34	28	52	36
Unidentified Causes	40	36	58	73
<b>Causes in total</b>	<b>147</b>	<b>150</b>	<b>600</b>	<b>231</b>

Diagram 4. SAIDI Indicators in 2004-2005



In 2005 the unplanned long-term System Average Interruption Duration Index (SAIDI) within the territory of Rytų Skirstomieji Tinklai AB reduced by 3 minutes and was 147 minutes. Whereas in the same period the SAIDI indicator in the territory of VST AB increased by 369 minutes and amounted to 600 minutes. As it has been mentioned before, such a significant decrease was preconditioned by the hurricane Ervin ravaged in Lithuania, January 2005. Due to the Force

Majeure circumstances, the SAIDI for a single user grew by 327 minutes in the territory covered by VST AB.

The SAIDI due to causes ascribed to the operator's responsibility for a single user in 2005 increased in both companies as compared to 2004 (by 6 minutes in the territory of Rytų Skirstomieji Tinklai AB and 16 minutes in the territory of VST AB).

The NCC will further analyze continuity of electricity supply indicators, monitor changes thereof and perform detailed comparative analysis. The results of such analysis will be published on the NCC Internet Website. Changes in continuity of supply level of the companies from 2008 on will be estimated by setting the price caps of transmission and distribution service prices, in line with the procedure set forth by the NCC.

The Rules for Electricity Supply and Use foresee that in case electricity supply is interrupted or restricted to a user or electricity quality parameters on the site of provision of electricity transmission or distribution services are not in compliance with the ones specified in respective service sales and purchase agreement, the operator or supplier reimburses the direct damages incurred by such user. The operator or supplier is not bound for reimbursement of such damages to the user, when electricity supply is interrupted or restricted, or electricity quality parameters contravene the contractual ones due to the impact caused by the Acts of God or fire, war, acts of terror, Force Majeure, third person's activities (electricity theft, equipment impairment, when side items fall on overhead electricity lines, etc.), system pre-emergency automation effect (in cases of breakdowns or failures in other energy systems), due to acts of the state authorities, or when a single interruption time for a user does not exceed the longest allowable disconnection time for that particular continuity of supply category, or when respective automation or security systems disconnect power supply to the user's equipment due to the user's acts or negligence, inappropriate maintenance of its own equipment or breaches of requirements contained in applicable legal acts.

An application for reimbursement of damages must be supplied in 10 calendar days after the date of occurrence of damages. In 10 calendar days after its reception date at the latest, such application must be considered at the general commission meeting. Operator or supplier and user's representatives must participate in the work of such commission. The commission formed especially for this reason must investigate causes of interruption or restriction in electricity supply and establish the amount of the damages.

Where the parties involved fail to agree, the amount of damages must be set by court. Damages incurred due to the interruption or restriction in electricity supply must be reimbursed in 30 calendar days after the date of establishment of the value thereof.

In cases of changed electricity prices and/or tariffs by regulated network operators and/or public suppliers and the procedure of application thereof, new procedure is published in Supplement to the

Official Gazette, *Informaciniai Pranesimai*. Applicable electricity prices, tariffs and procedures of application thereof are placed publicly on the Webpages of respective companies. On the Internet, planned changes and description of electricity prices, tariffs and procedures of application thereof are available to users, and users may also make their inquiries to the companies.

Besides, companies within the electricity sector are bound by the Law on Electricity to notify domestic users in writing or otherwise on any increase in their charges, a month prior to such increase at the latest.

Connection fees to functioning electricity networks are set by the NCC. Such fees must be published immediately after the NCC passes a decision for approval thereof. Applicable fees are also available on the Website of respective company or by calling the company by the numbers given on the Website.

Companies must publicly notify market participant on the following information:

- electricity tariffs to users, changes of such tariffs, new schedules, etc.;
- commercial losses and technological costs;
- conditions and procedures for new users' connection based on applicable legal acts (required documents, applications, etc.);
- terms and conditions of payment for electricity, payment charges, etc.; and
- different campaigns and discounts.

Apart from official and mass media publications and Webpages, information on issues in concern is available to customers at all and any client servicing departments, information and general telephone lines, as well as respective information leaflets.

Electricity transmission service prices vary depending on the voltage of the power networks, wherefrom electricity is supplied to customers. Large industrial customers annually consuming about 24 GWh electricity, with up to 4,000 kW power capacity allowable for use, get electricity from medium and high voltage power distribution networks, whereas household entities consuming about 3,500 kWh per year and business clients with annual energy consumption reaching up to 50 MWh and allowable capacity about 50 kW usually get their power from the low voltage distribution networks. Average electricity transportation prices are shown in Table 9, respectively.

Table 9. Average Electricity Transportation Service Prices, 2005

Description	Ig	Ib	Dc
Average Electricity Transportation Service Prices in the Country, EUR/MWh	25,31	53,00	53,00

Municipal taxes, expenses for services in line with public interest or any similar expenses are not included into electricity transportation service prices.

Pursuant to the Law on Electricity, the NCC by its resolution No. 135 as of December 23, 2002, approved the procedure for regulation of balancing energy price. Based on information received by the transmission system operator on regulated electricity procurement results and the aforementioned procedure, the market operator sets the balancing energy prices for suppliers (eligible customers working under the supplier's licenses) and generators. The balancing energy market mechanism may be defined by the characteristics given in Table 10, below.

Table 10. Balancing Energy Market Characteristics

No	Feature	Description
1.	Settlement interval	60 minutes
2.	Balancing region	Each separate electricity generation and usage site.
3.	Regional interaction	All market participants or persons buying and/or selling electricity according to contracts, as well as otherwise as foreseen by the Rules on Electricity Trade, must enter the auction and join the auction contract upon their signature. Such joining to the contract does not make any obligation thereto of trade in an auction, although it obliges the market participant to supply information as specified in the Rules to the market operator. The bid has simple format: limited/ unlimited charge/ amount bids, minimum amount 5 MW, not required information on dynamic characteristics of power plants. Foreign transmission system operators entering into the regulatory agreements with the Lithuanian transmission system operator may also participate at an auction of balancing energy. Foreign transmission system operators must comply with the same conditions for participation at an auction and have the same rights as other balancing energy trade auction participants.
4.	Closing of session	Balancing energy trade auction session is closed 2 hours prior to the commencement of balancing energy realization at the latest, or balancing energy bids may be corrected or recalled 2 hours prior to possible realization of the bid at the latest.
5.	Day trade options	Conditions shall be ensured to the market participants trading at an hourly auction to procure the energy shortage and/or sell the surplus of energy, i.e. including balancing energy to other market participants in transparent competitive environment.
6.	Balancing energy prices	Balancing energy price shall be calculated in accordance with 'pay as you bid' principle. It is equal to the average weighted price of each uninterrupted trade session, corrected by respective coefficients in purchasing/selling electricity to the transmission system operator. Prices of regulated up/ down bids cannot exceed/ be lower than the price of balancing energy purchased/ sold to the transmission system operator fixed at the end of the uninterrupted trade session.
7.	Supply of information	After each transaction made during the uninterrupted trade session, the market operator shall calculate the average weighted price of each trading hour of that particular trading session and balancing energy prices and notify other auction participants on this through the auction information system. Within two hours after the trading hour at the regulated auction at the

		latest, the transmission system operator with the help of the auction information system notifies all participants on all realized balancing bids. The results of the balancing energy trade auction must be published in the auction information system, the access to which must be ensured to all balancing energy auction participants. In the auction information system, each successful bidder may receive additional information on the seller or purchaser, from/to which the bidder has bought/sold balancing energy for the price fixed in the transaction.
8.	Settlement process and schedule	Before setting the hourly trade to suppliers, a transmission scheme operator shall trade in balancing energy with generators accounting by hour, and with suppliers accounting by calendar month. Settlement procedures and conditions of trade in balancing energy are foreseen in respective agreements with transmission system operator.

Small-scale market participants and participants newly approaching the market shall have the same conditions as other participants on the balancing energy market.

When hourly trade in electricity starts with suppliers, the Rules of Electricity Auction Trade will come into effect to ensure fair participation of buyers, as well as sellers on the momentary electricity market. Thus market laws will be also reflected more clearly on the balancing market and requirements of the Electricity Directive fulfilled in full.

### **3.1.4. EFFECTIVE UNBUNDLING**

The NCC ensures effective competition, non-discrimination of users and suppliers and provision of fixed-quality services to all users on the electricity market. In order to avoid cross-subsidizing to electricity generation, transmission, distribution and supply activities, the NCC implements the control on effective unbundling of accounting systems within these fields.

The Law on Electricity provides that where a distribution network company apart from distribution activity is also engaged in public supply of electricity, it must unbundle these two fields. Distribution and supply activities are considered to be separated, when the sales (power supply) division of a distribution network company is engaged in a public supplier's activities provided that unbundling of economic operations is guaranteed. Such company must file, categorize and summarize its economic operations related to electricity transmission, distribution, supply or other activities by separate bookkeeping accounts and ledgers.

Before July 1, 2007, public suppliers engaged in supply of electricity to users unable to chose the supplier, as well as eligible customers must file, categorize and summarize the user-related information by separate bookkeeping accounts and ledgers.

Transmission system operator, distribution network operators and public suppliers bound by the obligation to provide services in compliance with public interests enter, detail and file the revenue and costs related to these types of activities in separate bookkeeping accounts and ledgers.

The Rules on Licensing of Activities within the Energy Sector provide that a separate license shall be issued to a company willing to engage itself in each type of licensed activities. Such company must handle the accounting of each such licensed activity separately. By the end of a preceding year, within four months of the current year, the company must cause an audit to be performed on the input of the licensed activities and supply such audit results to the NCC.

Legally unbundled electricity transmission and distribution network companies started their operation activities in 2002, pursuant to the Law on Reorganization of the Special Purpose Public Company Lietuvos Energija. Thus Lietuvos Energija AB, which had previously functioned as a sole, integrated, state capital electricity company, underwent its reorganization and electricity generation companies and two distribution network operators were separated and established on the basis of its affiliates. Key power generation companies were unbundled from the vertically integrated system in the middle of 1997.

Table 11 below shows the number of separate companies or participants on the Lithuanian electricity market.

Table 11. Number of Licensed and Functioning Electricity Market Participants

No.	Market participants	Recognized/ Number of licenses				Number of functioning market participants			
		2002	2003	2004	2005	2002	2003	2004	2005
1.	Eligible customers	12	25	45 095	69074	6	6	6	6
2.	Electricity generators	-	-	-	-	6	8	8	8
3.	Transmission system operator	1	1	1	1	1	1	1	1
4.	Distribution network operator (excluding local distribution networks)	2	2	2	2	2	2	2	2
5.	Electricity suppliers	20	21	24	27	4	8	8	8
5.1	Public suppliers (including local distribution networks)	7	7	7	7	2*	3*	3*	3*
5.2	Independent suppliers	13	14	17	20	2	5	5	5
6.	In total:	35	49	45 122	69104	19	25	25	25

Note: \* - Public suppliers functioning under electricity supply agreements with independent suppliers or generators.

The ownership of 1 transmission system and 2 (7 including local distribution networks) distribution network operators is unbundled on the legal basis and all these companies manage the assets related to respective electricity activities.

Table 12. Headcount and Other Data on Electricity Network Undertakings, 2005

Undertaking	Company's headcount part within the electricity sector, %	Part of input related to overlapping services within the company's total costs, %	Part of headcount employed in provision of several types of services within the company's total headcount, %
Lietuvos Energija AB	71	0	0
Rytų Skirstomieji Tinklai AB	93	0	0
VST AB	93	0	0

Lithuania does not apply the rule of 100,000 customers. In 2005 Lithuania had 5 licensed distribution network operators with less than 100,000 users.

The main shareholder in Lietuvos Energija AB is the State of Lithuania holding 96.62 % of shares in the company. The key holder of these state-owned shares is the Ministry of Economy. The remaining part (3.38 %) of shares is held by minor shareholders.

The main shareholder in Rytų Skirstomieji Tinklai AB is the state holding 71.35 % of shares, 20.28 % of shares belong to E.ON Energie AG and 8.37 % to minor shareholders. The key holder of the state-owned shares in this company is the Ministry of Economy.

The public company VST was privatized on December 23, 2003. The key shareholder in this company is Lithuanian capital company NDX Energija. It owns 97 % of shares in VST, and minor shareholders own 3 % of shares.

Visagino Energija is a state enterprise. The key holder of the state-owned shares in this company is the Ministry of Economy.

Other companies are private.

After the reorganization of the vertically-integrated undertaking Lietuvos Energija SPAB by founding four new legal entities, namely, two distribution network undertakings and two power plants (Lithuanian Power Plant and Mazeikiai Power Plant), two hydro power plants still belong thereto: Kaunas HPP and Kruonis HPSPP used to ensure the national balance. Aggregates in Kruonis hydro pumped storage power plant (HPSPP) are used also as synchronic compensators. This is an important instrument in regulation of voltage levels within the 330 kV voltage network.

The transmission system operator is not engaged in supply activities, but, instead, a market operator functions as a division of the company. The market operator is responsible for organization of electricity trade, including auction. 2 power generation companies function as subsidiaries, i.e. Kruonis hydro pumped storage power plant and Kaunas hydro power plant. These plants ensure the power system balance and continuity of electricity supply in Lithuania. Distribution services in the company are separated from the public supplier's functions by separating the accounting systems of these activities.

Administration premises of both the transmission system operator and distribution network operators are located in the territories, geographically separated from those of the power generators'. Rytų Skirstomieji Tinklai AB and VST AB are also public or so-called "last resort" suppliers, therefore divisions of these companies performing these functions are situated nearby the companies engaged in distribution network operator's activities.

From 2002 on the transmission system operator and distribution network operators function as completely separate legal entities. The companies have different names, trademarks, are located in separate administration buildings and own separate websites, namely:

- Lietuvos Energija AB (TSO) – [www.le.lt](http://www.le.lt) ;
- Rytų Skirstomieji Tinklai AB (DSO) – [www.rst.lt](http://www.rst.lt) ;
- VST AB (DSO) – [www.vst.lt](http://www.vst.lt) .

Provision of information on operational activities of electricity companies, power supply market, etc. is ensured by the following measures: websites on the Internet, leaflets, brochures, annual reports, multimedia presentations, documentaries/ information films, public events (organized or supported thereby), press releases, informational articles, etc.

Companies place their annual reports, financial statements containing their economic and technical indicators on their web pages.

Shares of Lietuvos Energija AB, Rytų Skirstomieji tinklai and VST AB are traded on the Lithuanian Central Securities Market. Quarterly reports by these undertakings are presented publicly with strict compliance of the Securities Market requirements.

In accordance with profit (loss) accounts making procedure established for different types of activities by Lietuvos Energija AB, business operations related to the transmission system operator's activities are filed, categorized and summarized in separate bookkeeping accounts and ledgers. By expiration of each financial year, financial statements, income and expenditure audits are performed in regulated electricity network companies for each separate licensed activity by independent auditors. Such financial statements and auditors' opinion are produced to the NCC. Report according to separate activities is publicly released with the annual corporate operational statement. Each company publishes its audited financial reports approved by independent audit companies.

Prices by power generators, suppliers covering over 25 % market share and electricity sales and distribution network operators are regulated by the NCC setting the price caps to such prices. The price caps are approved in compliance with the Methodologies for setting Price Caps approved by the NCC. Power transmission and distribution activities are licensed. The NCC is the institution issuing such licenses. In compliance with the Methodologies for Setting Price Caps as well as the Rules on Licensing of Activities within the Energy Sector, the NCC establishes the forms of reports

the electricity transmission and distribution operators must follow in supply of their quarterly reports on their costs, power supply quality and continuity indicators, electricity balances, prices and other actual and planned results to the NCC. The costs (inputs) of power distribution service and public supply service are unbundled in accordance with the Cost Unbundling Methodology approved by the NCC.

Whereas electricity transmission and distribution activities are legally unbundled, the NCC checks the unbundling principles of distribution and public supply service costs applied by the distribution network companies. Such principles also serve the grounds for setting relevant prices.

Transmission, distribution and supply companies must cause to perform independent audits on compulsory basis. Regulated companies must submit their financial statements and auditors' opinion to the NCC.

The NCC presents detailed requirements to preparation of such accounting, as well as imposes responsibility for any breach of such requirements.

The NCC investigates cases of administrative law breaches as provided by the Administrative Code and imposes administrative penalties.

Violation of electricity transmission, distribution, storage and supply procedure, violation of procedure for energy resources and energy supply system balancing and connection thereto, violation of regulated tariffs and/or prices, failure to update compulsory insurance on due time, breach of transparency and other requirements set in respective laws and other legal acts related to electricity, default of obligations to provide mandatory services, engagement in energy-related activities in absence of a license required for such activity or breach of license requirements and failure to grant a right to use the energy resources or electricity transmission or distribution system (networks) impose a caution or penalty from a hundred and forty five to two hundred and ninety Euros to officials.

Unreasonable termination of energy resources or electricity supply, violation of supply security and/or energy quality requirements, installation and operation of facilities security requirements, breach of use procedure, engagement in energy-related activities in absence of an authorization required for such activity or breach of such authorization requirements, violation of energy accounting and supply of incorrect energy accounting data to respective institutions impose a caution or penalty from twenty nine to a hundred and forty five Euros to individual citizens, and caution or penalty from a hundred and forty five to two hundred and ninety Euros to officials.

Failure to deliver the data on corporate economic financial activities upon the set procedure to the NCC by energy resources and energy and cold water suppliers impose a penalty from a hundred and forty five to two hundred and ninety Euros to officials.

Delivery of knowingly incorrect (misleading) data to the NCC by energy resources and energy and cold water suppliers impose a penalty from two hundred and ninety to four hundred and thirty four Euros to officials.

Failure to deliver the data on corporate economic financial activities upon the set procedure or delivery of knowingly incorrect data to respective state authorities by companies engaged in energy-related activities impose a penalty from a hundred and forty five to four hundred and thirty four Euros to officials.

Violation or default of the NCC resolutions, as well as default of the NCC legal orders in the area of price-making in the energy and cold water supply sector impose a penalty from fifty eight to a hundred and sixteen Euros to officials.

The same violations or defaults committed by a person, who has been penalized already for violations listed in section one of this provision, impose a penalty from a hundred and forty five to two hundred and ninety Euros.

## 3.2. COMPETITION ISSUES.

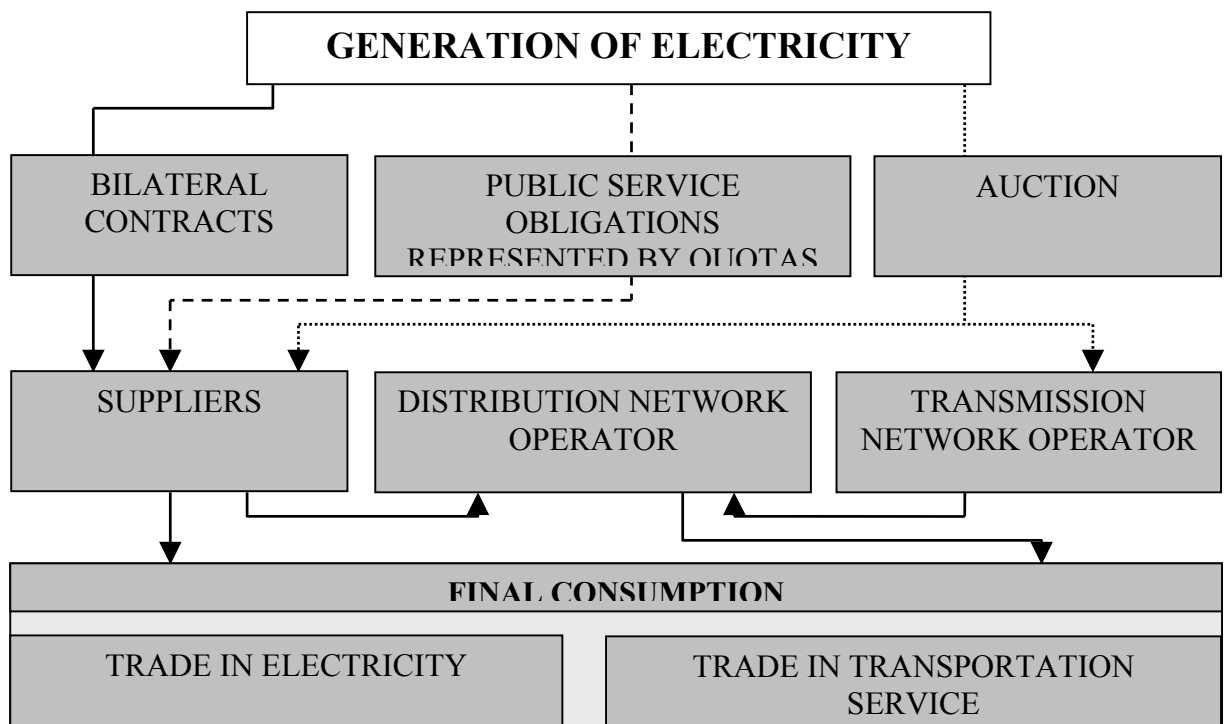
### 3.2.1. DESCRIPTION OF THE WHOLESALE MARKET.

#### MARKET STRUCTURE

After reorganization of the electricity sector, all activities on the electricity market are implemented following these principles:

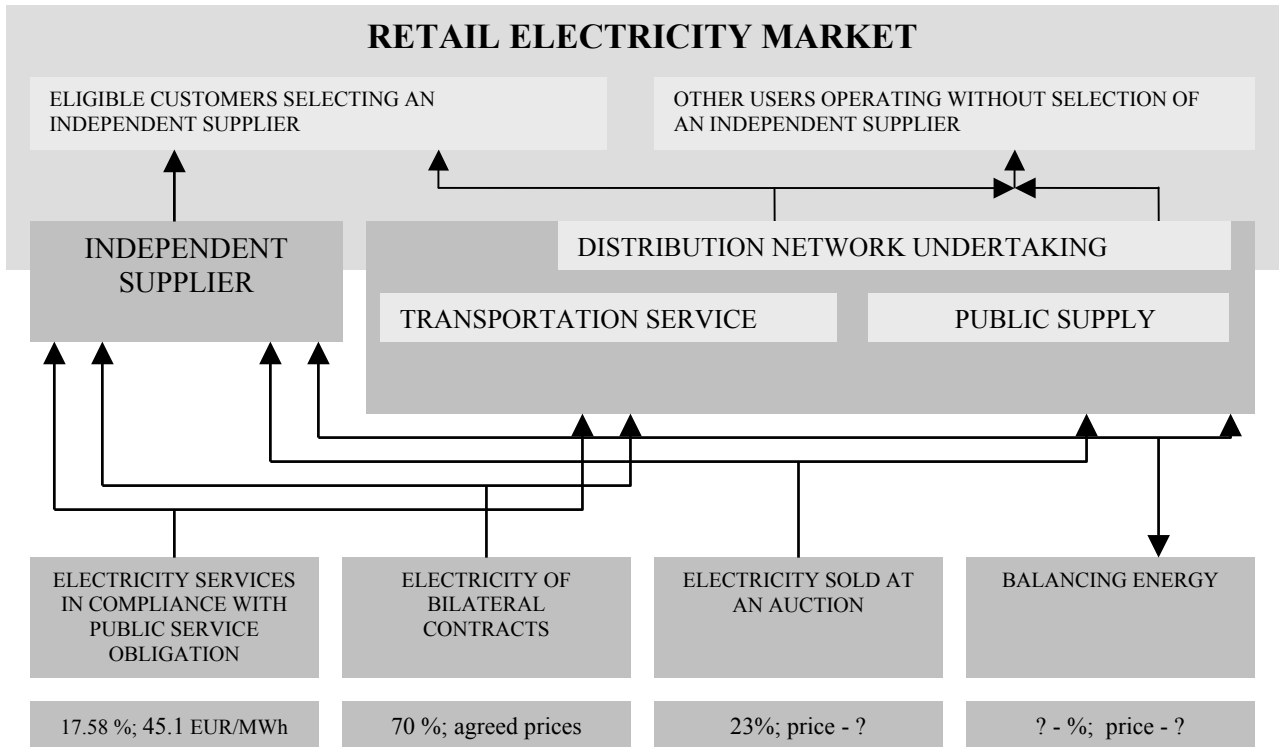
- three types of activities are considered the basic: electricity generation, supply and transportation;
- power plants are engaged in electricity generation; they sell their product on the wholesale electricity market common to suppliers and generators;
- supply (resale) activities are carried out by companies holding supplier's licenses; such companies purchase electricity on the wholesale market and sell it to customers;
- companies holding a transmission system operator and distribution network operator's license are engaged in electricity transportation activities;
- power generation and supply system function in the competitive environment, whereas transportation of electricity is carried out by a monopoly.

Diagram 5. Activities Unbundling Principle in the Electricity Sector (before 2006)



Trade in electricity market is carried out according to the scheme below:

Figure 6. Trade on the Electricity Market



The market of systemic services is not functioning in Lithuania.

In 2005 the maximum power of power stations in Lithuania was 5 GW. Power generated by nuclear power station made up to 26 %, by thermal stations - up to 53 % and by hydro power plants – 21 % of total generated power. Table 13 below reflects capacities of Lithuanian power plants available in 2006. In 2005 the first unit at the Ignalina Nuclear Power Plant was stopped, and the power plant's capacity was reduced by 50 %, up to 1,300 MW.

In 2005 Lithuania had four power plants with capacity of at least 5 % of installed disposable power, namely: Ignalina Nuclear Power Plant, Lietuvos Elektrine Power Plant, Kruonis Hydroelectric Pumped Storage Power Plant and Vilniaus Energija UAB. The most powerful out of these power plants is Lietuvos Elektrine, a thermal power plant consuming the highest amount of natural gas, as well as orimulsion and fuel oil in its power generation process. Ignalina Nuclear Power Plant uses nuclear power to generate electricity. Power plant Vilniaus Energija UAB is a thermal station, mostly using natural gas in its production processes. Kruonis Power Plant is a hydro pumped storage power plant and ensures the operational electricity reserve in the country and is operated by the transmission system operator. Kruonis Power Plant does not participate directly on the electricity market.

To satisfy the country's need for electricity and basic energy system's load, the Ignalina Nuclear Power Plant is sufficient. Under medium system load, energy is supplied by Ignalina Nuclear Power Plant and thermal stations. At peak energy consumption times, apart from the Ignalina and thermal

power plants, the system is supported by Kruonis Hydroelectric Pumped Storage Power Plant ensuring the operational reserve.

Table 13. Data on Capacity and Generation Data of Lithuanian Power Plants

Generator	Power Capacity as of 01-01- 2006		2005	
	Installed, MW	Disposable, MW	Generation, MIO kWh	Supplied to the network, MIO kWh
Ignalina Nuclear Power Plant	1300	1183	10337,6	9544,08
Lietuvos Elektrine Power Plant	1800	1732	1072,8	970,8
Kruonis Hydroelectric Pumped Storage Power Plant	900	760	369,1	369,1
Vilniaus Energija (VE, VE2,VE3)	384	367	1245,4	1113,2
Kaunas Thermal Power Plant	170	160	694,6	608,8
Mazeikiai Power Plant	160	148	159,6	122,1
Kaunas Hydroelectric Power Plant	101	90	384,6	380,5
Klaipeda Thermal Power Plant	11	10	27,9	17,2
Kauno Energija	9	8	1,2	0,5
Small HPP	24	24	68,1	68,1
Wind PP	1,1	1,1	1,8	1,8
Biomass PP	3	3	5,5	5,5
Other PP	102	69,8	404,9	402
<b>In total:</b>	<b>4965</b>	<b>4556</b>	<b>14773</b>	<b>13604</b>

Disposable power capacity rate of three largest power plants was 26 / 38 / 8.1 in 2005 (in 2004, 49.7 / 34.4 / 7.4) respectively by IAE, LE and Vilniaus Energija UAB.

Surplus amount of the installed power capacity in 2005 preconditioned rather low usage ratio for some power plants in Lithuania, especially that of Lietuvos Elektrine (0.08). The usage ratio in co-generation power plants usually is high during the heating season (0.66 – 0.92). High usage ratio in the Ignalina Power Plant (0.97) is determined by the electricity exports scale.

Table 14. Power Plant Usage Ratios

2005	IAE	LE	VE 3	VE 2	KE	PE	KHE*	ME	KIE
Average	0,97	0,08	0,54	0,92	0,66	0,01	0,47	0,14	0,29

\* - exploitation by inflow water – 1.

Table 15. Power Plants Accident Rates, %

2005	IAE	LE	VE 3	VE 2	KE	PE	KHE	ME	KIE
Average	1.21	0.3	2.17	0	1.37	0	0	0	0

Maximum demanded power capacity (gross) of the entire Lithuanian energy scheme was 1918 MW in 2005. After the estimation of compulsory long-term power capacity reserve (1300 MW), in 2005 Lithuanian market had the demand of 3218 MW power capacity excluding export needs and 578 MW power surplus (not including Kruonis Hydro Pumped Storage Power Plant). Users in the country (excluding power generation, transmission and distribution needs) consumed about 8.4 TWh electricity in 2005.

As reflected in Table 16 below, Lithuania faces the highest power capacity demand in winter.

Table 16. Maximum Power Capacity Demand

Month	Maximum of the need (gross), MW
January	1782
February	1788
March	1777
April	1540
May	1532
June	1390
July	1341
August	1404
September	1429
October	1700
November	1874
December	1918

The general electricity sector information for 2005 is shown in Table 17.

Table 17. Information on the Electricity Sector, 2005

Total consumption in the country (net), TWh	8.4
Demanded capacity (gross), GW	1.92
Generators' installed / disposable power capacity, GW	4.97 / 4.56
Number of companies with capacities of at least 5% out of the installed disposable power capacity (not including KHAE)	3
Installed disposable power capacity proportion of three largest companies	
IAE/ LE / Vilniaus Energija“ (Σ)	26% / 38% / 8.1% (72%)

In 2005 electricity sale abroad by Lietuvos Energija AB amounted to 4.03 TWh. Due to closure of the first unit of the Ignalina Nuclear Power Plant by the end of 2004, electricity exports reduced by 45 %. Lietuvos Energija AB exported electricity to Latvia, Estonia, Belarus, Kaliningrad Region of Russian Federation and continental Russia. Exports to Russia in 2005 accounted for more than a half of the entire exported electricity.

Imports in 2005 were 1.06 TWh. Key periods of import cover the spring flood in Latvia and repairs at the Ignalina Nuclear Power Plant.

On the Lithuanian wholesale electricity market, public and independent suppliers purchased electricity (from generators connected to the transmission network, at auctions and from the market operator) by 8 % more than in 2004.

Table 18. Electricity Exports/ Imports in 2005, MIO kWh

2005	Exports to					Imports from			
	Latvia	Belarus	Russia	Estonia	In total	Russia	Latvia	Estonia	In total:
In total:	<b>764.4</b>	<b>132.2</b>	<b>2953.9</b>	<b>179.9</b>	<b>4030.4</b>	<b>531.4</b>	<b>234.4</b>	<b>298.4</b>	<b>1064.2</b>

### Electricity Trade Volumes

In 2005 the number of generators on the market did not increase as compared to the previous year, i.e. 8 generators remained, also maintaining almost the same shares in the production sector, except September and October, when the Ignalina Nuclear Power Plant underwent its repairs.

Table 19. Generators' Supplied Share of Electricity, out of the Total Amount of Electricity Supplied to the Network in 2005, by %.

Generator/ Month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Ignalina Nuclear Power Plant	71	69	71	85	89	91	92	85	19	75	76	70
Lietuvos Elektrine Power Plant	7	6	6	4	4	5	4	11	68	12	5	5
Vilniaus Energija AB	14	15	14	7	3	1	1	2	5	8	12	16
Kauno energija	0	0	0	0	0	0	0	0	0	0	0	0
Kaunas Thermal Power Plant	7	8	8	4	2	2	2	1	6	4	6	8
Klaipeda Thermal Power Plant	0	0	0	0	0	0	0	0	0	0	0	0
Mazeikiai Power Plant	1	1	1	1	1	1	1	1	2	1	1	1
Lifosa AB Power Plant	0	0	0	0	0	0	0	0	0	0	0	0
In total:	100	100	100	100	100	100	100	100	100	100	100	100

As in 2004, Ignalina Nuclear Power Plant remained the market-dominating electricity generator in 2005, although its production volume decreased about 31 % in comparison with the previous year (2.3 % in 2004 as compared to 2003). Power generation by the Lietuvos Elektrine increased by 46 % (2.9 % in 2004 as compared to 2003). It is noteworthy that the first unit of the Ignalina Power

Plant has been closed since the beginning of 2005, but, as in the previous year, this power plant share on the generation market fluctuated from 69 to 92 % with exception of September, when power supply therefrom dropped to 19 %.

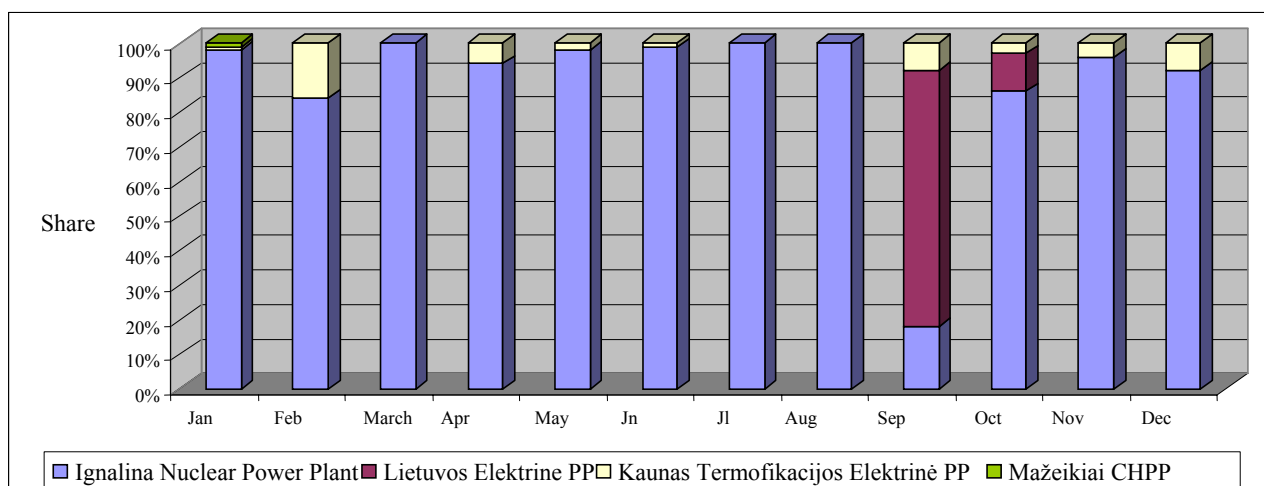
Last year in comparison to 2004 gross generated electricity supply decreased approximately by 24 %. The main reason of this was the drop down in exports (45 %). The general energy consumption however increased in the country at about 4 %.

In 2005 the average auction sales were about 23 % of electricity out of the entire amount supplied to the country market, i.e. almost by 9 percentage points more than last year. This was preconditioned by more intense additional power purchasing at an auction during the repairs at the Ignalina Nuclear Power Plant.

Table 20. Generators' Supplied Electricity Share at an Auction out of their Total Electricity Amount Supplied to the Network, 2005, %

Generator/ Month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Ignalina Nuclear Power Plant	2	0	1	1	5	9	16	10	73	71	10	8
Lietuvos Elektrine Power Plant	0	0	0	0	0	0	0	0	83	55	0	0
Vilniaus Energija AB	0	0	0	0	0	0	0	0	0	0	0	0
Kaunas Thermal Power Plant	0	0	0	1	4	2	4	2	100	49	6	6
Mažeikiai Power Plant	2	0	0	0	0	0	0	0	0	0	0	0

Diagram 7. Generators' Market Share at an Auction, 2005



Key auction market participant was also Ignalina Nuclear Power Plant, with exception of its repairs period, when it was replaced by the Lietuvos Elektrine.

The market trade covers 3 types of electricity, namely: electricity sold by contracts, electricity sold in carrying out the obligation of public services and additional electricity. Diagram 8 shows the dynamics of electricity purchased by market participants by the electricity types.

Diagram 8. Dynamics of Electricity Purchased by Market Participants by the Electricity Types, in 2004-2005.

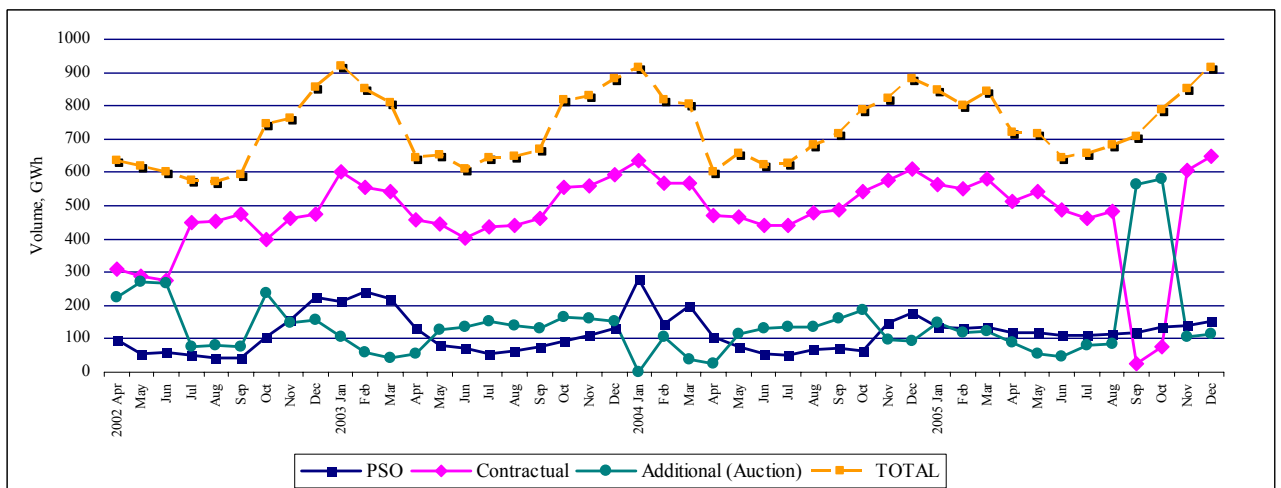
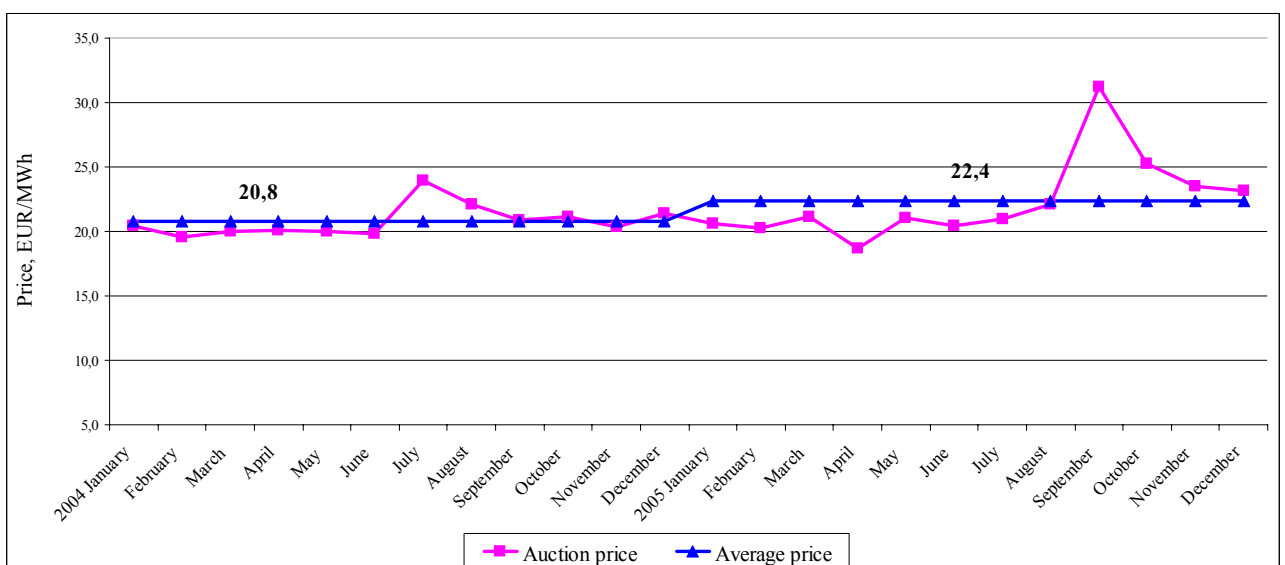


Diagram 10 shows electricity sales to internal electricity users. The most popular type of trade on the electricity market (about 60 %) was according to bilateral contracts. The major part of electricity according to bilateral contracts was sold by Ignalina Nuclear Power Plant. Thermal power stations mostly supply energy on the market fulfilling their public service obligations. The largest part of such energy is supplied on the market by Lietuvos Elektrine AB, Vilniaus Energija UAB and Kauno Termofikacijos Elektrinė UAB. Out of all thermal power plants, Vilniaus Energija UAB and Kauno Termofikacijos Elektrinė UAB also sold the highest quantity of electricity according to bilateral contracts.

Diagram 9 shows the dynamics of electricity prices at an auction.

Diagram 9. Electricity Auction Price Dynamics, 2004-2005, EUR/MWh



Electricity auction price fluctuation in 2005 was fairly insignificant with exception of September, when the price grew by about 8.7 EUR/MWh as Lietuvos Elektrine supplied 74 % of additional electricity quantity. In comparison to 2004, the average auction price increased by 1.5 EUR/MWh.

Diagram 10. Structure of Electricity Sold in 2005

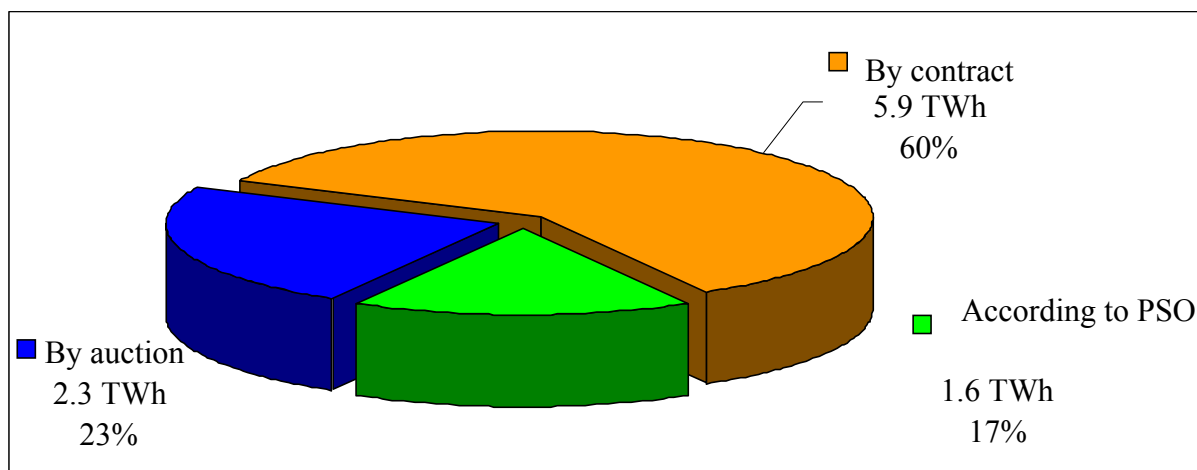


Table 21. Trade Volume of Electricity Sold by Contracts between Suppliers and Generators, 2005, MWh

Supplier	Generator					In total
	Ignalina Nuclear Power Plant	Vilniaus Energija UAB	Kaunas Thermal Power Plant	Mazeikiai Power Plant	Others	
Rytu Skirstomieji Tinklai AB	2,043,728	365,082	48,200		971	<b>2,457,982</b>
VST AB	1,833,747	238,145	214,452		3,214	<b>2,289,558</b>
Ekranas AB	71,087		26,872			<b>97,959</b>
Mazeikiai Power Plant	293,270			137,349		<b>430,619</b>
Achema AB	120,578					<b>120,578</b>
Ignalina Nuclear Power Plant	38,571					<b>38,571</b>
Visagino Energija	37,237					<b>37,237</b>
Akmenes Cementas UAB					340,173	<b>340,173</b>
In total	61,816					<b>61,816</b>
	<b>4,500,033</b>	<b>603,227</b>	<b>289,524</b>	<b>137,349</b>	<b>344,359</b>	<b>5,874,492</b>

In 2005 Lithuania had 6 operating eligible customers consuming 1.18 TWh electricity.

### System Services

Ancillary or system services to ensure electricity system operational stability and reliability are provided by the transmission system operator (TSO). Such operator also performs the function of capacity and electrical energy reservation function.

Cold capacity reserve is purchased from Lithuanian power plants. The TSO purchased hot capacity reserve from domestic and foreign power plants. Operational reserve is ensured by a single generator of the country, Kruonis Hydroelectric Pumped Storage Power Plant.

Table 22. Concentration of Undertakings Providing the Capacity Reserve

	2002	2003	2004	2005
	Quantity, MW/ hr			
<i>Cold reserve companies concentration index HHI</i>	9165.58	8946.66	6871.50	9950.75
Lietuvos Elektrine Power Plant	998	964	894	970.4
Mazeikiai Power Plant		1	27	1.3
Vilniaus Energija	28	27	34	1.1
Kaunas Thermal Power Plant	17	28	25	0
From foreign companies			108	0
<i>Hot reserve companies concentration index HHI</i>	2812.85	2751.59	2751.59	6397.29
Lietuvos Elektrine Power Plant	87	88	88	90.8
Mazeikiai Power Plant	41	38	38	7.0
Vilniaus Energija	41	37	37	0.8
Kaunas Thermal Power Plant	7	4	4	0.7
From foreign companies	29	59	59	16.4
<i>Operational reserve companies concentration index HHI</i>	10000	10000	10000	10000
Kruonis Hydroelectric Pumped Storage Power Plant	600	600	600	561.6

Lithuanian transmission network is fairly well-integrated with Belarus, Latvia and Kaliningrad's Region and this guarantees exports of electricity. There is no interconnection with the neighboring energy scheme in Poland. Hourly trade in the export/ import area was started in November 2003.

In 2005 Lithuania made no interconnections of companies functioning in the energy sector; this year was not successful for privatization of such companies.

### 3.2.2. DESCRIPTION OF THE RETAIL MARKET

In the electricity supply sector 7 undertakings have been licensed as public suppliers, 20 undertakings – as independent suppliers, whereas only 5 undertakings are actually engaged in the independent electricity supplier's activities. Key public suppliers supplying energy to all requesting users within the serviced territory are Rytų Skirstomieji Tinklai AB and VST AB. Independent

suppliers supplying energy to eligible customers are: Ignalina Nuclear Power Plant, Mazeikiu Elektrine AB, Ekranas AB, Achema AB and Akmenes Cementas AB. In 2005 only 4 eligible customers chose to cooperate with independent suppliers. Such companies with a eligible customer's status as Ekranas AB, Achema AB and Akmenes Cementas AB have obtained the independent supplier's licenses and operated as suppliers on the market.

Public suppliers Rytų Skirstomieji Tinklai AB and VST AB occupy the main share on the supply market, i.e. they sell about 84 % of electricity to customers in the country. Independent supplier Mazeikiu Elektrine AB sells electricity to a single large industrial company. Only Lithuanian suppliers operate on the electricity supply market without any foreign capital undertakings being engaged in these activities.

One of the largest electricity generators in Lithuania, Ignalina Nuclear Power Plant, also has an independent supplier's license and sells electricity to 2 eligible customers. This does not even reach 1 % of the total amount of electricity sold by this generator on the Lithuanian energy market.

30.8 % of all electricity sold on the market goes to the population, 29.2 % to industrial companies, 3 % to farmers and 37 % to other consumers

Within the period of 2004-2005 electricity supplier was replaced only by the users receiving electricity from the power transmission network. These users may be ascribed to the third category of consumers, i.e. large and extremely large industrial users consuming annually over 2 GWh of electricity.

Eligible consumers may choose and change an electricity supplier without paying any fees or charges. Distribution network operators also perform the public supplier's function and are obliged to supply electricity to all users requesting this and those what have not chosen any independent electricity supplier for certain pre-set and publicly announced electricity prices. In case of a user changing its electricity supplier, functions and duties of such user and suppliers are provided by the Law on Electricity, Article 28 *Independent Supply of Electricity*. Before entering into/ terminating the electricity supply contract with an independent supplier, eligible customer located within the territory specified in the public supplier's license must notify this in writing to the public supplier 30 calendar days prior to such planned entering/ termination. The same is with an independent supplier: before entering into/ terminating the electricity supply contract with a eligible customer situated on the territory ascribed to the public supplier, such independent supplier must notify this to the public supplier 30 calendar days prior to such planned entering/ termination. When purchasing electricity from an independent supplier, eligible customers owning facilities connected to the distribution networks must pay for electricity transportation via the transmission and distribution networks, for system services and services in compliance with the public interests to the distribution network operator. When purchasing electricity from an independent supplier, eligible customers

owning facilities connected to the transmission network must pay for electricity transportation via the transmission network and electricity sector services in compliance with the public interests to the transmission network operator.

Table 23. Electricity Prices according to Components, 2005, EUR/MWh

Description/ Consumer Category	Ig	Ib	Dc
Transmission service price (without fees)	25.31	53.00	53.00
including: transmission service price	6.37	6.37	6.37
price for ancillary services	3.68	3.68	3.68
Fees (duties) included into the transmission service price	-	-	-
Energy and supply service price	25.03	25.02	19.84
Taxes (18% VAT)	9.03	14.05	13.15
In total (with all duties and taxes included)	59.37	92.07	85.99

Pursuant to Article 15 of the Law on Energy, prices within the energy sector are contractual (agreed by the parties) and state-regulated. Prices are not regulated in production (electricity and reserve power capacity generation) and independent supply area with exception of cases, where electricity generators and independent suppliers occupy over 25 % of electricity sales market in Lithuania. Electricity transmission, distribution and public supply service prices are regulated with setting the price caps. The initial electricity transmission, distribution and public supply revenue level is established in accordance to the aforementioned ‘price cap’ principle for the period of three years. Such level is corrected on the annual basis in accordance with 4 correction coefficients (these may be of contingent changes, impact of electricity quantity, indexation and correction).

Price for electricity is comprised of five components (see Table 24).

Table 24. Electricity Prices set for Eligible Customers, 2005, EUR/MWh

Price Component/ Month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Additional electricity price (auction price) *	20.6	20.2	21.1	18.7	21.1	20.5	21.0	22.1	31.2	25.2	23.5	23.1
Price for electricity transmission service (330-110 kV)	10.1											
Price for electricity (35-6 kV) distribution service RST	17.7											
Price for electricity (35-6 kV) distribution service VST	18.7											
Price for electricity (0,4 kV) distribution service RST	20.4											
Price for electricity (0,4 kV) distribution service VST	23.4											
Independent/ public supplier electricity price* RST/VST	0.6/0.58											

\* - Electricity generation or independent supplier's price may also be the agreed one.

Electricity sales proportion 17.35 % to be implemented according to the public service obligations was approved for the year 2005 (17.36 % for 2004), and applied in accordance with the procedure set forth in the Rules on Obligation to Provide Public Services; and the average price for electricity bought up according to the obligation to provide public services was fixed 43.18 EUR/MWh (45.88 EUR/MWh in 2004).

Users' electricity facilities are connected to electricity networks by the operator in pursuance with the procedure and conditions established by the Order No. 4-388 on the Rules of Connection of Electricity Consumers and Generators' Objects (Networks, Facilities, Systems) to the Objects (Networks, Facilities, Systems) Operated by Energy Companies, issued by the Ministry of Economy of the Republic of Lithuania on October 29, 2004 (the Official Gazette, 2004, No. 159-5826). The connection fee depends on the user's type (household or commercial) and electricity amount planned for consumption in the future.

The aforementioned Rules set forth the connection term for the user's facilities only, where an inlet terminal with a measuring board is required for such connection of the user's facilities and no design project is required for implementation of such works. Such term cannot be longer than 15 business days after the date of payment for the connection service, unless otherwise is agreed between the parties. The maximum term for electricity facilities connection is not fixed.

Each service agreement on connection of the user's electrical facilities to the electricity networks signed between the operator and user must specify the term for connection of user's electrical facilities to given operator's electricity networks.

In connection of a user's electrical facilities in compliance with the aforementioned Rules, after assessment of the user's requirements and technical possibilities, the price for the service to be

provided by the operator may amount to 40 % of the budget estimate value of the user's equipment connection to the network or may be calculated in accordance with the NCC approved fees. Presently applicable fees have been approved by the NCC's Resolution No. 122 Concerning Connection of New Electricity User's Facilities to the Networks, as of December 11, 2002.

In 2005 18,011 new customers (249,1 MW) were connected to the distribution operator networks (including those requesting for the power capacity increase), the electricity for which had been 100 % supplied by public suppliers. The number of new customers grew by 34.5 % as compared to 2004, and the average newly installed power capacity increased by 15.9 %.

Pursuant to the Law on Electricity, generators, auction and independent suppliers' prices are not regulated in Lithuania. Prices of transmission and distribution network operators, as well as by public suppliers are regulated by setting the price caps. Concrete prices and tariffs are set by energy companies themselves. State-regulated prices and concrete prices and tariffs are announced and controlled by the NCC.

### **3.2.3. MEASURES TO AVOID ABUSES OF DOMINANCE**

The Law on Electricity provides for non-regulated electricity and reserve power capacity prices by electricity generators and independent suppliers with exception of cases, where a generator or independent supplier occupies over 25 % of the market. Electricity and reserve power capacity price regulation procedure for the generators and independent suppliers occupying more than 25 % of the market, as well as procedure for regulation balancing energy price falls within the NCC's scope of competence.

Relations among companies within the energy sector, as well as relations with energy resource and/or energy users are based on contracts. Energy supply, transmission and distribution contracts must be public. Electricity is supplied, transmitted and distributed to regulated customers and natural persons according to contracts signed under compulsory standard conditions. Such standard conditions to be included into energy transmission, distribution and supply contracts on compulsory basis and binding to regulated customers and natural persons must be approved by the Government or other thereby authorized institutions in performance of the state energy management function. As presented by suppliers, standard conditions to be included into electricity sales – purchase contracts (agreements) concluded with household customers must be approved by the Government authorized institution in coordination by the National Consumer Rights Protection Board at the Ministry of Justice.

Agreements with household customers are concluded for unlimited period of time unless otherwise is specified by such agreements. Such agreements may also provide for certain electricity quality parameters, responsibility for implementation thereof and other conditions.

In compliance with the Rules on Trade in Electricity approved by the order No. 380 of the Minister of Economy, as of December 18, 2001, the market operator must submit information on amount of electricity used and/or supplied by each market participant by hours within a trading day, as well as on imports, exports and regulating instructions given by the transmission network operator's dispatcher office within a trading day, establish the results of trading in balancing and regulated electricity and provide an access for each market participant to information relevant thereto, establish the results for each day in a month and issue respective references to each market participant to be used in making invoices for balancing energy and regulated electricity.

***Legal Documents Regulating Trade in Electricity:***

1. *The Procedure for Regulation of Electricity and Reserve Power Capacity Price Applicable to Electricity Generators and Independent Suppliers Occupying over 25 % of the Market* approved by the resolution No. 112 of the National Control Commission for Prices and Energy, as of November 19, 2001;

2. *The Methodology for Setting Electricity Transmission and Distribution Service Prices and the Price Caps thereof* approved by the resolution No. O3-85 of the National Control Commission for Prices and Energy, as of August 30, 2004;

3. *The Methodology for Setting Public Electricity Prices, Public Supply Service Price and the Price Caps thereof* approved by the resolution No. O3-85 of the National Control Commission for Prices and Energy, as of August 30, 2004;

4. *The Regulation Procedure for Balancing Energy Price* approved by the resolution No. 135 of the National Control Commission for Prices and Energy, as of December 23, 2002;

5. The Resolution No. O3-99 by the National Control Commission for Prices and Energy on *Setting the Price Caps of Prices for Services by Lietuvos Energija AB*, as of October 11, 2004.

6. *The Procedure of Promotion of Purchasing Electricity Generated out of Renewable and Waste Energy Resources* approved by the Government of the Republic of Lithuania resolution No. 1474, as of December 5, 2001;

7. *The Rules on Trade in Electricity* passed by the order No. 380 by the Minister of Economy, on December 18, 2001;

8. *The Rules on Obligation to Provide Public Services* approved by the Government resolution No. 1474 as of December 5, 2001;

9. *The Rules on Licensing of Activities within the Energy Sector* approved by the Government resolution No. 1474 as of December 5, 2001;

10. *The Rules on Obligation to Provide Public Services* passed by the order No. 380 of the Minister of Economy on December 18, 2001.

Distribution network operators are also public suppliers of electricity. At present, there are any eligible customers of electricity, what would use public electricity distribution service and receive their electricity from an independent electricity supplier. Prices of services provided by a public electricity supplier and public electricity prices are regulated by the NCC. Public suppliers are allowed to satisfy 70 % of their energy need by making bilateral electricity purchasing agreements with electricity generators, and the remaining part of this need is satisfied by buying out electricity in accordance with their obligation to provide services in compliance with the public interest and at an energy auction held by the transmission system operator.

Distribution network undertakings must supply quarterly electricity balances to the Ministry of Economy, where they must specify: amounts of electricity bought upon contracts, amounts of electricity related to services in compliance with the public interest, amounts of additional electricity, amounts of electricity bought from minor water power plants, etc. Such companies also submit other reports on amounts and tariffs of electricity sold, not only to the Ministry of Economy, but also to the Department of Statistics.

Each natural or legal person ascribed to a certain customer category according to the operator and/or supplier established procedure and criteria, in possession of facilities consuming electricity or networks in compliance with the set forth technical requirements, fulfilling technical connection requirements, having a pre-set site for connection to the operator's network and electricity measuring units installed, must enter into the electricity sales – purchase agreement with the supplier (including public supplier or independent supplier) before commencement of electricity supply under non-discriminating conditions. In contracts (agreements) between eligible customers and distribution network operators, electricity transmission service must be estimated. Where electricity to customers (including eligible customers) is supplied by the public supplier, no separate agreement for the distribution service is required to enter with the distribution network operator. In this particular case, conditions of the aforementioned agreement, duties, rights and responsibilities of the parties must be included into respective electricity sales-purchase agreement to be made with the public supplier. With exception of agreements with household consumers, all contracts (agreements) are of certain specified term. Where prior to the expiration of the term none of the parties notify on termination and/ or amendment of the given agreement and/or conclusion of a new agreement, the given agreement is considered extended for the same term under the same conditions. Where prior to the expiration of the term of such agreement a party to such agreement suggests for making a new agreement, before making such new agreement the relations between the parties will be governed in accordance with conditions contained in the previous agreement. A

customer is entitled to terminate agreements on unilateral basis with prior 30 calendar days written notice on such termination sent to respective operators and/or supplier only provided that all and any payments due for such user are fully made. The operator and/or supplier is entitled to terminate the agreement with the customer (with exception of household users) upon the court judgment or on unilateral basis with 30 calendar days prior written notice on such termination sent to respective customer, if such customer (including a eligible one) is in full or partial breach of its contractual obligations. Such agreements may also provide for other termination causes.

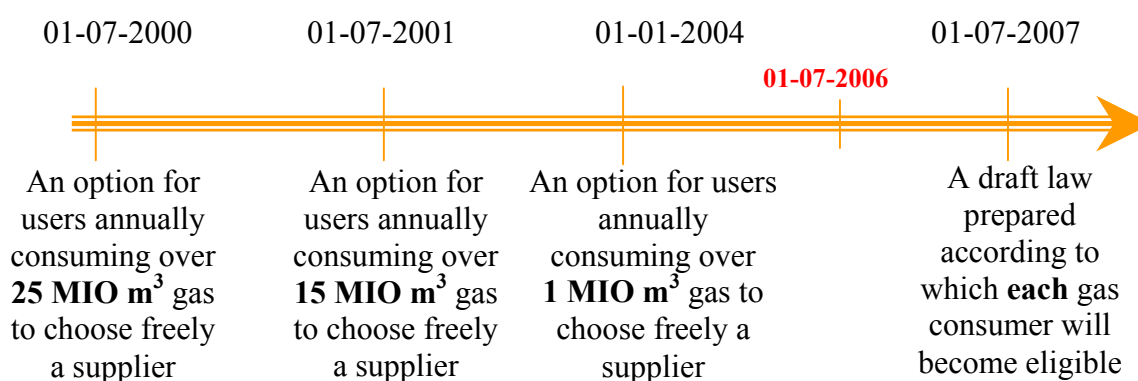
## 4. REGULATION AND PERFORMANCE OF THE NATURAL GAS MARKET

### 4.1. REGULATORY ISSUES.

#### 4.1.1. MARKET LIBERALIZATION

Liberalization of the Lithuanian natural gas sector was started in 2000, when the Seimas of the Republic of Lithuania ratified the Law on Natural Gas. Diagram 11 shows the legal opening of Lithuanian natural gas market since 2000.

Diagram 11. Legal Opening of Lithuanian Natural Gas Market



The present level of legal opening of Lithuanian natural gas market ensures conditions for 90 % of gas consumers to become eligible customers, although as for July 1, 2006, the actual natural gas opening level was 81 %, i.e. remained unchanged since 2004. 28 gas customers were treated as eligible, a right to the eligible customer's status was given to 113 consumers in total (see Table 25). A new draft of the Law on Natural Gas has been submitted to the Seimas of the Republic of Lithuania for consideration. By this draft, all regulations contained in the Directive 2003/55/EC are planned to introduce to the Lithuanian legal system, including the requirement to open the gas market to all consumers as from July 1, 2007.

Table 25. Lithuanian Natural Gas Supply Market Participants

Market Participants	Number of consumers having the right to gain a eligible customer's status and number of gas supply companies operated under gas supply licenses			Number of eligible customers and gas supply companies actually engaged in these activities		
	2003	2004	2005	2003	2004	2005
Eligible customers	95	109	113	23	26	28
Gas supply companies	13	14	14	3	3	3

Lithuania has none of its own natural gas resources. Gas is imported to Lithuania from a single source, Gazprom AAB. In 2005 gas to eligible customers in Lithuania were supplied by 2 gas supply companies, Lietuvos Dujos AB and Dujotekana UAB. Each of them has been given a pre-set gas quota by Gazprom AAB: Lietuvos Dujos AB supplied 62 % of gas and Dujotekana UAB 38 % of gas to eligible customers in 2005. Such a situation on the gas supply market created some possibilities to gas suppliers to precondition natural gas prices applicable to consumers: Lietuvos Dujos AB traded in gas with 15 % profit margin and Dujotekana's profit margin reached up to almost 21 % in 2005.

#### **4.1.2. MANAGEMENT AND ALOCATION OF INTERCONNECTION CAPACITY AND MECHANISMS TO DEAL WITH CONGESTION**

Lithuanian natural gas system has border links to Belarus, Latvian and Russian gas systems. Table 26 shows the gas import capacities through the main cross-border points to the neighboring countries.

Table 26. Capacities at cross-border points

Interconnection	Capacities, MIO m <sup>3</sup> /hr
Lithuania – Latvia	0.22
Latvia – Lithuania	0.22
Belarus – Lithuania	1.20
Lithuania – Kaliningrad's Region	0.28

Gas transportation through interconnections to Russia, Belarus and the Republic of Latvia is regulated by contracts. Capacities of such border links are limited by setting the maximum allowable monthly loads, +/- 5 % of the average daily consumption for the month.

In 2005 Lithuanian natural gas import capacities amounted to 8.5 billion m<sup>3</sup> per year. The need for natural gas by Lithuanian customers was 3.1 billion m<sup>3</sup> annually.

In accordance with the long-term Agreement between Lietuvos Dujos AB and Gazprom AAB for 1999-2015, natural gas is transported by transit to the Kaliningrad's Region (Russian Federation). The transit capacities foreseen in the aforementioned Agreement for 2006-2015 amount to 1.05 billion m<sup>3</sup> annually.

Maximum import capacity depends on the characteristic of the imported gas supply modes (pressures, temperatures, etc.), they as well depend on the capacity of the gas measuring stations in Kotlovka (Belarus – Lithuania) and Kemenai (Lithuania – Latvia). Presently, the transmission system operator has no methodology to apply for calculation of technical import capacity, and the calculation of the technical import capacity is based on the design capacities of the networks and measuring stations taking into consideration the gas supply mode indicators.

In 2005 no trade in transmission system capacities was carried out on the secondary market within the Lithuanian natural gas sector.

General organizing principles 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 Natural Gas. In compliance with provisions of the aforementioned Law, a right to use the transmission system is granted to gas suppliers, eligible customers, distribution undertakings and gas companies transporting gas by transit. Section 2 of Article 9 of the Law on Natural Gas contains a provision ensuring prohibition to a transmission system operator to discriminate the system users and gas customers falling within different categories in favor of other consumers or undertakings related to the transmission system operator. Sections 2 and 3 of Article 19 of the aforementioned Law provide for an obligation to a transmission system operator to disclose information on the system access conditions to all system users, and a duty to notify the NCC about all cases, when the operator refuses any user's application for provision of transmission services. Section 4 of Article 19 of the Law on Energy provides for a requirement to a system operator to submit information on its pursue activities, charges of services and services provided to gas consumers within the territory of operation of such system operator.

Paragraphs 74 and 75 of the Rules for Transmission, Distribution, Storage and Supply of Natural Gas foresee an obligation for a transmission system operator to publish the main conditions for the use of the transmission system, including the transmission charge, free, still available capacity and the period of validity of such conditions, 30 calendar days prior to the commencement of application of such conditions, at the latest. The Rules also oblige a transmission system operator to notify the system users on any planned system repairs or connection of other users to the gas networks, as well as specify the period, when any restriction or termination of gas transmission is planned (i.e. the commencement and expiration dates of such period).

#### **4.1.3. THE REGULATION OF THE TASKS OF TRANSMISSION AND DISTRIBUTION COMPANIES**

Pursuant to the Law on Natural Gas of the Republic of Lithuania, natural gas transmission, distribution, storage and supply are considered to be licensed activities. The Licensing Regulations are approved by the Government of the Republic of Lithuania. Licenses are issued by NCC, which is also in charge of controls over the licensed activities.

On July 1, 2006, Lithuania had a single natural gas transmission system operator, also operating as a distribution system operator, and 6 local distribution systems operators. Natural gas transmission and distribution system operators are listed in Table 27.

Table 27. Natural Gas Transmission and Distribution Undertakings

No.	Undertaking	Type of License	Local/ National Network	Key Shareholders
1	Lietuvos Dujos AB	Natural gas transmission; Natural gas distribution	National	E.ON Ruhrgas International AG, Gazprom AAB, State Property Fund
2	Achema AB	Natural gas distribution	Local	Private undertaking
3	Druskininkų dujos UAB	Natural gas distribution	Local	Private undertaking
4	Intergas UAB	Natural gas distribution	Local	Private undertaking
5	Fortum - Joniškio Energija UAB	Natural gas distribution	Local	Private undertaking
6	Agrofirma Josvainiai AB	Natural gas distribution	Local	Private undertaking
7	Energijos Sistemų Servisas UAB	Natural gas distribution	Local	Private undertaking

Before June 2002 a license to supply natural gas was mandatory to these gas undertakings only, which supplied gas to regulated customers. From June 2002 on holding natural gas supply licenses are compulsory to all gas undertakings including those, what supply gas to eligible customers only. Table 28 reflects the number of licensed natural gas supply undertakings.

Table 28. Licensed Natural Gas Supply Undertakings

Number of Supply Licenses Issued		Engaged in Licensed Activities in 2005	
For Natural Gas Supply	Natural Gas Supply (to eligible customers and gas distribution companies only)	For Natural Gas Supply	Natural Gas Supply GDT (to eligible customers and gas distribution companies only)
6	8	5	2

### Transportation Tariffs

Gas transmission and distribution prices are regulated by approving the price caps calculated in compliance with the Methodology for Setting Natural Gas Price Caps. Such Methodology is prepared and approved by the NCC. Methodologies for calculation concrete prices are prepared and approved by separate gas undertakings. The price caps for gas transportation are approved by the NCC for a period of three years. These price caps are corrected on the annual basis depending on inflation, operational efficiency ratios, changes in gas consumption volumes, as well as other factors, not depending on the undertaking's operation. Gas undertakings set concrete transportation prices not exceeding with the price caps as approved by the NCC.

Gas transmission and distribution prices are applicable by the "postage stamp" principle irrespective of the transmission and distribution distance. In setting the price caps, gas transportation amounts and costs are calculated, taking into consideration actual transportation amounts and actual costs by the undertaking within the last three years, as well as forecasts for the next three years. Once in a quarter, gas undertakings submit the monitoring data on their licensed activities required for setting and correction of the price caps, as well as controls over gas undertakings' prices. Such monitoring data include: financial accounts on licensed operational activities, costs account, investment management statement, account on the connected users, gas supply and transportation reports, report on changes in the undertaking's long-term assets and report of the service quality indicators.

In 2005 the NCC approved the amendments in the Methodology for Setting Natural Gas Price Caps. The regulations for calculation of undertaking's standard profit and regulations for profit correction in excess of the standard profit were amended, as well as a possibility ensured for gas undertakings to differentiate gas distribution prices in the amended Methodology.

The new edition of the Methodology foresees profit calculation out of the balance value of undertaking's long-term assets with the annual interest rate of 3 years duration applicable on the State bonds and the investment risk premium, not exceeding 3 percentage points. Profit calculation base is set considering the long-term assets value of the licensed activities subtracting the value of assets kept in reserve, not used or related to the licensed activities and/or removed from operation, as well as money paid by users for their connection to gas networks and the long-term assets revaluation result.

To encourage the efficiency of gas companies' activities, the Methodology provides for a possibility to efficient-operated gas undertakings to increase the standard profit margin up to 4 percentage points, and in case the undertaking improves its service quality and security of gas supply - by one additional percentage point. On the contrary, where the undertaking reduces its service quality or continuity of supply, its standard profit margin should be reduced respectively by

1 percentage point. So that companies could not save assets for account of investments, the Methodology provides a condition, according to which the profit part in excess to the standard profit may be reduced, if the given gas undertaking has failed to carry out its investment programs approved by the NCC.

Earlier applied practice, when the price caps were calculated for each natural gas service within each consumer category, was refused in the new edition of Methodology. The Methodology provided for the NCC's obligation to approve only one price cap for each separate service (gas transmission, distribution or supply to regulated suppliers) thus creating conditions for gas undertakings to select the most appropriate price differentiating method by themselves and form more flexible pricing policy. The NCC's obligation to check, whether concrete prices set by gas undertakings not exceeding with the price cap and are not discriminatory in respect of other consumers or consumer categories, however have remained in the new edition.

In 2005 the NCC set the transportation price caps for the largest gas transportation undertaking Lietuvos Dujos AB to be applied as from July 1, 2005 to June 30, 2008. Table 29 reflects network charges in Lithuania.

Table 29. Network Charges Applicable as from July 1, 2006

Description	D3*	I1*	I4-1*	I4-1**
Network charges, EUR/MWh (VAT excluded)	6.57	6.57	3.83	3.75

\* to regulated customers

\*\* to eligible customers

### Continuity of Supply Indicators

Pursuant to the Rules for Transmission, Distribution, Storage and Supply of Natural Gas approved by the Government of the Republic of Lithuania, the Ministry of Economy is authorized to approve the quality requirements for licensed activities, and the NCC – to ensure the control over fulfillment of the aforementioned requirements. The Quality Requirements for the Licensed Activity Services have not been still prepared.

After inspection of principles for collection and classification of information on the planned and unplanned gas supply interruptions and reviewing the reporting of such information, from 2004 on, the largest natural gas undertaking in Lithuania Lietuvos Dujos AB started including the reports on short-term gas supply interruptions due to technical inspections of gas systems in buildings into its accounting system of data about the planned gas supply interruptions. The average planned

natural gas supply interruption number was 0.2335 per system user and the average duration of such planned interruptions was 2.0658 minute in 2005.

Data on unplanned natural gas supply interruptions are presented in Table 30. The average number of unplanned gas supply interruptions was 0.00512 per system user, whereas the average duration of such unplanned interruptions was 0.1395 minute per system user.

Table 30. Data on Unplanned Interruptions in Natural Gas Supplies by Lietuvos Dujos AB, 2005

Number of unplanned interruptions	Number of disconnected users	Duration (min) of unplanned supply interruptions	Average unplanned gas supply interruption number per system user	Average unplanned gas supply interruption duration (min) per system user
537	2742	74780	0.00512	0.1395

The most often causes of unplanned interruptions in natural gas supply account for the natural calamities and the third parties' impact, such as earthworks carried out in the irresponsible manner.

### Balancing

Basic requirements to the balancing of the Lithuanian natural gas transmission system are set forth in the Rules for Transmission, Distribution, Storage and Supply of Natural Gas approved by the order No. 48 of the Minister of Economy passed on February 5, 2002.

The transmission system operator, Lietuvos Dujos AB, is directly responsible for the balanced operation of the gas transmission systems located and connected in the territory of Lithuania. The directions of the aforementioned undertaking on balancing of gas flows are binding to all natural gas distribution, storage and supply companies, as well as companies carrying gas by transit, as well as the system users. The gas undertaking in charge of the balancing prepares gas flow balances according to the concluded contracts and gas amounts supplied to the gas system. The system users are entitled to make certain corrections on the gas transmission quantities as determine in the contracts on conveyance or delivery points, but these quantities can never exceed the maximum hourly quantities specified in respective gas transmission, distribution or storage contracts. Supply contracts provide that the gas balance cannot exceed the standard monthly amounts,  $\pm 5\%$  of a daily amount (daily amount = monthly amount/ number of days in the month).

Household and small commercial customers (making up to 6 % of all consumers) do not participate in the gas transmission system's balancing. Gas consumption restrictions are foreseen in 13 % customers' gas supply contracts, although such consumers do not pay balancing charge, i.e.

they participate in the balancing process only passively. The remaining system users (eligible customers) actively participate in the system balancing process.

Seeking to satisfy the gas needs of all consumers, a gas transmission, distribution and storage undertaking plans prospective gas transmission, distribution and storage capacity within the gas system. A gas supply undertaking, system user and customer (with exception of household customer and customer using annually under 20 thousand m<sup>3</sup> of gas) plan for prospective gas supply and/or usage amounts (quantities) and notify them to the transmission and distribution undertaking. Consumption forecast for small customers (using annually under 20 thousand m<sup>3</sup> of gas) is carried out by the system operator once in a year. Such forecast is corrected on a quarterly basis, 50 days prior to the beginning of the current quarter. These customers can use exactly the amount of gas they need. System users participating actively in the gas system balancing pay the balancing charges (see Table 31). System users consuming in excess of the gas balance pay respective penalties for disbalance (see Table 32). Presently, Lithuania does not have any official balancing charges calculation methodology. The prices are set by the transmission system operator. Natural gas balancing charges and penalties for disbalance are set in respective natural gas transportation contracts. The new draft of the Law on Natural Gas as submitted to the Seimas for consideration provides that the transmission and/or distribution system operators should prepare the System Balancing Regulations to be approved by the NCC. The new edition of the aforementioned Law also provides an obligation for the NCC to prepare a Methodology for Balancing Charges Calculation and approve specific balancing charges.

Table 31. Balancing Charges

Description	In warm season of the year	In transitional season (spring, autumn)	In cold season of the year
Balancing charges, EUR/MWh	0.29	0.89	1.78

The penalties shall be applied to system users in cases of the following disbalances (see in Table 32):

- exceeding the capacity unapproved by the system operator;
- exceeding the capacity approved by the system operator;
- penalty for unused capacity.

Table 32. Disbalance Penalties

Description	In warm season of the year	In transitional season (spring, autumn)	In cold season of the year
Penalty for exceeding unapproved capacity, EUR/MWh	6.53		
Penalty for exceeding approved capacity, EUR/MWh	0.40	1.09	2.18
Penalty for unused capacity, EUR/MWh	0.10		

In setting the amount of disbalance penalty, a user's daily (24 hours) gas consumption is recorded. In case of disbalance, a detailed calculation method of such disbalance penalty is presented in respective gas transportation bill. Such bill is filed once or twice a month.

A penalty for exceeding unapproved capacity is payable, when a system user is in excess of its daily gas consumption without prior approval from the system operator. A penalty for exceeding approved capacity is payable, when a system user is in excess of its daily gas consumption with prior approval from the system operator.

The same penalty for disbalance is also payable by the transmission system operator to the user, where the operator limits (restricts) the contractual capacities. A penalty for any limitation of approved user's capacity is payable only in respect to the daily (24 hours) gas amount procured by the system user from a gas supply undertaking, which has been refused to transmit by the transmission system operator in question.

The following incentives are applied to the system users by a transmission system operator: economic benefits for excess of contractual capacities to the system users with interrupted gas supply mode, i.e. such users, to which the gas supply undertaking may disconnect gas supply any time.

Lithuania applies daily (24 hours) natural gas balancing interval. The possessed technologies restrict from the hourly gas system balancing. The balancing is carried out to all active balancing system participants from a single centralized unit.

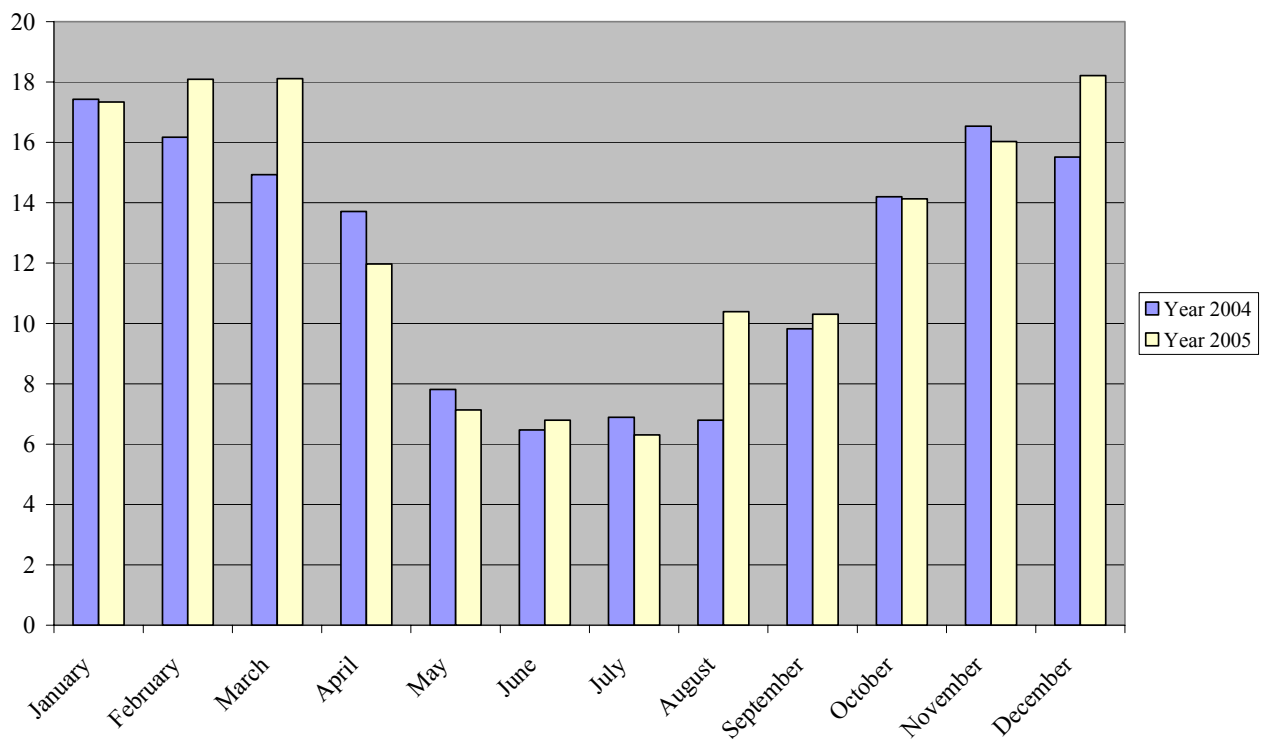
Procedure for providing information related to the balancing mechanism is foreseen in respective contracts. Each Thursday a system user provides information on the natural gas amounts required for transmission and distribution during next week, and the system operator gives its approval or disapproval towards them. Where the system operator cannot transmit and distribute the natural gas amounts required by the system user, the operator corrects them and approves such gas amounts, which it will be able to transmit and distribute. The aforementioned information is

provided to the system user each Friday. At present, the transmission system operator does not provide uninterrupted information on the transmission system's balancing to market participants.

A gas undertaking must have a 24-hours functioning telephone line or any other means of communication, which would serve for operative reception of information on gas supply interruptions, limitations, variations from the user's mode and emergency situations from gas transmission and distribution undertakings and conveyance thereof to users.

Recently eligible customers have been regularly using maximum firm capacity during the cold season of the year (peak time). Large users have been often exceeding the maximum firm capacity. Such natural gas supply mode is only possible, when transmission system operators work in close cooperation with foreign operators. Diagram 12 shows the maximum daily natural gas consumption within a month's period.

Diagram 12. Maximum Daily Gas Consumption in a Month, MIO m<sup>3</sup>, 2004 and 2005



#### 4.1.4. EFFECTIVE UNBUNDLING

The Law on Natural Gas provides that vertically integrated gas undertakings must handle separate accounting systems of the following activities: gas transmission, distribution, storage and supply. Financial accounting systems for all activities must be handled in such a way as they should be handled, if such activities would be carried out by separate undertakings. Basic operating cost

unbundling principles are set in the Methodology for Setting Natural Gas Price Caps approved by the NCC. Each gas undertaking must prepare the Rules for Unbundling of Licensed Activities and submit them to the NCC. In handling their accounting systems, gas undertakings must prepare balance sheets and profit (loss) accounts for each type of activities. The NCC implements control over effective unbundling of accounting systems of different gas activities and avoidance of cross-subsidizing to transmission, distribution, storage, supply and activities not related to the gas sector.

In 2005 the gas sector had 4 natural gas distribution undertakings engaged in gas distribution and supply activities servicing less than 100 thousand consumers. A single gas transmission, distribution and supply company Lietuvos Dujos AB serviced more than 100 thousand consumers. All operational natural gas transportation undertakings are not legally unbundled from their gas supply divisions. Presently applicable Law on Natural Gas does not contain the requirement for legal dissociation of activities of integrated natural gas undertakings, where such undertakings service more than 100 thousand consumers, so the rule of 100 consumers is not applicable at the moment.

Table 33. Average Headcount in Lietuvos Dujos AB in 2005

		Transmission	Distribution	Supply to regulated customers	Other activities	In total
Headcount	Persons	350	1231	186	188	1955
	%	17.9	63.0	9.5	9.6	100
	%	90.4			9.6	

According to the Licensing Rules in the Natural Gas Sector, a separate license is issued to persons willing to be engaged in each type of licensed activities within the natural gas sector. In expiration of each financial year, independent auditors must perform consolidated financial accountability, as well as revenue and cost audits according to the licensed activities. Financial accountability and auditors' opinion are presented to the NCC. Activities Report is supplied with the Annual Corporate Operation Report. Gas undertakings must publish their consolidated financial accounts.

Lietuvos Dujos AB handles separate bookkeeping accounts and reports on their transmission, distribution, and supply to regulated consumers and non-operational activities. The company prepares balance sheets and profit (loss) accounts for its separate activities, but such reports are not presented to the public at large. Lietuvos Dujos AB has a single trademark, Website on the Internet and is introduced as Lietuvos Dujos AB ([www.dujos.lt](http://www.dujos.lt)). Shares of the company are traded on the Lithuanian Central Securities Exchange with its quarterly reports being published as required by the

Securities Exchange. Key shareholders of the company Lietuvos Dujos AB are the following: E. ON Ruhrgas International AG holding 38.9 % shares, Gazprom AAB holding 37.1 % of the corporate shares and the State Property Fund with 17.7 % of the corporate shares. 6.3 % of shares are held by different natural and legal persons.

#### *Responsibility for Violation of Requirements Set forth to the Licensed Activities*

The NCC may impose penalties, suspend and/or revoke a license for violations of licensed activity. In suspending the license, the NCC must set a term, during which an undertaking must eliminate its breaches of the licensed activity requirements. Where the violations are not eliminated to the set term, the license may be revoked.

Infringing persons responsible for performance of the licensed activity may be held responsible in compliance with the procedure as provided in the Administrative Code. The Administrative Code foresees certain responsibility for any breach of requirements set forth to energy resources or energy transmission, distribution, storage, supply or use activities, as well as failure to provide the data on economic financial activities of an energy resources or energy supply undertaking and/or provision of knowingly misleading information, violation or non-compliance of the NCC resolutions, as well as incompliance with the NCC instructions.

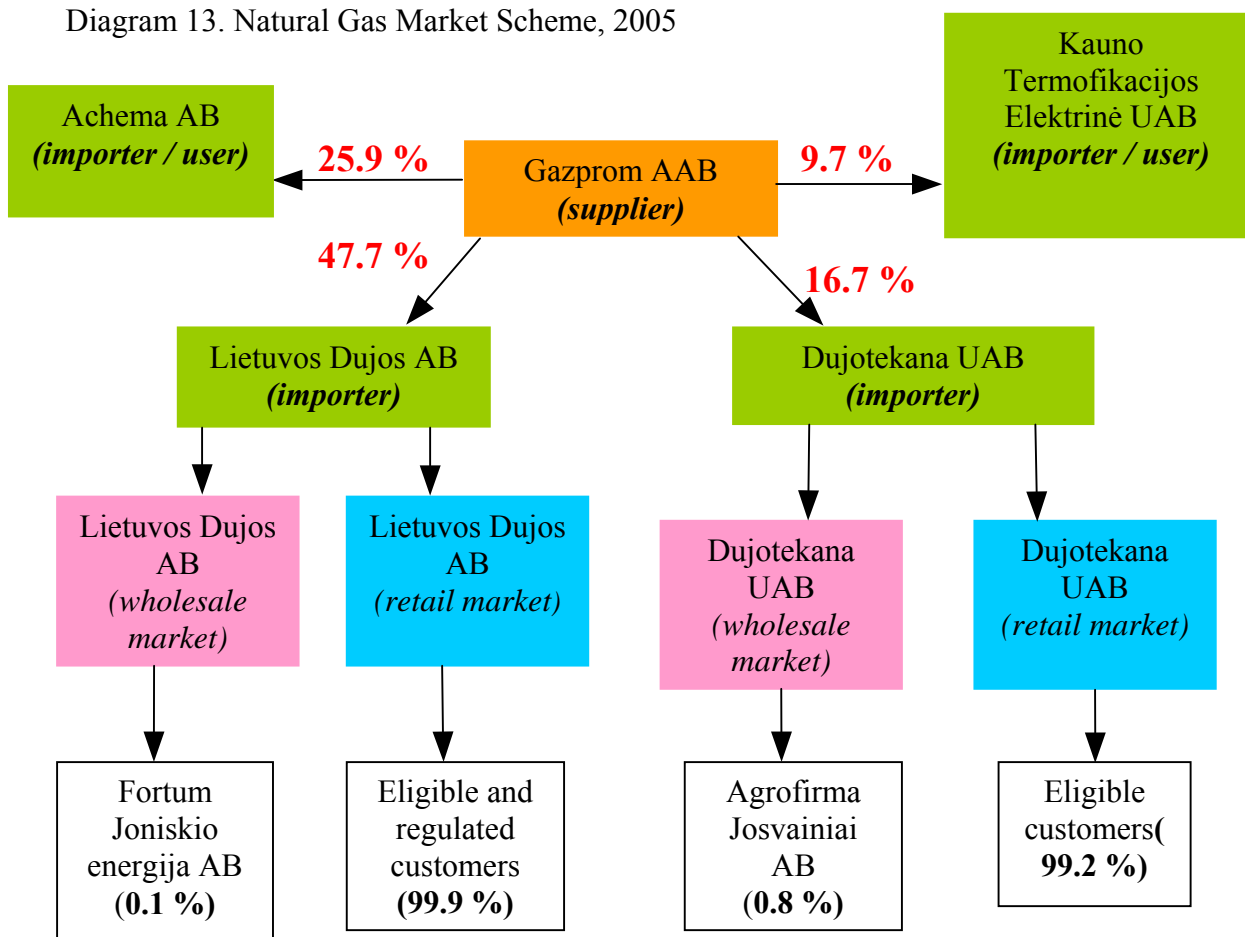
In 2005, after finding out violations in the licensed activities, the NCC issued 20 protocols for breach of administrative law. It is noteworthy that legal entities are not held responsible in compliance with the administrative law procedures. Directly responsible officials and natural persons are penalized instead, for such violations. Two basic types of penalties are provided in the Administrative Code of the Republic of Lithuania, namely, a caution and penalty depending by its amount on the character of violation.

## **4.2. COMPETITION ISSUES.**

### **4.2.1. DESCRIPTION OF THE NATURAL GAS MARKET**

Annual imports of natural gas to Lithuania amounted to 3.116 billion m<sup>3</sup> in 2005, and consumption reached up to 3.062 billion m<sup>3</sup> natural gas. The average calorific value of natural gas was 33.5 MJ/m<sup>3</sup>. Natural gas is not produced in Lithuania; the entire quantity is imported from Russia.

Diagram 13. Natural Gas Market Scheme, 2005



99.2 % of gas was imported and supplied by four gas undertakings, including two of such undertakings, Achema AB and Kauno Termofikacijos Elektrinė UAB, which purchased natural gas directly from Gazprom AAB to satisfy their own needs. Other two gas supply companies, Lietuvos Dujos AB and Dujotekana UAB, traded in gas on both, the wholesale and retail markets. In 2005 a rather small amount of gas, 7 million m<sup>3</sup> or 0.2 % of the total quantity of gas, was sold on the wholesale market in 2005. In difference to other suppliers, Lietuvos Dujos AB supplied gas to regulated, as well as eligible customers on the retail market. The market share occupied by both suppliers (i.e. Lietuvos Dujos AB and Dujotekana UAB) is 100 %. Trade in natural gas is carried out by making annual gas sales - purchase contracts. Pursuant to Article 22 of the Law on Natural Gas, the NCC is entitled to getting acquainted with contracts signed between gas undertakings and consumers. Gas undertakings submit the basic conditions of signed gas sales – purchase contracts and annual operational reports to the NCC.

#### Competition Policy Actions

Competition policy actions are regulated by the Law on Competition of the Republic of Lithuania (the Official Gazette, 1999, No. 30-856). The aforementioned Law stands in regulation of activities by the state governing authorities, municipal institutions and legal entities that restrict or

may restrict competition, as well as unfair competition actions, and establishes rights, duties and responsibilities by these institutions and entities, as well as the legal framework for control over restriction of competition and unfair competition in the Republic of Lithuania. The Competition Council of the Republic of Lithuania carries out controls over fulfillment of requirements set by the Law on Competition by legal entities, state governing authorities and municipal institutions.

Legal acts of the Republic of Lithuania, basically including, but not limited to the Law on Energy, Law on Natural Gas, Law on Construction and others, make favorable environment for foundation of gas undertakings by issuing of respective licenses. Minimum requirements are set with unrestricted possibilities to develop the energy infrastructure and market relations in the natural gas sector.

#### 4.2.2. DESCRIPTION OF THE RETAIL MARKET

In 2005 natural gas was supplied to users by 6 supply undertakings, Lietuvos Dujos AB, Dujotekana UAB, Haupas UAB, Fortum Joniškio Energija UAB, Druskininkų Dujos UAB and Agrofirma Josvianiai AB. Dujotekana UAB was selling gas to 12 eligible customers and occupied 26.4 % of the gas supply market, Lietuvos Dujos AB supplied gas to 20 eligible customers and 535,977 regulated customers. The market share occupied by this company made up to 72.8 %. Haupas UAB supplied gas to small region in Lithuania – Druskininkai town and had 0.8 % of the market (see Table 34). Other companies occupied an insignificant share of the gas supply market.

Table 34. Gas Quantity Sold by Undertakings on the Retail Market and their Market Share in 2005

Gas Undertaking	Gas quantity, billions of m <sup>3</sup>	Gas quantity, GWh*	Occupied market share, %
Lietuvos Dujos AB	1.424	13250.71	72.8
Dujotekana UAB	0.517	4812.16	26.4
Haupas UAB	0.016	148.96	0.8

\* 1 m<sup>3</sup> = 33.5 MJ

According to gas consumption, key market participants were the following:

- gas power plant (26 users) occupying 52.2 % of the market;
- household and small commercial sector (more than 535 thous. users) occupying 8.8 % of the market;
- medium-sized industry and commercial sector (more than 1 thous. users) occupying 11.8 % of the market; and
- large industrial undertakings occupying 27.2 % of the market.

Natural gas consumers are divided into two categories, that of eligible customers and regulated customers. Regulated customers are the customers having no right to choose the supplier. Eligible customers may choose a supplier by filing an application to the gas supply undertaking, two months prior to the beginning of a calendar year. A user must file a prior written request, 14 calendar days in advance at the latest, to a supply undertaking for making a gas supply (sales – purchasing) contract. After estimation whether the supply undertaking can satisfy the need for requested gas quantity, it notifies the applying customer on its full or partial approval for the requested gas quantity, or refusal to meet the request, in 14 calendar days after the date of reception of the customers’s request. The refusal to meet the customer’s request must be objective, non-discriminating and well-motivated. The NCC must also be notified on such refusal to meet the customer’s request.

Gas supply company may be changed free of any charge in Lithuania. Eligible customers may choose between two gas supply companies Lietuvos Dujos AB and Dujotekana UAB. Prices of gas sold by these undertakings differ a lot: although they buy gas for similar prices, by selling gas to consumers, Dujotekana UAB apply by 36 % higher profit margin than Lietuvos Dujos AB. Many eligible customers would like to change their gas supply undertaking and purchase cheaper gas from Lietuvos Dujos AB, but their option possibilities are limited by the gas quotas issued by a sole gas seller Gazprom AAB to each gas supply undertaking. Such situation has partially been a precondition of the fact that none of existing eligible customer has changed their gas supply undertaking in 2005.

Table 35. Natural Gas Price according to the Components, as from July 1, 2006, EUR/MWh

Definition /Consumer Category	D3*	I1*	I4-1*	I4-1**
Network charge	6.57	6.57	3.83	3.75
Levies included into the transportation price	-	-	-	-
Gas price (commodity price)	13.43	13.43	13.43	15.11
Charge for gas supply	1.52	0.30	0.0003	0.0003
Taxes (VAT, 18%)	3.87	3.65	3.11	3.39
In total	25.39	23.95	20.37	22.25

\*prices for regulated customers

\*\*prices for eligible customers

### *Investigation of Complaints Related to the Third Party's Right to Use the Gas System*

Section 3 of Article 26 of the Law on Energy provides that the NCC is in charge of investigation of complaints (claims) related to the energy undertakings' activities or negligence in supply, distribution, transmission and/or storage of energy, to suspension of the right to use the networks and/or systems, to connection, energy supply flow balancing, application of charges and tariffs, in compliance with the preliminary procedure of claim investigation out of court. In its claim investigation procedures, the NCC follows the legal acts of general as well as special (sector-related) character and Preliminary Claim Investigation out of Court Procedure approved by the NCC. The majority of claims in the natural gas sector were related to conditions for connection to the gas systems and refusals to connect.

In 2005 pre-trial investigation was started in accordance with a claim by Intergas UAB regarding conditions of connection of a gas pipeline in the Mazeikiai region to the transmission network by Lietuvos Dujos AB. Intergas UAB was building the gas pipeline branch to the Mazeikiai region and applied to Lietuvos Dujos AB for making a contract regarding the connection of the aforementioned pipeline to Lietuvos Dujos AB transmission system. Signing the aforementioned contract failed since May 2004 because, according to Intergas UAB, Lietuvos Dujos AB had required payment of unreasonably high natural gas transmission system's connection and capacities expansion costs. The NCC found out that Lietuvos Dujos AB had failed to publish information on unused capacities of the transmission network and possibly discriminated the existing or future system users. It was also established that Lietuvos Dujos AB applied different investment payback criteria towards Intergas UAB and disproportionably divided the gas pipeline construction costs. The NCC obligated Intergas UAB to correct its application for connection to the transmission network, and Lietuvos Dujos AB to recalculate the connection fee. By the end of 2005, both interested parties signed the mutual pipeline connection agreement.

## 5. SECURITY OF SUPPLY

### 5.1. ELECTRICITY

Within the period of 2006 – 2008, Lithuania will retain surplus in generating power capacities (also considering possible exports of energy).

Taking into consideration the foreseen decommissioning of Ignalina Nuclear Power Plant and Lithuania's obligation to increase electricity generation out of renewable energy resources, construction of private power stations and power stations using renewable energy resources, mostly biomass and wind energy, is planned. Table 38 reflects the planned power capacity balances within Lithuanian energy system in peak demand for the period of 2006-2008.

Table 36. Forecasts of Change in Installed/ Disposable Power Capacity in Lithuanian Power Plants, by MW

	2006	2007	2008
<b>Ignalina Nuclear Power Plant</b>	<b>1300.0/1183.0</b>	<b>1300.0/1183.0</b>	<b>1300.0/1183.0</b>
Lietuvos Elektrine Power Plant	1800.0/1732.0	1800.0/1732.0	1800.0/1732.0
Mazeikiu Elektrine Power Plant	160.0/148.0	160.0/148.0	160.0/148.0
Vilniaus Elektrine Power Plant	384.0/367.0	372.0/352.0	372.0/352.0
Kauno Elektrine Power Plant	170.0/161.0	170.0/161.0	170.0/161.0
Kauno Energija	8.0/7.0	8.0/7.0	8.0/7.0
Klaipedos Energija	10.8/9.0	-/-	-/-
Panevezio Energija	-	36.0/32.0	36.0/32.0
<b>In total by thermal stations:</b>	<b>2532.8/2424.0</b>	<b>2560.8/2434.0</b>	<b>2560.8/2434.0</b>
Kaunas HPP	100.8/90.0	100.8/90.0	100.8/90.0
Kruonis Hydroelectric Pumped Storage Power Plant	900.0/380.0	900.0/380.0	900.0/380.0
Small private power plants	27.4	28	30
<b>In total by hydro power plants:</b>	<b>1028.2/470.0</b>	<b>1028.8/470.0</b>	<b>1030.8/470.0</b>
<b>Power plants by industrial companies and other undertakings</b>	<b>106.0/70.0</b>	<b>148.0/70.0</b>	<b>209.0/79.0</b>
Including:			
Biomass	3	15	25
Wind	1	31	82
<b>In total:</b>	<b>4967.0/4178.4</b>	<b>5037.6/4231.0</b>	<b>5109.6/4303.0</b>

Table 37. Maximum Capacity Demand, 2005-2009, MW

Year	Demand Maximum (gross)
2005	1780
2006	1940
2007	2070

2008	2140
2009	2220

Table 38 reflects the planned power capacity balances within Lithuanian energy system in peak times of demand for the period of 2006-2008.

Table 38. Planned Power Capacity Balances for the Lithuanian Energy in Peak Times of Demand, 2006-2008, MW

	2006	2007	2008
Installed/ disposable power capacity in power plants (not including half of disposable power capacities in Kruonis HPSPP, wind, biomass and small hydro power plants)	4178	4231	4303
Maximum system-demanded power capacity under the maximum growth of demand	1940	2070	2140
Export	~400	~350	~300
Compulsory long-term reserve	1300	1300	1300
<b>Balance of powers (surplus)</b>	<b>533</b>	<b>506</b>	<b>663</b>

Table 39. Forecasted Electricity Exports in 2006-2008, thous. kWh

Country	2006	2007	2008
Estonia	340	290	180
Latvia	680	520	520
Russia and Kaliningrad's Region	1460	830	798
Scandinavian countries	100	550	472
In total:	2580	2190	1970

The existing electricity generation capacities may be further expanded or new generation facilities installed on a new site only after obtaining a license (permit) for development of electricity generation capacities. Permits are issued to any person filing an application and ensuring their operational activities are in compliance with the following conditions:

- 1) electricity facilities and related equipment will be safe and reliable;
- 2) it will not cause any harm to human health;
- 3) will be in compliance with environmental requirements;
- 4) will be in compliance with the land use and selection of construction site requirements;
- 5) will be in compliance with the energy consumption requirements;
- 6) will be in compliance with technical, economic and financial possibilities;
- 7) services to be provided will be in compliance with the public interest;
- 8) will be in compliance with fuel requirements.

Permits for development of electricity generation capacities and generation of electricity are issued in accordance with the Regulations for Issuing Permits for Activities in the Electricity Sector

approved by the Minister of Economy. Presently 55 permits for development of electricity generation capacities have been issued (see Table 40) and 80 permits for generation of electricity (see Table 41).

Table 40. Permits (Licenses) for Development of Electricity Capacities, Valid as for 31-12-2005

Year	Development permits issued in total		Traditional electricity generation capacities	Electricity generation capacities using renewable energy resources			
	Number of permits	Power capacity, MW	Power capacity, MW	Of renewable resources, MW	Water, MW	Wind, MW	Others MW
2002	1	15	15				
2003	7	42.938	26.564	16.374	0.733	15.641	
2004	19	139.507	83.587	55.92	1.1	52.59	2.23
2005	28	85	58	26.465	0.915	25.3	0.25
In total:	55	282.254	183.495	98.759	2.748	93.531	2.48

Table 41. Permits (Licenses) for Generation of Electricity issued before 31-12-2005

Year	Generation permits issued in total		Traditional electricity generation capacities	Electricity generation capacities using renewable energy resources			
	Number of permits	Power capacity, MW	Power capacity, MW	Of renewable resources, MW	Water, MW	Wind, MW	Others MW
2002	28	4818	4812	6.1	6.0	0.16	
2003	19	56	50	6.0	3.7		2.29
2004	15	115	4	111.1	110.1	0.69	0.33
2005	18	639	602	36.7	4.8	0.15	31.75
In total:	80	5628	5468	160.0	124.7	0.99	34.37

In 2005 several types of fuel were used for generation of electricity. Nuclear fuel is used at the Ignalina Nuclear Power Plant. Natural gas prevails in the fuel balances of thermal power stations for electricity generation. These generators also use fuel oil and orimulsion to produce energy. A small part of electricity was generated by using renewable energy resources. Talking about the fuel balance for energy generation of the entire country, the following indicators revealed in 2005:

- 70 % electricity was generated using nuclear fuel;
- 24 % electricity was generated using fossil types of fuel, mostly natural gas;
- 6 % electricity was generated by hydro power plants.

## **Long-Term Planning and System Development**

Taking into consideration continuity of supply, quality effectiveness, use, management and environment requirements as set forth in the National Energy Strategy, and with the view of improving conditions for the use of the system, the long-term electricity system development is planned by the transmission system operator in coordination of the Government authorized institution and distribution network operators. Planning for the long-term electricity system development should be based on relevant scientific research. A right to install or develop the electricity networks within the territories specified in electricity transmission and/or distribution licenses is granted to holders of such licenses only. In case there are no persons willing to install new generation facilities, the Government authorized institution calls for a tender competition to install new industrial facilities and is responsible for arrangement of such tender and setting non-discriminating tender requirements for participants thereof.

Permits for development of electricity generation capacities are issued in accordance with the Regulations for Issuing Permits for Activities in the Electricity Sector approved by the Minister of Economy. Each undertaking willing to construct a power plant on a new site or increase the power capacity generated by the existing power plant, or in reconstruction of the existing or construction of new additional technological energy generation facilities has to obtain a permit for expansion electricity generation capacities. To its application for the aforementioned permit for development of electricity generation capacities, such undertaking has to enclose the following documents in proof of fulfillment of the following requirements:

- Safety and reliability of electricity, power facilities and related equipment;
- Environment conservation;
- land use and selection of the construction site;
- fuel to be used.

An undertaking with technological electricity generation capacities in excess of 10 MW summed power capacity (electric and thermal) has to submit a document in proof of the undertaking's capacities to store and maintain reserve fuel in stock.

The Ministry of Economy has to issue the permit to such applicant undertaking in 30 days after the date of reception of all required documents, or issue a motivated written refusal to issue such permit. Construction works of a new energy generation development facility must be carried out in such a way that the construction would be started and performed with at least 25% of total estimated construction and installation work value within the initial construction period fixed for no longer than 3 years.

To encourage the generation and purchasing of electricity produced with the use of renewable and waste energy resources in the Republic of Lithuania, general criteria, conditions and

requirements are set in compliance with the Government-approved Procedure for Encouragement of Generation and Purchasing Electricity Generated with the Use of Renewable and Waste Energy Resources.

Following this Procedure electricity generation by wind, biomass, solar energy and small hydro power plants (of under 10 MW power capacity) as well as purchasing such energy is promoted. The aforementioned power plants are connected to the networks of operable energy undertakings in compliance with procedures provided by respective legal acts with 40 % connection charge discount applicable to such generators. Such discount is treated as purchasing of services in compliance with the public interest and next year is reimbursed to operators connecting such power plants. Procedure and conditions for encouragement of purchasing electricity generated by geothermal power plants, hydro power plants with power capacity over 10 MW and power plants using waste energy resources, as well as procedure and conditions for connection of such power plants to the existing networks are set forth by the Government of the Republic of Lithuania.

Wind power plants of power capacity over 250 kW are constructed in the special areas without exceeding power capacity fixed for each such area and total power capacity of 173 MW fixed for all areas. Permits to generators willing to construct the aforementioned power stations are issued by organizing tenders.

Technical condition of key elements within the transmission system is of extreme significance to reliability of the entire energy system. The most of attention is given to maintenance of required technical condition. Taking into consideration the fact that a major part of the transmission system was built in 1960-ies and 1970-ies, and operability term for key network elements is about 30-40 years, it must be noted that in the nearest future Lithuanian faces great investments into technical updating of the network.

Transmission network operators in Lithuania, Latvia and Estonia prepared a study Baltic Grid 2012. The Study aims at setting possible development prospects for electricity transmission networks in the Baltic States up to 2012 to ensure security and reliability of operation of the aforementioned transmission systems, required quality of electricity supplied to consumers, and find out electricity transmission possibilities in integration into the energy systems UCTE and NORDEL in the neighboring countries. The study also considered the impact by decommissioning of Ignalina Nuclear Power Plant in 2009, possibilities for renewal of existing power plants and construction of new power plants and electricity lines. In conclusion, the study presented the guidelines for development of electricity transmission network in the Baltic States, foresaw inevitable changes within Lithuanian, Latvian and Estonia electricity transmission systems.

The transmission network, presently existing in Lithuania, has been estimated as sufficient to match the power capacity flows with application of different market scenarios. It has been noted

however that problems are possible in the network voltage regulation within the eastern part of the transmission network after decommissioning of Ignalina Nuclear Power Plant. Therefore it has been stated that installation of a regulated shunt reactor of 180 Mvar power capacity is necessary at the Ignalina facility, as well as 30 and 60 Mvar power capacity reactors at 330/110/10 kV Utena and Neris transformer substations.

The study has also specified that in the Lithuanian energy system the most dangerous is Klaipeda node, when during the summer repair mode the lines Sovetsk – Klaipeda or Jelgava (Viskali) – Broceni are disconnected, as after 2010 on the existing 110 kV network will not be fit for transmission of electricity in required quantities. To solve this problem construction of a new 330 kV line Klaipėda – Telsiai is necessary.

Interconnection of Lithuanian and Polish energy systems is planned through 1000 MW power capacity direct current branch in Alytus. Lithuanian-side investments for such interconnection of Lithuanian and Polish energy systems may amount to about 143 million Euros. If an agreement with Poland is reached for this construction, Lithuania will have to install 154 km 400 kV line Alytus – Elk (including the span of 48 km from Alytus to the border), and two-link 330 kV line stretching for 53 km from Kruonis to Alytus.

In accordance with this project, two additional 400 kV lines must be constructed on the Polish side: Elk – Narew (about 134 km) and Elk – Małki (about 169 km). Total investments of this interconnection system could amount to about 434 million Euros.

Such interconnection between Lithuanian and Polish electricity networks is necessary in order to ensure reliable electricity supply after decommissioning of unit II at Ignalina Nuclear Power Plant. After such interconnection, the electricity networks of the Baltic States would be connected to the Middle and Western Europe electricity networks, small electricity market of the Baltic States would be expanded, favorable conditions for competition on the electricity generation market and effective market operability would be ensured.

Contracts for construction of electricity transmission line (350 MW) of 110 million EUR value were signed between Estonia and Finland in Tallinn, on April 29, 2005. Lithuanian transmission system operator Lietuvos Energija AB has already invested 5.5 million EUR into this project, whereas its entire investment package to the project will amount to 27 million EUR. Partners in this Estlink project are the following undertakings: Lietuvos Energija AB and Latvenergo (Latvia) to own 25 % shares each, Eesti Energia (Estonia) to be holding 39.9 % shares and Finnish companies Pohjolan Voima and Helsingin Energija with 10.1 % shares each.

Nordic Energy Link, the consortium formed by five energy undertakings, has signed agreements with Swedish consortium ABB, the awarded tenderer, and the banks Nordic Investment Bank and SEB Eesti Ühispank. The European Commission has expressed no objection for an exception to be

applied in concern to this submarine cable line providing the project partners with a priority right to use the new cable and do not include the project costs in the electricity transmission tariffs of these countries. The entire length of the cable line is about 100 km, including 70 km to be laid on the seabed. The project deadline is foreseen by the end of 2006. The project has certain economical and political benefits, first of all due to its contribution to electricity supply reliability in the Baltic States, reducing the dependence on the Russian energy system, and creation of more favorable conditions for competition in the electricity generation sector. Implementation of the project will ensure the link between the Baltic and Scandinavian energy systems with participation possibilities on the electricity market in this region.

With the sponsorship from the Swedish Government and Ministry of Economy of the Republic of Lithuania, the interconnection possibilities between Lithuanian and Swedish electricity networks are being investigated (SwindLit project). Initial feasibility study has been prepared already, and the feasibility study SwindLit is planned for the nearest future to consider the possibilities of interconnection between the Swedish and Lithuanian energy systems by a direct current cable line for electricity exchange between the two systems. As one of the possible project suggestions may be construction of wind power station grounds on Swedish and Lithuanian shore.

In 2005 Lietuvos Energija AB prepared the Study **Plan for Development of 330-110 kV Network within the Lithuanian Energy System up to 2014**. The aim of this study was to evaluate the existing electricity system by Lietuvos Energija AB, foresee possible changes in 110 kV transformer substation connections in 2005-2014, carry out electrical calculations for 110 – 330 kV network modes and submit respective conclusions and recommendations for further network development, planning large investment projects and investments required for the network development and restoration.

By the end of 2005, following the requirements set forth in the Law on Electricity, **the System Development Plan** was prepared. The existing Lithuanian energy system (generation, consumption, flows in the lines and system reliability) was reviewed and the prospects including the system development plans up to 2014 were presented in the Plan. The System Development Plan will be submitted for approval to the Ministry of Economy, Rytu Skirstomieji Tinklai AB and VST AB.

Planning of investments is carried out in compliance with the following procedures approved by the Management of Lietuvos Energija AB:

**Investment Planning Procedure:**

– the procedure for planning investment or long-term asset purchasing projects is set forth to be applied in preparation, selection and implementation of different investment projects.

**Investment Project Implementation and Control Procedure:**

- the procedure is set for implementation, management and control of investment projects from the beginning to the end;
- key functions and responsibilities for an investment project manager, representative of the employer in charge and other persons participating in project implementation are defined;
- investments are planned by preparing the 10 and 5 year investment plans on periodic basis, i.e. in every two years;
- annual investment plans are prepared for implementation of an investment project.

All works are carried out considering the studies, including the following:

- Setting the Characteristics of Facilities within the Electricity System, as well as Dynamic Characteristics (2002);
- Breakdown Analysis of Equipment within the Transmission Network and Evaluation of its Reliability Status (2003);
- Analysis of Energy Supply Scenarios and Continuity of Energy Supply in The Baltic States (2004);
- Reactive Power Capacity and Voltage Control within the Transmission Network in Cases of Frequency Failure, in Operation of the System's Pre-emergency Automation (2004);
- Transmission Network Stability Studio for 2005, after Closure of the First Unit at Ignalina Nuclear Power Plant; Optimization of Normal Network Status, Modifications in the System's Pre-emergency Automation, Calculation Methodology for a Construction's Stability, Data and Application by Calculation Software PSS/E And Mustang (2004);
- Reliability Evaluation Methodologies for the Electricity Transmission Network (2004 M.);
- Investigation of Emergencies within the Energy System and Preparation of Recommendations for Emergency Prevention (2005);
- Analysis of Accidents and Facility Breakdowns in 2004 (2005);
- Methodology for Parameter Identification in Units' Dynamic Characteristics and Certification of Dynamic Characteristics in Power Generation Units (2005);
- Technical Feasibility Studio for Electricity Market Development in Lithuania (2002);
- Estimation of Overhead Expenses for Lithuanian Electricity System after Connection of Wind Power Plants (2003);
- Preparation of Localization Schemes for Construction of Wind Power Plants in Lithuania, Taking into Consideration Wind Energy Potential, Technical Opportunities for Connection to the Transmission Systems and Environmental Requirements, with Fixing Economically Reasonable Total Power Capacity Quotas to Each Locality (2003);
- Evaluation of Organizational Structure for Operational Controls in the Transmission Network (2005).

The existing electricity generation capacities fit fully to the needs of Lithuanian consumers and allow for exports of electricity. Moreover, Lithuania still has surplus in electricity generation capacities. Therefore no construction of new large power generation facilities is foreseen.

Taking into consideration the planned decommissioning of Ignalina Nuclear Power Plant and Lithuania's obligation to increase electricity generation out of renewable energy resources, construction of 25 MW cogeneration power plant in Panevezys and additional operation of about 130 MW power generation facilities using renewable energy resources, mostly wind energy, is planned.

Essentially, the existing electricity transmission and distribution networks are in compliance with the present demand for electricity. Three fourths of transmission and distribution facilities however have been produced some 20 years ago, and one fourth – some 30 years ago. Therefore Lithuania will soon face a need for investment, not only to maintain the existing level of electrical networks, but rather to improve their condition in order to satisfy the constantly growing requirements to reliability and stability of energy supply systems, as well as seeking to develop common electricity market for the three Baltic States.

A great disadvantage is lack of direct link between the Lithuanian and Western European and Scandinavian electricity systems. The planned interconnections to the Polish and Swedish energy systems will ensure possibilities for integration into the Western European and Scandinavian electricity markets and increase reliability of energy supply in Lithuania.

Notwithstanding the new wording of the Law on Electricity that has recently come into force, the situation on the market has not changed a lot during the third year of existence of the electricity market in Lithuania. With cheap electricity supplier, the Ignalina Nuclear Power Plant, still dominant on the market, other power stations still have restricted possibilities to expand their market share, as they have higher generation costs. Although starting from July 1, 2004, all commercial customers have been granted a eligible customer's status, the number of undertakings choosing the independent supplier has not changed. As in 2003, there are 6 such users and their electricity consumption amounts to 15 % of the sales market. All such users are connected to the high voltage network. This shows that it is more cost-efficient for users connected to the medium and low voltage network to buy electricity from the public supplier.

Starting from July 1, 2007, all consumers will be granted a eligible customer's status. After decommissioning of Ignalina Power Plant, competition may increase among power generators. This could animate the electricity market and more and more users might choose independent suppliers.

The development of electricity market should also be invigorated by the new electricity tariff policy applied by public suppliers.

## **5.2.GAS**

Gazprom AAB and Lithuanian natural gas undertakings have signed long-term gas sales - purchasing agreements. The first long-term agreement (for the period of 6 years) was signed between Gazprom and Lietuvos Dujos AB in 1999, and extended up to 2015. According to this agreement, Lietuvos Dujos AB has undertaken to transport natural gas supplied by Gazprom to the Kaliningrad's Region (Russian Federation). The gas transit capacities amounting to 1050 Mio m<sup>3</sup> annually have been reserved for 2006-2015 by the aforementioned agreement. Lithuania has any underground gas storage. Lietuvos Dujos AB keeps 15 Mio m<sup>3</sup> of natural gas in Incukalnis (Republic of Latvia) underground gas repository in 2005. Under the highest natural gas demand, gas provision is supplied with gas from the underground repository; Lithuania also negotiates with Gazprom for a possibility to consume over the agreed gas quantities, as well as with Beltransgaz for maintenance of the agreed pressure at gas measuring unit in Kotlovka (gas import point to the Republic of Lithuania).

Where shortage in natural gas is formed due to suppliers' fault or in cases of technical failures, gas may be supplied from the underground gas repository in Incukalnis.

Since the commencement of its operation in 2002, Dujotekana UAB has also made the gas sales-purchase agreement with Gazprom. This contract expires in 2012.

Capacities at cross-border points are sufficient and any congestion problems should not be faced within the nearest three years. Therefore Lithuania does not foresee any investment to increase its import capacities for 2007-2009. Nevertheless the transmission system operator, Lietuvos Dujos AB, has been making continuous investments into the transmission system development within the territory of the Lithuanian Republic. In the period of 2006 – 2009, the undertaking plans to invest 57 mio EUR to built new capacities and improve reliability of the Lithuanian transmission system, as well as gasification of the new territories.

Technical maintenance quality and required degree of such maintenance for networks within the natural gas system is ensured by performance of prevention maintenance and repair works sticking to their frequency as set in the Operation Rules approved by the Ministry of Economy of the Republic of Lithuania, also following the requirements set fort in legal acts regulating construction and other relevant activities. The performance quality and degree of such technical maintenance works is controlled by the State Energy Inspectorate. The aforementioned Inspectorate is also responsible for certification of employees engaged in construction and operation of energy

facilities, in compliance with regulations approved by the Ministry of Economy of the Republic of Lithuania.

In 2005 Natural gas consumption in Lithuania increased by 4 % as compared to 2004. The transmission system operator forecasts that this trend will remain similar in the future (see Table 42).

Table 42. Forecast of Gas Imports and unused Capacity in 2007-2009

Description	2007	2008	2009
Import, billions m <sup>3</sup> annually	3.6	3.9	4.2
Unused capacities, billions m <sup>3</sup> annually	3.5	3.2	2.9

Regulator and Other Institutions' Role Considering:

*- Requirements relating to 'supplier of last resort':*

Supervision on security of supply is carried out by performance of undertakings' operational activities monitoring, also monitoring the supply and demand, as well as by the NCC's oversight, how undertakings comply with the requirements set for the licensed activities. In supply of gas to consumers, gas supply undertakings must follow the Rules for Transmission, Distribution, Storage and Supply of Natural Gas, which provide in detail for natural gas supply termination, payment settlement and other issues. Presently, the assigned natural gas supply to consumers is implemented to all gas customers consuming up to 1 million m<sup>3</sup> gas annually. The natural gas supply price for such users is regulated.

The new draft Law on Natural Gas of the Republic of Lithuania provides for the NCC's right to obligate a gas undertaking holding a gas supply license to carry out the assigned supply in accordance with the Government established procedure.

*- Incentives to increase gas import capacity;*

Lithuania has sufficient gas import capacity and it is not planned for their increase in the nearest future. Therefore any special incentives to increase gas import capacity are not applied in Lithuania.

*- Requirements relating to the availability of storage for public service reasons;*

Lithuania has no natural gas storages installed. In order to improve the continuity of supply, in 2005 15 million m<sup>3</sup> gas was kept at the underground gas storage in Incukalnis (Latvia) according to the agreement signed between Lithuanian transmission system operator Lietuvos Dujos AB and Latvian system operator Latvijas Gaze AB; it is further foreseen to keep about 20 million m<sup>3</sup> gas.

### *Progress Made in Major International Infrastructure Projects*

At present, no project and/or studies are in progress for Lithuanian gas transmission network's interconnection to any transeuropean network.

In 2002 the study for interconnection of Lithuanian and Polish gas networks was performed by Ramboll company. Several possibilities were explored: to interconnect the Lithuanian gas transmission system and Yamal I, laid through the territory of Poland, or interconnect it to the gas pipeline planned from Denmark to Poland.

In 2005 several large investment projects were completed implementing the National Energy Strategy: a gas metering station was constructed at the Lithuanian-Latvian border interconnecting Lithuanian and Latvian natural gas networks and providing with technical possibilities to use the Latvian underground gas storage in Incukalnis; the second line (63 km) of the gas transmission pipeline Kaunas – Sakiai was laid and gas metering station in Sakiai was reconstructed to increase the Lithuanian and transit capacities of gas supply to the Kaliningrad's Region; construction of 99 km gas transmission network to Ignalina Nuclear Power Plant was completed to ensure the supply of heat required for technological process in the Power Plant reactors and provision of heat to Visaginas town after decommissioning of the Plant in 2009.

In 2005 the feasibility study for construction of underground gas storage in Telsiai region prepared by the German company ESK under commission of Geonafta UAB and Dujotekana UAB was presented to the Ministry of Economy.

In 2006 the Ministry of Economy ordered a scientific research study, called the Comparison of Natural Gas Reserve Storage Projects. The study authors will have to analyze possibilities for natural gas reserve accumulation and storage at the underground natural gas repositories in Lithuania, as well possibilities of use of Latvian storages in accordance with technical – economical indicators and strategic reliability.

## **6. PUBLIC SERVICE ISSUES.**

### **6.1. ELECTRICITY SECTOR**

The Law on Electricity defines the public interest in the energy sector as activity or omission in the electricity sector, directly or indirectly related to public security and environmental protection, as well as electricity generation using renewable energy resources in combined power and heating generation power plants.

The Government or other institution authorized thereby makes the list of electricity sector services in compliance with the public interest, public suppliers and procedure for provision of such services. Market participants include the costs for provision of the aforementioned services into their operational costs.

In carrying out their obligation to provide services in compliance with the public interest, transmission system operator, distribution network operator and public suppliers enter the revenues received and costs incurred in relation to performance of the aforementioned obligation into separate bookkeeping accounts and ledgers.

The existing electricity generation capacities may be expanded and/or new capacities installed on new sites only after a respective permit for development of electricity generation capacities is obtained from respective institutions. Such permits are issued to all persons filing applications with guarantees that the activities they are going to perform will be in compliance with certain conditions, including, but not limited to compliance with the public interest.

The Government of the Republic of Lithuania has approved the list of public service obligations in the energy sector applicable to:

1. public and independent electricity suppliers as well as eligible customer engaged in imports of electricity:

1.1. to buy and sell electricity generated using renewable and waste energy resources;

1.2. buy and sell electricity generated by thermal power plants, when such power plants also supply heat to centralized heating networks of major cities;

1.3. buy and sell electricity generated in specified power plants, where electricity generation is necessary to ensure reserves of the energy system;

1.4. pay the costs for safeguarding work safety, waste storage and landfill in the nuclear power plant;

2. the transmission and distribution network operators:

2.1. to guarantee connection to the transmission and/or distribution networks for all consumers complying with the set technical requirements, and ensure reliable electricity supply to such users;

2.2. ensure high quality of supplied electricity by setting respective quality standards and regulate reimbursement of costs and/or damages in relation thereto; and

2.3. develop the energy infrastructure in the country and interconnections between different systems in order to satisfy the growing energy needs in the country and ensure clear and transparent regulation of relevant costs and reimbursement thereof.

Provision of public service obligations specified in the list above is regulated by the Rules on Obligation to Provide Services in Compliance with the Public Interest approved by the Ministry of Economy.

In performance of their activities, electricity sector undertakings must notify users on effective consumption of electricity, services provided by the undertaking, conditions set to provision of such services, prices and tariffs for services and energy, fees and conditions for connection of the users' facilities to the networks, as well as on any foreseen changes of conditions contained in respective contracts. Undertakings functioning within the energy sector must notify in writing or otherwise on any increase in prices or tariffs to household customers, one month in advance at the latest. Public suppliers are strictly prohibited from discriminating users or separate categories of users. A customer buying electricity from a public supplier must make all and any payments due to such supplier for electricity and transmission thereof. A customer is entitled to unilateral gratuitous termination of its contract with public supplier, with 30 calendar days prior written notice, provided that such customer has made all payments due to such public supplier in full.

Household customers are entitled to:

- 1) free and gratuitous selection of supplier;
- 2) reception of supplier's information on the supplier's name, headquarters' address, company code and legal status, provided services and conditions for provision thereof, service and electricity prices and tariffs, presentation of notifications on prices, contract terms, contract conclusion and termination conditions and dispute settlement procedures;
- 3) unilateral gratuitous termination of contracts, if contractual terms (conditions) have been changed and they are unacceptable to household users;
- 4) reception of offers from energy sector undertakings on ways of payment, and free choice of a way of payment.

According to approved Regulations for Supply and Use of Electricity, supply may be terminated or restricted in case of the customer's fault. With prior written notice sent to a household customer 15 calendar days in advance, and to other customers 10 days in advance, the operator or supplier is entitled to terminate or restrict power supply to such customers on the date specified in the notice or any time later, when the user within the set period of time fails to make payments due for electricity consumed.

Throughout 2005 close limited liability company VST suspended electricity supply to 0.5 thousand commercial and 7.5 thousand household customers for provided electricity services, for

which the aforementioned users failed to pay. This makes about 1.2 % of the total number of customers.

In November 2005 Rytų Skirstomieji Tinklai AB suspended electricity supply to 0.4 thousand commercial and 10.9 thousand household customers for provided electricity services, for which the customers failed to pay. This makes about 1.5 % of the total number of customers.

Where electricity transmission and/or supply is suspended/or restricted to a customer, or electricity quality parameters do not comply with the set requirements on the site of electricity transmission service or electricity sales-purchase site, the operator or public supplier upon the user's request reimburses the direct loss to such user incurred due to the operator or public supplier's fault. Indirect loss is not subject for reimbursement. Such customers must file an application for reimbursement of direct loss in 10 calendar days after occurrence of such loss. The operator or public supplier in question must consider the customer's application in 30 calendar days. Loss incurred due to termination or restriction of electricity transmission and/or supply may be reimbursed in 30 calendar days after the date of fixing the value of such loss and validity of the customer's request, unless otherwise is agreed between the customer and public supplier.

Whereas a small percentage of eligible customers (all and any customers except household ones, as from July 1, 2004) have selected an independent supplier, the majority of electricity customers purchase electricity from 2 main public suppliers according to the regulated public tariffs. Regulated public tariffs are applicable to all customer categories, including population, small, medium and large business undertakings, etc.

Public supplier must sign contracts and supply electricity to all customers falling within the territory specified in the license issued to such public supplier, requesting this and not choosing any independent supplier.

Customer is entitled to unilateral gratuitous termination of contract with its public supplier. Such user must notify its public supplier on this in writing 30 calendar days prior to the date of such planned termination and make all payments due to such public supplier for electricity supplied thereto and transmission service.

Before making or terminating an electricity supply contract with a eligible customer falling within the territory specified in the license of the public supplier, an independent supplier must notify the public supplier on this prior to 30 calendar days in writing.

Before making or terminating an electricity supply contract with an independent supplier, a eligible customer falling within the territory specified in the license of the public supplier must notify such public supplier on this prior to 30 calendar days in writing.

The price caps of public tariffs (see table 43) are set annually to each specific public supplier. Electricity transmission via the high voltage lines and distribution services, as well as the revenue

for public supply services are set for the period of 3 years with an annual correction according to the indexation, volume adjustment amount and contingency coefficients; and the price caps for distribution and supply services are calculated in accordance with the electricity amount planned for transmission, distribution or sales within that year. The price caps of the public tariffs is comprised of electricity generation price cap, transmission service price cap, distribution service price cap via the medium and low voltage lines, as well as supply service price cap. The public tariffs level depends on fluctuation of generation price. Whereas the market price of the key generator occupying over 70 % of the Lithuanian market is regulated, and other generators sell the major part of their electricity as provision of services in compliance with the public interest, the NCC foresees a generation price to be included when calculating the price cap of public tariffs.

Table 43. The Price Caps of Public Tariffs by Rytų Skirstomieji Tinklai AB and VST AB, EUR/MWh

<b>Rytų Skirstomieji Tinklai AB</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
<i>High voltage (&gt;110 kV)</i>	35.45	36.00	35.88
<i>Medium Voltage (35-6 kV)</i>	48.51	54.65	54.30
<i>Low Voltage (0.4 kV)</i>	74.49	85.15	83.79
<b>VST AB</b>			
<i>High voltage (&gt;110 kV)</i>	35.51	35.97	35.83
<i>Medium Voltage (35-6 kV)</i>	48.86	58.04	57.55
<i>Low Voltage (0.4 kV)</i>	72.06	85.32	84.28

The proportion of customers to which the public tariffs were applied in 2005 was the following (%):

Household	Industry	Others
96.51	0.10	3.39

Electricity supplied to its customers is a product. Electricity consumption is allowable only, when respective contracts are made between a customer (also including eligible customers) and public electricity supplier, transmission or distribution network operator. The basis for making such contracts is established in the Civil Code of the Republic of Lithuania. Any disputes between contractual parties are solved by negotiations or in court. A duty to observe the mandatory requirements is specified in licenses issued to energy undertakings.

The National Consumer Rights Protection Council at the Ministry of Justice investigates claims by natural persons for any breach of energy sales – purchasing contracts and service provision contracts applying preliminary procedure for claim investigation out of court.

The State Energy Inspection at the Ministry of Economy is in charge of investigation of claims related to breakdowns and operation of energy objects, facilities and measuring units, energy quality requirements, violations of energy measuring and payment for the energy consumed,

emergencies, termination/ suspension of energy supply, in compliance with the preliminary claim investigation procedure out of court.

The NCC is responsible for investigation of claims related to operation and omission of energy undertakings in supply, distribution, transmission and storage of energy, related to failure to grant the right for the use of electricity networks, connection, balancing of energy flows, application of prices and tariffs, in compliance with the preliminary claim investigation procedure out of court.

## 6.2. NATURAL GAS SECTOR

Pursuant to Article 5 of the Law on Energy, is carrying out the management of the energy sector on the state level, the Government or its authorized institutions are entitled to assign public service obligations to undertakings engaged in energy-related activities.

Public service obligations to Lithuanian undertakings are established by the Law on Natural Gas and enforcement legal acts, namely:

1. the regulation of natural gas supply price to regulated customers;
2. the obligation of the distribution system operator to supply gas to regulated customers on compulsory basis.

Gas undertakings must supply gas to regulated customers for regulated prices. Besides the household and small-scale commercial sector annually consuming less than 1 million m<sup>3</sup> gas, the regulated gas supply tariffs are also applicable to some customers within the medium scale commercial and industrial sectors annually using over 1 million m<sup>3</sup> gas. These are the customers, which have failed their right to gain the eligible customer's status. There are 85 such customers. They consume 46.9 % of total gas quantity sold to the regulated customers. According to proportion of the customers, the highest rate of regulated customers makes the household (99.1 %, see Table 44).

Table 44. Number and Proportion of Regulated Natural gas Customers and Consumed Quantity

Regulated Customers	Number and proportion in 2005	Natural Gas Consumption in 2005, in Mio. m <sup>3</sup>
Household customers	531,364 (99.1 %)	167.7 (28.5%)
Commercial customers	4,251 (0.8 %)	100.7 (17.1%)
Industrial customers	356 (0.1%)	320.2 (54.4%)

The price caps for regulated customers are set for the period of three years. They are corrected once in a half of year due to inflation, changes in gas consumption volume and changes in gas import prices. From July 1, 2006 on, the NCC set the price cap for regulated customers buying gas from Lietuvos Dujos AB, amounting to 606.52 LTL /thous. m<sup>3</sup> (18.87 EUR/MWh). Gas price and gas supply price are included into such price cap.

In 2005 due to non-payment, natural gas supply was terminated to 155 customers.

Natural gas supply issues to Lithuanian customers are regulated by the Law on Natural Gas. Requirements for conclusion natural gas supply (sales-purchasing) contracts are defined in the Rules for Transmission, Distribution, Storage and Supply of Natural Gas,

In defining gas supply conditions and control over observance thereof, the scope of responsibility by the Government and other public institutions is the following:

1. The Government or its authorized institution fixes standard (sample) conditions for gas supply contracts to be applied by gas supply undertakings as well as consumers on compulsory basis. At present, the standard conditions of such contracts are set in the Rules for Transmission, Distribution, Storage and Supply of Natural Gas;

2. The National Consumer Rights Protection Council at the Ministry of Justice implements control over performance of gas supply (usage) contracts;

3. The NCC is responsible for investigation of claims related to operation and omission of natural gas undertakings in supply, distribution, transmission and storage of natural gas, related to failure to grant the right for the use of the system, etc. Article 22 of the Law on Natural Gas provides that the NCC has the right to get introduced to contracts signed between gas undertakings and users.