2005 Annual Report of the Public Utilities Commission of the Republic of Latvia on the National Energy Sector, Prepared for the European Commission

1. Foreword

During the course of 2005, every sector that is regulated by Latvia's Public Utilities Commission fully corresponded to the complex work of the regulator – work that is aimed at balancing the interests of public service users with those of service providers.

People in Latvia usually believe that their interests are best served by cheaper services. People also, however, expect to receive the services continuously and at the required level of quality. Can we imagine life without electricity, gas or electronic communications? A major windstorm in Latvia at the beginning of 2005 reminded most people that our daily lives have become dependent on the stability of power and gas deliveries.

Significant investments are required for the safe, continuous and high-quality delivery of public services. In the energy sector, foreign suppliers of the relevant resources have substantial influence. The prevailing global energy crisis has caused the price of energy resources to rise, and this has been felt by each and every resident of the Republic of Latvia. The problem also applies to sectors which are not regulated by the state – the sale of petrol, for instance.

During the year that is covered by this report, the Public Utilities Commission participated actively in the drafting of regulatory legal acts and in strengthening competition in the energy sector. Taking into account the rapidly rising price of natural gas from Russia, new natural gas tariffs were approved in 2005. In 2006, the Public Utilities Commission has faced particularly intensive work in the energy sector and in the establishment of a unified regulatory institution.

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Chairwoman, Public Utilities Commission

2. Summary: Major developments over the last year

The basic organisational structure of the regulatory agency

After a law on regulators in the field of public utilities was approved on October 19, 2000, a two-tier system of public services regulations was established in Latvia. The first-tier regulator is the Public Utilities Commission (hereafter – Commission). It regulates public services at the national level. Local government regulators form the second tier of regulation, and they regulate local service providers in their territories. The unified multi-sector regulator launched its operations in 2001. It regulates energy (electricity, gas, and heat if it is produced in a combined heat and power plant), electronic communications, postal services and the railway sector at the national level. Local government regulators oversee waste management (except for waste recycling), water supplies, sewerage services, delivery of heat, and production of heat in boiler houses.

The Commission and the local government regulators are, according to the law, independent in their decision making, and they are not subject to the decisions of

the national government, local governments or other state institutions. The regulators' decisions may be declared unlawful and repealed only by the courts. The Commission does not supervise local government regulators, and it does not have the right to influence their work.

The Commission operates in accordance with the law "On Regulators of Public Utilities", laws related to the regulated sectors, and all relevant Cabinet of Ministers regulations. The Commission also has its own statutes, strategies and code of ethics. These have been approved by the Commission's board.

On January 4, 2006, a concept on establishing an efficient public utilities regulatory model, one that is most suitable for the existing situation in Latvia, was approved by the Cabinet of Ministers. In order to reach this goal, a unified system for the regulation of public utilities must be established in Latvia. The decision was taken after a study of the positive experiences of the existing unified regulator. Moreover, the work of local regulators has not been as good as had been expected, and this is due to a lack of professional staff and financial resources. The government concept envisages a system in which the uniform consideration of issues that are related to public utilities regulation in Latvia is ensured through the taking of decisions by the board of the Commission. The regulator will obtain and assess the necessary information, take decisions, and monitor the implementation of those decisions. The regulator will have regional structural units at its disposal. These will be formed on the foundation of existing local government regulators, hiring existing specialists in the field and optimising the number of structural units as much as possible.

The goals of the Commission

In accordance with the law "On Regulators of Public Utilities", the goal of regulation is to make it possible for people to receive continuous, safe and high-quality public services with tariffs (prices) which correspond to economically reasonable costs. The regulatory system is also meant to promote development, along with economically justified competition in the regulated sectors.

The functions of the Commission

The Commission performs the following functions:

- It protects consumer interests and promotes the development of public service providers;
- It promotes competition;
- It issues licenses, registers authorisations, and supervises adherence to their requirements;
- It supervises the compliance of services to various requirements related to quality, environmental protection, technical regulations and standards;
- It defines tariff calculation methodologies;
- It approves service tariffs;
- It offers public information about its activities and the operations of public service providers;
- It performs extra-judicial dispute settlement.

The structure of the Commission

The decision-making institution of the Commission is its board, which consists of five commissioners. The board takes decisions on behalf of the Commission and approves administrative acts which are binding for specific public service providers and users. The executive institution operates under the oversight of the Commission's chairperson, and it serves both as a secretariat and as the provider of expert services. The executive institution prepares issues and documents for board meetings, enacts approved decisions, and oversees the implementation of those decisions.

In order to ensure the regulation of public services, all public service providers in the regulated sectors are required to pay a stamp duty for the regulation of public services. At this time this payment is equal to 0.2% of the annual net turnover of each regulated company. This principle ensures the financial independence of the Commission.

Parliament appoints the chairperson of the Commission on the basis of a recommendation from the Cabinet of Ministers. The chairperson of the Commission is also the chair of its board. Similarly, Parliament approves four board members, each with a term in office of five years.

The executive institution has a separate department for each regulated sector. It also has a Legal Department, an Economic Analysis Department and several independent divisions.

Major developments in the gas and electricity markets

A new law on the electricity market was adopted on May 25, 2005. It speaks to legal regulations concerning the opening up of the electricity market, and it was drafted in compliance with the relevant normative acts of the European Community. These prescribe norms which regulate market access, operations and criteria for systems. They also set out the procedure which relates to receiving permission for the production, transmission, distribution and sale of electricity. In accordance with the law, the Commission approved several legal acts in 2005 – requirements related to the independence of system operators, legal acts related to the operations of public traders, and requirements related to the reports which must be filed by system operators. On June 8, 2005, the Commission issued a license to the state-owned company "Augstsprieguma tīkls", which began to function as an independent transmission system operator as of September 1, 2005. In accordance with the law on the electricity market, the state-owned company Latvenergo established a public trader on September 28, 2005.

During the course of 2005, Commission experts participated actively in the drafting of amendments to the law on energy. The aim is to adopt EU directives on gas market development and to adapt them to the situation which prevails in Latvia. A legal environment must be prepared for the provision of third-party access. The fact is, however, that no real competition is expected in the market for natural gas supplies in the near future, because there is full dependency on external suppliers – Gazprom and Itera Latvija, who supply gas along networks which belong to Gazprom. Alternative gas supplies would be possible only if:

- The Russian gas market were to be liberalised;
- New connections with other EU countries and with Norway were provided;

- An LNG storage and regasification plant were to be built.

Each of these options would require massive investments, however, and these would not be cost-effective at the present level of end user tariffs. The aforementioned targets could be achieved only through the implementation of a pan-EU strategy, because Latvia's national government is not in a position to resolve these problems. Indeed, they require successful international co-operation.

Major issues handled by the regulator
Licensing and license supervision

According to Regulation No. 297 of the Cabinet of Ministers, the Commission regulates the generation of electricity and heat by combined heat and power plants with a maximum capacity above one MW, as well as the generation of electricity at power plants with a capacity above one MW (including hydropower plants, wind power stations and combustion power stations). The Commission regulates the transmission of electricity if the voltage is at least at a level of 110 kV, the distribution of electricity if the voltage is between 1 and 110 kV, and the sale of electricity to consumers if the annual volume of sold electricity exceeds 4,000 MWh.

As of December 31, 2005, a total of 76 licenses had been issued in the electricity supply sector. Of these, 36 were for electricity and heat generation in CHP plants, 14 were for wind power generators, two were for hydropower plants, one was for electricity transmission, nine were for electricity distribution, and 15 were for electricity sales. This shows that licenses are issued in all electricity sectors, and this indicates that the market is opening up for new competitive opportunities.

The Commission also regulates the storage, transmission, distribution and sale of natural gas and liquefied gas, excluding only oil gas and other gaseous hydrocarbons which are used as fuel.

In the natural gas supply sector, the joint stock company "Latvijas Gāze" has licenses for the storage, transmission, distribution and sale of natural gas.

As of December 31, 2005, 113 licenses had been issued in the liquefied gas supply sector – 24 for storage and filling, 34 for distribution, and 55 for sales. The Commission cancelled four licenses and issued four new ones in 2005.

Also in 2005, 31 objects which belong to energy supply companies were inspected so as to investigate their operations and their compliance with license requirements. All of the companies were inspected on schedule, as were companies which had filed applications for the alteration of license requirements, for the issuance of a license, or for approval of tariffs. Inspections were also conducted at facilities with respect to which complaints had been received. In addition to all of these, another 13 objects were also inspected.

Tariff regulation
Electricity

The law on the electricity market took effect on June 8, 2005, and the Commission drafted and approved several secondary legal acts in accordance with the law, taking into account the opening up of the electricity market. Several amendments and corrections were made to four methodologies used to calculate electricity tariffs:

- The tariff calculation methodology for heat energy generated in combined heat and power plants (CHPs) and for electricity generated by CHPs with a capacity above 4 MW;
- The methodology for calculating electricity transmission system service tariffs;
- The methodology for calculating electricity distribution system service tariffs;
- The methodology for calculating electricity tariffs for captive users.

In February 2005, differentiated service tariffs were approved for the Latvenergo electricity transmission network. These corresponded to ceilings on transmission network service tariffs in 2005. New tariffs for the Latvenergo hydropower plants on the Daugava River have been in effect since February 24, 2005. The law on the electricity market declares that in future, electricity tariffs will no longer be defined for the Daugava hydropower plants. This is done at this time, however, and this must be seen as a component in the procedure for opening up the market.

In May 2005, in accordance with ceilings on distribution network service tariffs that were specified for the second year of the ongoing tariff review cycle, new differentiated tariffs were approved for the Latvenergo electricity distribution network. These came into effect on July 1, 2005. New differentiated transmission tariffs were also approved on February 24, 2005, and they came into force in April of that year. Other companies did not file any tariff applications with the Commission in 2005.

According to Eurostat data, Latvia had the lowest electricity tariffs in 2005 among all European Union member states when it came to households and commercial users. Two major factors which ensure low prices are:

- The cost-based tariff setting methodologies and effective regulatory work of the Commission;
- The low price of imported electricity and of the Daugava hydropower plants, although these prices could increase significantly in the near future.

Natural gas

End sales tariffs for natural gas are made up of the purchase price of natural gas on the border of the country and of tariffs related to services which are associated with the delivery of natural gas to users – transmission, storage, differentiated distribution and sales tariffs. The purchase price for natural gas is transferred without any changes to the differentiated end tariffs.

Calculation methodologies for natural gas supply tariffs were elaborated in 2002 and at the beginning of 2003. Changes were made at the end of 2005 to reflect amendments to the law on energy and other legal documents.

New natural gas supply tariffs for the period between 2005 and 2007 were also approved in 2005. On July 1, the second part of a tariff increase which was approved in 2003 came into force. On August 1, tariffs approved for 2005 followed suit.

Regulation of all consumer tariffs continues to be justified specifically because of the lack of competition in the natural gas supply sector. This process ensures greater tariff stability, as well as the balancing out of the interests of the supplier and the users. Eurostat data show that in 2004, Latvia had the lowest household natural gas tariffs of any EU member state, and the second lowest tariffs for commercial users. This proves that it is possible to regulate a monopoly successfully on the basis

of an effective and cost-based tariff setting methodology. The Commission has ensured low network tariffs, and as a result of this, the network charge is only one-third of the total price paid by the end user. The low tariffs, however, have not prevented the natural gas supplier from developing successfully over the last several years. It has increased operational efficiency, increased turnover, expanded its networks, multiplied its volume of investments, and achieved ever-increasing profits.

Liquefied propane gas (LPG, propane/butane mix)

Amendments to the law on energy which were approved in 2005 state that only general sector regulation is to be preserved in the market for LPG, i.e., licensing and market supervision. In the LPG supply sector, the Commission has conducted market analysis during the reporting year so as to verify the level of competition in the sector. The results of this show that limited competition exists at the wholesale level. The Commission will continue to scrutinise LPG market activities.

Protection of consumer interests

In 2005, the Commission approved legal acts which allow it to supervise the market formation process more effectively, while simultaneously ensuring the transparency of market information, along with equal conditions for all market participants. The Commission approved regulations on the granting of permits for the installation of direct electricity line connections, system access regulations for participants in the electricity system, system access regulations for the generators of electricity, as well as regulations concerning minimum requirements which relate to the independence of an electricity system operator.

In 2005, 69 complaints and applications were received from public service users in the energy sector. The number of complaints has decreased, particularly in the electricity and heat sectors. In the gas supply sector, the number of complaints remained unchanged in comparison to the previous year. Individuals submitted 91% of all complaints.

There were 33 complaints in the energy sector, of which six were declared to be justified. The Commission was very careful about ensuring consumer protection. The service provider was forced to apologise and to reimburse losses for sub-standard services.

Complaints which were received by the Commission referred to many different subjects. In the electricity supply sector, most had to do with electricity supplies (475), metering and payments (26%), and the quality of the supplied electricity (8%). In the gas supply sector, complaints usually concern maintenance of the natural gas supply system (46%), natural gas metering and payments (39%), and issues related to liquefied gas (15%).

3. Regulation and performance in the electricity market

3.1. Regulatory issues (Article 23(1), except sub-section “h”)

3.1.1. General

The state-owned company Latvenergo dominates the field of electricity supplies in Latvia, controlling more than 90% of installed capacity for the generation of electricity in Latvia. The company offers services related to the import,

transmission, distribution and delivery of electricity to consumers. In addition to Latvenergo there are some 150 small hydropower stations with an installed capacity of 25 MW (1% of the total). There are also 14 wind power stations with a total capacity of 25.2 MW (1% of the total). Among 36 independent combined heat and power (CHP) plants, three are biogas power stations with a total capacity of 7.8 MW, and three are wood CHP plants with a total capacity of 2.2 MW.

All the independent CHP plants, hydropower stations and wind farms are relatively small, and they have feed-in tariffs.

The exception to this is the newly built "Imanta" CHP, which has a capacity of 48 MW, or nearly 2% of total installed capacity. This CHP could become a serious player in the generation market.

Latvia imports electricity for most of the year, but during flooding in the spring, it also exports it. The total amount of imports amounts to some 40% of all consumption, and it depends each year on the amount of water in the Daugava river.

In addition to Latvenergo, there are eight licensed companies which offer electricity distribution. Another 14 have the right to sell electricity.

Since July 1, 2004, all electricity users except households have been allowed to choose alternative electricity suppliers, but none has done so. Several companies which do not own distribution networks have been licensed to sell electricity, but there have been no actual sales so far. At present, the level of market opening is 76%. All customers will become eligible on July 1, 2007, when the market will be 100% open.

The placement of generation capacities is inadequate, as is the number of market participants if a free electricity market is to be launched in Latvia and the Baltic States – one that would be based on bilateral agreements. It is not easy for small companies to purchase electricity at a competitive price in neighbouring countries (Lithuania, Estonia and Russia). This is because Latvenergo purchases larger amounts of electricity and, therefore, pays a lower price. It is also true that Latvia's electricity system at this time is not connected to those of the European Union's member states. A major project aimed at installing a submarine cable between Tallinn and Helsinki is proceeding at this time. Latvenergo is joining with energy companies in Lithuania, Estonia and Finland in pursuit of this project.

3.1.2. Management and allocation of interconnection capacity and mechanisms to deal with congestion

At this time there is no real evidence to show that there is congestion in and between the Baltic States, as cross-border interconnection capacities are large. Latvia has cross-border lines with Estonia (two 330 kV and two 110 kV lines) and Lithuania (four 330 kV and three 110 kV lines). Latvia also has cross-border connections with countries that are not in the EU – Russia (one 330 kV line) and Belarus (one 110 kV line).

Baltic power companies set up a joint Baltic Power System Control Centre in 1998, one which is responsible for operational planning (including outages), dispatching, calculation of transmission capacities, analysis of the performance of the transmission grid, and planning co-ordination.

3.1.3. Regulating the tasks of transmission and distribution companies

Latvia has one transmission system operator, a subsidiary of Latvenergo. The operator rents the fixed assets of the transmission system from its parent company. Latvenergo also owns the biggest distribution system operator. There are, in addition, eight local distribution companies.

Network tariffs

Methodologies for the calculation of transmission and distribution system service tariffs have been developed in accordance with the law on energy, the law on the regulators of public utilities, regulations related to the supply and use of electricity, as well as other legal acts which are in force in Latvia. These are applied when tariffs are set. The main principles behind these methodologies are the following:

- A price cap method must be used in setting service tariffs.
- The regulated enterprise must clearly and unambiguously reflect the cost of each regulated service, including only those assets and activities which are related to the regulated services. The regulated enterprise must apply the cost allocation model after its basic principles and specifications have been approved by the regulator. The cost allocation model must be comprehensive.
- The duration of the tariff review cycle is three years. The regulator can extend the tariff review cycle if the tariff for the next cycle has not been approved by the end of the ongoing review cycle.
- The regulatory asset base and the rate of return on capital must be used in determining capital costs. The rate of return on capital is the weighted average return rate from the rate of return that applies to equity and long-term interest rates on borrowed capital, as defined by the regulator. The rate of return on capital is calculated in terms of the specific relationship between equity and borrowed capital. The rate is set so as not to affect the enterprise's choice between the use of equity and borrowed capital. At the request of an enterprise, the regulator can set the rate of return on capital before tariff proposals are submitted.
- In accordance with the law on the regulators of public utilities, tariffs must correspond to economically justified costs. When setting the base tariff, the regulator must perform analysis and assessment of costs and profits.
- Two interrelated activities which are included in the methodology constitute the basis for setting tariffs:
    - Setting economically justified base tariffs for the base year of the tariff review cycle;
    - Setting tariff ceilings for each year of the tariff review cycle.
- The regulator approves the average tariff ceiling on transmission and distribution services.
- The service provider must present all costs at a level of precision up to 500 lats, as well as the quantity of transmitted or distributed electricity with a level of precision up to 500,000 kWh.

According to existing procedure, companies submit reasonably justified tariff proposals. The Commission must approve or reject the proposal within 120 days' time. The Commission's decisions can only be challenged in court.

Estimated national network charges for the typical consumer (average)

Type	Consumption	Average network charges EUR/kWh
Dc	3500 kWh	0.028 – 0.03
Ib	50MWh	0.0208 – 0.0131
Ig	24GWh	0.0021 – 0.003

1. Dc: Household, 3500kWh a year, connected to 0.4 kV lines:
   TS 3500 x 0.00424 = 14.84 LVL = 21 EUR
   DS 3500 x 0.01789 = 62.62 LVL = 89 EUR
   Total without VAT = 110 EUR or 0.03 EUR/kWh

2. Ib: Commercial customer, 50 MWh a year, permitted load 50 kW
   a) connection to 6-20 kV lines
   TS 50 000 x 0.00424 = 302 EUR
   DS 50 000 x 0.00787 = 560 EUR
   Fee for permitted load = 50 x 2.50 = 178 EUR
   Total without VAT = 1040 EUR or 0.0208 EUR/kWh

   b) connection to 6-20 kV buses
   TS 50 000 x 0.00424 = 302 EUR
   DS 50 000 x 0.00296 = 211 EUR
   Fee for permitted load 50 x 2 = 142 EUR
   Total without VAT = 655 EUR or 0.0131 EUR/kWh

The difference between 6-20kV buses and lines: 0.0208 – 0.0131 = 0.0077 EUR/kWh

3. Ig: Industrial customer, 24 GWh a year, permitted load 4000 kW

   a) connection point 110 kV lines
   ET tariff 24 000 000 x 0.00104 = 35,515 EUR
   GPM tariff 4000 x 2.816 = 16,027 EUR
   Total without VAT = 51 542 EUR or 0.0021 EUR/kWh

   b) connection point low voltage side of 110/6-20 kV transformer
   ET tariff 24 000 000 x 0.00147 = 50 199 EUR
   GPM tariff 4000 x 3.990 = 22,709 EUR
   Total without VAT = 72,908 EUR or 0.0030 EUR/kWh

The difference between 110/6-20kV transformer low voltage side and 110kV lines: 0.0030 – 0.0021 = 0.0009 EUR/kWh

The quality of services

New regulations on the sale and consumption of electricity are currently being drafted. These will state that the regulator has the right to define quality requirements. Then the regulator will issue regulations on the quality of electricity

supplies and services. Quality indicators will be defined in areas such as continuity of supply, quality of voltage, commercial quality, etc.

During the course of 2005, the quality of electricity was improved for 3,300 end users, and the average amount of time needed to repair problems in the distribution network was improved by 2.9 hours (from 6.3 to 3.4 hours). There were 38,657 instances of load metering and 42,128 instances of prevention metering. There were 20 interruptions in the transmission network with an average duration of 1.6 hours before they were fixed. There were also 49,025 interruptions in the distribution network, with an average repair time of 3.6 hours.

In 2005, the Commission adopted regulations on the information that must be provided to final customers. This defines the information which system operators must include in electricity bills, as well as other information. Information that must be included on bills is the following:

- The charge for electricity;
- The monthly fee (if applicable);
- The charge for the nominal voltage of the input protection apparatus (if applicable)
- The charge for the permitted load (if applicable);
- The total payment, without value added tax (VAT);
- VAT;
- The total payment, including VAT.

Other information must be provided at least once per year in promotional materials:

- Information about the tariff structure;
- The contribution of each energy source to the overall fuel mix of the supplier during the preceding year;
- Information about environmental impact in terms of carbon dioxide emissions and radioactive waste which result from the electricity that has been produced with the overall fuel mix of the supplier during the preceding year.

The Commission has also adopted regulations which define a procedure whereby customers can access the financial information of the various companies.

Balancing

The Latvian Electricity Market Act proposes that the TSO be responsible for power balance in the system, as well as for the provision of balancing services in the transmission level. The Market Act also proposed that the TSO develop balancing and settlement procedures and put them down in the Grid Code. Amendments, therefore, will be needed to the current version of the Grid Code. The regulator plans to approve the balancing arrangements that are drafted. The Electricity Market Act sets out guidelines in terms of how the balancing arrangements among consumers, producers and system operators should be provided. Customers and producers that are market participants, along with distribution networks, will have to conclude balancing services agreements with the system operators to the network of which they are connected.

The TSO is responsible for the operational reliability of the power system. This includes making sure that demand equals supply in the system on a second-by-second basis. For this purpose, the TSO has an open supply agreement and maintains operating reserves. Furthermore, those few customers, larger electricity producers

and distribution networks which are directly connected to the transmission grid obtain balancing services directly from the TSO after concluding the relevant agreement. The concept of a balancing group has also been introduced. The idea is that customers have the right to delegate a supplier in terms of settling imbalances with the system operator. In that case, the supplier concludes a balancing service agreement with the system operator, and it may carry out the netting of imbalances among customers and producers.

The balancing model at the distribution level does not differ from one at the transmission level. Customers and producers directly connected to the distribution grid must buy the balancing service from the respective DSO, or they may delegate this task to their supplier. The tariffs for the captive customers includes the balance energy costs.

According to the Electricity Market Act, administration of imbalance settlements is the responsibility of system operators. Balance settlement is based on hourly energies that are obtained from hourly energy measurements (no load-profile-based metering system has been planned at this time). Ascertaining the volumes of measured deliveries and reporting these – that is the responsibility of the network operator. Ascertaining the volume of fixed deliveries and reporting these, in turn, is the responsibility of the parties to the electricity market themselves. The power balance of each party operating in the electricity market is determined on the basis of the balance settlement. A supplier may have fixed purchase supplies as well as fixed sales deliveries, and imbalance in these is normally non-existent. The supplier can also have consumers and producers in its portfolio. These are metered and will always be in imbalance. Netted deliveries provide the total balance of the supplier's portfolio. The imbalance derives from a difference between planned and actual positions.

An imbalance pricing methodology is to be elaborated and published by the TSO. This will mean the calculation and publication of prices related to the balancing of energy. The methodology is currently being drafted, and the basic principles are in place. The basic property of the imbalance pricing methodology is that prices are calculated *ex ante*, which means that they will be calculated in advance of the operating week, month or even quarter of the year. The periodicity will depend on the market situation and on volatility in prices. In order to determine imbalance prices for night-time, off-peak and peak periods, administered step-up and step-down factors will be multiplied by the market reference price. The market reference price could be assumed to be the weighted average price of the competitive segment of a Public Trader's portfolio. This approach to pricing offers several positive features:

- Simplicity: Simple mathematics allows each market participant to control and to understand its balancing expenses. The fact that imbalance prices are known *ex ante* means that every participant in the market can predict and assess balancing expenses in advance. This provides some sense of stability. Imbalance prices will provide an incentive for wholesale market players so that they can match their physical positions and their contractual positions as accurately as possible before the operational phase. This allows market players to contribute toward the planning of an overall power balance in the system – something that is important for the TSO.

The described imbalance pricing approach is not real-time market based. It is a logical solution, however, because:

- The creation of a liquid real-time market has been an issue in the region for many years, mostly because of the small number of potential participants and the fact that little liquidity can be predicted. There would still be a question – whether a

cleared price which is the result of such a real-time market could be applied as a reference price so as to charge imbalances;

- Although the described approach is not real-time market based, it is nevertheless market based. Because the reference price that is used to calculate imbalance prices is derived from live trades carried out by the Public Trader. Under these circumstances, this is a very reasonable source for the market reference price;
- Although the approach is not real-time market based, it still fulfils its main tasks – it provides the right incentives, it is transparent, and it is based on a current market price. The balancing interval is 60 minutes. The Latvian power system has one balancing area, and the time of gate closure is D-1 09.00 (provisional). There is no intra-day market.

3.1.4. Effective unbundling

There are nine DSOs in Latvia – eight comparatively small operators with fewer than 100,000 customers apiece. The dominant DSO company is Latvenergo, which has 1,093,379 customers. There is a single TSO – "Augstsprieguma tīkls", which is wholly owned by Latvenergo and launched operations as a separate entity on September 1, 2005. The TSO and a significant number of the DSOs are located apart from production and supply affiliates. The TSO rents the transmission network assets from Latvenergo. Assets are rented by one DSO and owned by eight.

Latvia's law on the electricity market obliges TSOs and DSOs to publish separate balance sheets. Because the TSO began operations on September 1, 2005, separate balance sheets are available. When it comes to the setting of rules on the compilation of unbundled accounts, the regulator has approved cost allocation methodologies and has implemented its right to commission a compliance audit, one that is conducted by an independent auditor.

At the end of 2005, Latvenergo had 5,611 employees, 3,841 – by the DSO, 20 – by the unit which sells electricity, and 1,750 – by work units related to the generation of electricity, administration and communications services. The independent TSO had 595 employees. The percentage of shared services in the TSO's cost structure in 2005 was 9%.

In 2005, the Commission approved regulations on the minimum requirements of ensuring the independence of an electricity system operator. These regulations define the maximum requirements that can be presented in national law so as to ensure the greatest possible independence for system operators, along with successful market functioning. After 2007, the distribution system operator will be an independent legal entity.

The legislator has envisaged sanctions which the Commission can apply to companies which fail to comply with management, account unbundling or other requirements. The Latvian Administrative Code allows the Public Utilities Commission to punish service providers in the sector when the following administrative offences are committed:

- Failure to deliver information to the regulator or the delivery of false information;
- Failure to comply with the legal decisions taken by the regulator;
- Providing services without a license or breaching its provisions.

3.2. Competition issues [Article 23(8) and 23(1)(h)]

3.2.1. Description of the wholesale market

Since July 1, 2004, all electricity users except for households have had the option to choose alternative electricity suppliers. The fact is, however, that no one eligible user has switched suppliers. Last year, in approving new electricity network tariffs for the state-owned Latvenergo company, the Commission focused in particular on making sure that transmission and distribution tariffs might encourage potential users to accept the offers of other suppliers. Several companies were given licenses only for the sale of electricity, and they planned to operate as intermediaries in the delivery of services to eligible users.

The inactivity of eligible users can, in part, be explained by concentrated generation and the difficulty of finding a better energy price abroad than Latvenergo can find. Electricity generation in Latvia is almost entirely related to Latvenergo (producing approximately 60% of total consumption), and independent electricity generators tend, individually, to be much too small to offer major volumes of energy for large potential users. When it comes to the import of alternative energy, potential intermediaries and eligible users face energy export quotas that are defined in some countries. There are also specific balancing conditions, and foreign operators are often loath to become involved in low-volume deals. The real independence of the transmission system operator is aimed at making sure that the separation of Latvenergo functions is not just a formality – that this process really does contribute to market development and strengthen competition. At the same time, the Commission's experts have been involved in the drafting of amendments to the law on energy and to the development of the law on the electricity market, the aim being to introduce the requirements of EU directives in relation to the electricity market. Both documents were adopted in 2005.

According to Eurostat, Latvia had the lowest electricity tariffs for households and commercial users among all European Union member states in 2005. This was the result by comparatively low network tariffs, as well as the major role performed by large hydropower plants in the generation of electricity (producing approximately 30% - 50% of total consumption). The cost price of electricity generated by hydropower plants is relatively small – other sources of electricity in Latvia and electricity imported from the country's nearest neighbours cannot compete. At the same time, it must be stressed that the existing level of end tariffs is not an obstacle against further development in the energy supply sector. The most important companies are financially stable, they operate at a profit, and they have been making extensive investments in networks and generation capacities.

In 2005, total consumption of electricity in Latvia was 5,880 GWh, and the amount of installed available generation capacity was 2,684 MW. The main generator in Latvia produced 4,554 GWh of electricity.

Annual total consumption, including losses, was 6,457.6 GWh in 2005.

Peak load in 2005 was 1,272 MW.

Only one company has a 5% share of installed available capacity – the largest producer, Latvenergo, produces about 90% of the total generation volume.

The share of the three biggest generators was 94%.

All electricity was sold at regulated prices and in line with approved tariffs.

Latvia has connection lines to two neighbouring member states – Estonia and Lithuania; this means that the regional market is the Common Baltic Electricity

Market. A major project aimed at installing a submarine cable between Tallinn and Helsinki is proceeding at this time. Latvenergo is joining with energy companies in Lithuania, Estonia and Finland in pursuit of this project.

There were no acquisitions or mergers in the electricity industry in Latvia in 2005.

3.2.2. Description of the retail market

In 2005, electricity supply companies supplied the required volume of energy, selling 5,880 GWh of electricity to consumers – 5.2% more than in 2004. One-quarter of this electricity was used by local residents for household needs, and the remainder went to commercial consumers. The number of consumers has not changed significantly. Most consume a comparatively small volume of electricity. In 2005, only 108 consumers used more than five million KWh of electricity each. Of the total number of customers, 585 used more than one million KWh apiece.

There were 1,001,058 household and 92,321 commercial consumers. The distribution of consumers among groups in 2005 was as follows:

- Industry – 1,758 GWh, or 30%;
- Agriculture and farms – 120 GWH, or 2%;
- Households – 1,454 GWH, or 25%;
- Other – 2,548 GWh, or 43%.

As noted above, no commercial customer has taken advantage of the opportunity to switch to a different supplier.

Type	Consumption	Energy price and supply margin	Network charges EUR/kWh	VAT 18%	Final price
Dc	3,500 kWh	0.023	0.03	0.01	0.063
Ib	50MWh	0.0212	0.0208	0.008	0.05
Ig	24GWh	0.022	0.03	0.006	0.0421

4. Regulation and performance in the natural gas market

4.1. Regulatory issues [Article 25(1)]

4.1.1. General

During the reporting year, Commission experts actively participated in the drafting of amendments to the Latvian energy law, the aim being to introduce the requirements of EU directives with respect to gas market development and to adapt these to the existing situation in Latvia. A legal environment must be prepared for the provision of third-party access, but no real competition in the market for natural gas supplies is expected anytime soon. That is because of the high level of dependence on external suppliers – Gazprom and Itera-Latvija. These supply gas along networks which belong to the former of those two companies. Alternative gas supplies would become possible if the Russian gas market were to be liberalised, if connections to other EU countries and Norway were to be ensured, or the LNG storage and regasification plant were to be built. All of this would require significant, not to say

enormous investments, and these would not be cost-effective at the present level of end users tariffs and total annual consumption of natural gas.

Most of the liquefied gas (a mix of propane and butane) that is sold in Latvia is imported from Lithuania and Russia. In 2005, Latvia imported some 64,000 tonnes of liquefied propane gas. Approximately 50% was sold for use as automotive fuel, while the other half went for household heating and food preparation needs. The gas is sold in cylinders and from group reservoirs. At the end of 2005, 57 companies were competing in the market for liquefied propane gas.

Because there is a lack of competition in the natural gas supply sector, regulation of all consumer tariffs will continue to be justified for the foreseeable future. The regulatory process ensures greater tariff stability, balancing out the interests of the supplier and those of users. According to Eurostat, Latvia had the lowest household natural gas tariffs among all EU member states in 2005, and the second lowest tariffs for commercial users (tariffs were lower still in Estonia). This has not been a problem for the natural gas supplier, however, in terms of successful developments over recent years. Operational efficiency has been enhanced, turnover has been on the rise, networks have been expanded, investment volumes have been increased, and ever-increasing profits have been achieved. What is more, the joint stock company Latvijas Gāze has never owed any debt to its supplier, Gazprom.

4.1.2. Management and allocation of interconnection capacity, mechanisms to deal with congestion

Latvia's natural gas transmission system was developed some 40 years ago, and the following principles were the cornerstone for the process:

1) Natural gas is supplied to Latvia along a Latvian-Russian pipeline only during the warm period of the year (April-September), and it is accumulated in an underground gas storage facility;

2) During the colder part of the year, gas from the underground facility is delivered to Latvian consumers, as well as transmitted to Estonia and back to Russia;

3) There is also a connection to Lithuania, but it is only used as an emergency backup system for the supply of a limited Lithuanian region;

4) The transmission system was designed for annual consumption of up to 4 bcm in Latvia – more than two times more than current consumption.

The natural gas transmission system is operated by the vertically integrated Latvijas Gāze company. It transmits natural gas on the basis of orders from the owners of natural gas (Gazprom and Itera-Latvija). During the winter, about 1 bcm of natural gas is transmitted to Russia and Estonia.

4.1.3. Regulating the tasks of transmission and distribution companies

These are the general regulations and basic principles in support of tariff calculation methodologies:

- The methodologies have been developed in conformity with the law on energy, the law on the regulators of public utilities, regulations related to the supply and use of gas, as well as other legal acts which are in force in the Republic of Latvia. The methodologies are applied when determining transmission and distribution service tariffs.
- A price cap method must be used to set service tariffs.

- The regulated enterprise must clearly and unambiguously reflect the cost of each regulated service, including only those assets and activities which are related to the regulated services. The regulated enterprise must apply the cost allocation model after its basic principles and specifications have been approved by the regulator. The cost allocation model must be comprehensive.
- The duration of the tariff review cycle is three years. The regulator can extend the tariff review cycle if the tariff for the next cycle has not been approved by the end of the ongoing review cycle.
- The regulatory asset base and the rate of return on capital must be used in determining capital costs. The rate of return on capital is the weighted average return rate from the rate of return that applies to equity and long-term interest rates on borrowed capital, as defined by the regulator. The rate of return on capital is calculated in terms of the specific relationship between equity and borrowed capital. The rate is set so as not to affect the enterprise's choice between the use of equity and borrowed capital. At the request of an enterprise, the regulator can set the rate of return on capital before tariff proposals are submitted.
- In accordance with the law on the regulators of public utilities, tariffs must correspond to economically justified costs. When setting the base tariff, the regulator must perform analysis and assessment of costs and profits.
- Two interrelated activities which are included in the methodology constitute the basis for setting tariffs:
    - Setting economically justified base tariffs for the base year of the tariff review cycle;
    - Setting tariff ceilings for each year of the tariff review cycle.
- The regulator approves the average tariff ceiling on transmission and distribution services.
- The service provider must present all costs at a level of precision up to 500 lats, as well as the quantity of transmitted gas with a level of precision up to 10 tcm.

When transmission tariffs are determined, the relationship between the total transmitted volume and the volume transmitted in favour of Latvian consumers is taken into account.

The distribution tariff is differentiated on the basis of the customer's annual consumption. After the expiration of a transition period, additional differentiation criteria (connection pressure) will also be taken into account.

Tariffs for typical customers (2005 average)

		EUR/GJ	EUR/GJ
Type	Consumption	Transm	Distr
I4-1*	418.6 TJ	0.36	0.85
I1	418.6 GJ	0.36	1.37
D3	83.7 GJ	0.36	1.37

* Load factor is not implemented because the transmission and distribution systems are underused.

In 2005, new tariff proposals were analysed, and new tariffs were approved by the Commission. These tariffs took effect on August 1, 2005, and remained in effect until May 1, 2006.

Balancing

The TSO currently conducts balancing on the basis of the consumption rate. Industrial consumers are required to observe tolerance thresholds for over- and under-consumption (+/-10% on a daily basis), taking into account rules that are set out in gas supply contracts.

4.1.4. Effective unbundling

The current regulatory requirement is that all regulated activities must involve unbundled accounts. The Commission has implemented these requirements in regulations related to the independence of system operators. The regulator approves the cost allocation methodology that is proposed by the company, and it has the right to request an independent compliance audit. All system operators share only administrative costs. The offices of the TSO and the DSO are located separately.

4.2. Competition issues [Article 25(1)(h)]

4.2.1. Description of the wholesale market

Latvian consumers consume approximately 1.6 bcm of natural gas a year, and 100% of that gas is imported by Latvijas Gāze from Russia – that is a forced situation. All import operations are handled by Latvijas Gāze on the basis of a supply agreement among it, Gazprom and Itera-Latvija. There is no wholesale market for natural gas in Latvia.

Since Latvia joined the EU, it was given the right to postpone implementation of EU Directive 2003/55 until 2010 because the exclusive rights of the gas supplier, Latvijas Gāze, and its owners, Gazprom and Itera-Latvia, are compulsory.

4.2.2. Description of the retail market

The Latvian retail market structure is as follows:

- Households – 7.5%
- The power industry – 59.7%
- Industry – 24.6%
- Utilities and commercial enterprises – 8.2%

Power plants which use gas operate in the CHP regime and used up 40% of gas in 2005. 27% of gas was consumed by boiler houses, and 8% went to two major industrial users (a steel refinery, which got 7%, and a timber processing company, which used up 1%).

All of the consumers received gas from the vertically integrated joint stock company Latvijas Gāze.

Because of the lack of alternative suppliers, there will be no switching of suppliers in the foreseeable future.

All prices at the retail level are set by the regulator, and they are differentiated in accordance with the annual consumption level of customers.

The final price of natural gas consists of the price of services, the price of imported natural gas, and VAT.

EUR/GJ

Type	Consumption	Storage	Transmission	Distribution	VAT 18%	Final price
I4-1*	418.6 TJ	0.17	0.36	0.85	0.25	1.63
I1	418.6 GJ	0.17	0.36	1.37	0.34	2.24
D3	83.7 GJ	0.17	0.36	1.37	0.34	2.24

Consumers also pay a fixed monthly fee for metering, ranging between EUR 1.04 and EUR 1.09. This depends on who owns the meter.

5. Security of supply

5.1. Electricity [Article 4]

Total electricity consumption in 2005 amounted to 6,457 GWh, which was 5% more than in 2004. Generally speaking, there has been a tendency of increasing electricity consumption by 3-5% per year in recent years, and it is expected that this will also be the case in 2006.

Peak load in 2005 was 1,272 MW. Forecasts for the years between 2006 and 2008 are as follows:

- 2006 – 1,300 MW
- 2007 – 1,350 MW
- 2008 – 1,380 MW

Available generation capacity at this time is at a level of 2,684 MW.

According to licenses that have been issued by the regulator, new generation capacities (CHPP) equal to 84 MW will be introduced by the end of 2006.

There are nine distribution system operators, and their license conditions state that they must supply all customers with electricity and connect new customers in their zones of operations. Latvenergo is by far the biggest DSO in Latvia and covers 99% of demand.

The total capacity of the transmission network is currently at a level of 6,942.8 MVA, which is five times more than the peak load in 2005. This ensures the continuous supply of electricity. After a major windstorm in 2005, the safety zones of transmission lines in forested regions were widened so as to lessen damage caused by falling trees.

Guidelines approved by the Cabinet of Ministers say that the security of supply should also be supported through the construction of a major thermoelectric generation plant, one which uses fuel other than natural gas.

5.2. Gas [Article 5]

Latvian consumers consume around 1.6 bcm of gas each year, with annual growth of 1-2%. The technical import capacity which is available at this time is 3.5-4 bcm.

The aforementioned growth is based on the increasing use of gas to produce heat. Major changes in the structure of gas consumption, however, should not be expected, because of the lack of major industrial consumers. At the same time, the rising price of natural gas could lead to a halt or decrease in gas consumption if some industrial consumers prove unable to bear the increased fuel costs (it is possible that the border price of gas in 2007 will be equal to the net European price).

The joint stock company Latvijas Gāze is the only trader of natural gas in Latvia, and its exclusive license obliges it to supply natural gas within the covered zone. At this time this refers to all of Latvia, and the obligation exists as long as deliveries are technologically possible and economically feasible.

6. Public service issues [Article 3(9) for electricity, 3(6) for gas]

Public Service Obligations (PSOs) are imposed on service providers by law. These are specifically defined in secondary legislation and in license terms. Given that most provisions are imposed by the legislature.

PSO requirements are defined in several laws, particularly the law on energy, the law on the electricity market, and the law on the regulators of public utilities.

The regulator, however, also defines several tasks, and these are defined in licensing terms:

- Services for all customers in the designated area;
- Continuous operation of their objects under acceptable technical condition up to the boundary of the energy user's object, with ownership to be mutually determined;
- Compliance of public services to all technical, quality and safety standards, as well as existing national legislation.

According to the law on energy, all licensed service providers must, in accordance with their licensing terms, ensure the safe, continuous and stable delivery of electricity, heating energy, gas or other types of energy and fuel to existing and potential users, doing so at an economically justified level of quantity and quality and in conformity with environmental protection requirements. Operations of licensed service providers are regulated in accordance with the law on the regulators of public utilities. Certain other requirements are set out for system operators in the law on energy, which states that in its area of operation and within the time frame stated in its license, the system operator has a permanent obligation to provide access for system users and applicants to energy transmission or distribution systems or natural gas storage sites if such access is permanently compatible with appropriate technical regulations and safety requirements.

A DSO has the obligation of connecting every customer in the licensed area. According to regulations that have been approved by the Commission, the connection charge (the cost of project design and construction) must be shared by the customer (60%) and the DSO (40%).

Article 33 of the law on the electricity market specifies universal service obligations. At this time, these obligations have not been detailed in secondary legislation. In draft regulations on the trade and use of electricity, it is expected that all household users and users connected to a low-voltage distribution network will have the right to receive universal services.

There are no similar obligations in the supply of natural gas.

The obligation to purchase electricity produced within the country in CCHPs or from renewable resources

One of the most important obligations imposed on the public supplier of electricity is the obligation to purchase electricity that is produced within the country in CCHPs or from renewable resources.

Article 28 of the law on the electricity market says that producers can receive the right to sell electricity to the public supplier (Latvenergo), and the public supplier has the obligation to buy it, as long as the producer satisfies requirements that have been defined by the government. At this writing, the issue is regulated in Regulation No. 9 from January 8, 2002, and the requirements can be applied insofar as they are not in contradiction with the law on the electricity market. The government is designing new regulations on particular criteria and requirements which regulate obligatory purchase. These regulations contain provisions on the operating regime, the security of the supply, efficiency, and the formula for determining the price of electricity.

Article 28 of the law on the electricity market also says that the public supplier must report the costs of the obligatory purchase. These are included in the end user tariff, and all users connected to the public supplier must cover them in proportion to the amount of electricity which they consume.

In general, the same provisions also apply to producers of electricity that comes from renewable resources (Article 29 of the law on the electricity market). Here, however, there are a few specific features. For one thing, Article 29 of the law says that a specific segment of total electricity consumption must be based on the production of electricity from renewable resources. By 2010, this segment must reach 49.3% of the total amount of electricity consumption.

The obligation to purchase electricity produced in CCHPs and from renewable resources is also defined in the public supplier's license.

There are no corresponding obligations in the supply of natural gas.

Protection of vulnerable customers

According to Article 33 of the law on the electricity market, the public supplier of electricity faces several obligations which have to do with the supply of electricity to captive customers. On September 28, 2005, the regulator modified Latvenergo's trading license so as to impose the obligations of a public supplier on it.

There are plans at this time to draft a unified strategy for the supply of gas and electricity to vulnerable customers. At the moment, each municipality deals with this issue separately in terms of providing a minimum set of public services to each individual.

Labelling the primary energy source

Article 29 of the law on the electricity market says that producers which conform to criteria may receive a proof of origin in terms of the produced electricity, this occurring in accordance with government-specified procedures. An institution authorised by the government issues the proof of origin.

Annex A – Customer protection issues

According to the law on the regulators of public utilities, the Commission is obliged to deal with customer complaints. In simpler cases, the regulator offers oral or written consultations or opinions. In more complicated cases, however, there are dispute resolution procedures when it comes to customer complaints.

In 2005, there were four dispute resolution procedures. One had to do with gas issues (the details and motivations that should be the basis for a service provider's refusal to supply gas). Three had to do with electricity (the possibility to be exempted from connection fees, termination of a supply contract, and refusal to conclude an electricity supply contract). All of the disputes were resolved at meetings of the regulator's board. One of these decisions has subsequently been appealed before the Administrative Court.

In 2005, the regulator received and responded to 69 customer complaints – far fewer than were received in 2004 (a decline of approximately 41%). These particularly applied to the production of electricity and heat. The level of complaints in the field of gas supplies has remained unchanged.

In 2005, 11 decisions were appealed before the Administrative Court. In just one case the Commission's decision was overturned.

In issuing answers to complainants, the regulator hopes that service providers will provide more transparent information about applicable prices and tariffs, as well as standard terms and conditions, when it comes to the accessibility and use of electricity and gas services.

It can be concluded that the regulator can ensure transparent, simple and free-of-charge procedures for dealing with customer complaints. Such procedures make it possible to settle disputes fairly and promptly, providing, where warranted, for a system of reimbursement or compensation, as well.

Regulation of end user prices

In accordance with the prevailing legal framework, the regulator sets tariffs on transmission services and distribution services, for captive customers in the electricity supply sector, and for transmission, distribution and storage services for all customers in the gas supply sector.

There are the following price caps which apply to the electricity sector:

	transmission		distribution	
	EUR/kWh	%, compared to the previous year	EUR/kWh	%, compared to the previous year
2004	0.006029	100	0.020443	100
2005	0.006114	101.4	0.020629	100.9
2006	0.0068	111.2	0.0215	104.2

In the base year (the first year of the tariff review cycle), the value of the tariff ceiling (the maximum level of regulated service tariffs over a specific period of time) is equal to the average base tariff value. The average base tariff value is determined on the basis of the forecast costs of the service provider in the base year. The tariff

ceiling value, expressed in percentages in relation to the average base tariff, is equal to 100% for the first year of the review cycle. In subsequent years in the review cycle, changes in the ceiling value of the average base tariff for each specific year are calculated in accordance with a formula that is used to determine the adjusted average base tariff.

The procedure for revising and updating these price caps in response to developments in the market is identical for the electricity and gas market – proposals for tariff reviews are submitted by the companies themselves.

The designated supplier is fully compensated for the obligation to supply electricity and gas under regulated tariffs, because existing network service tariffs are economically justified and give the companies enough incentive for development.

The proportion of customers in each segment (household, commercial, industrial still supplied by the regulated supplier/by the supplier of last resort) in the electricity market is as follows: 25% for households, 43% for commercial, 30% for industrial, and 2% for agriculture and farms.

The proportion of customers in each segment (household, commercial, industrial still supplied by the regulated supplier/by the supplier of last resort) in the gas market is as follows: 7.5% for households, 59.7% for the power industry, 24.6% for industry, and 8.2% for utilities and commercial enterprises.

Activities of the regulator in ensuring transparency of terms and conditions of supply contracts

A very important duty for the government is to ensure transparency of terms and conditions when it comes to supply contracts. The government is allowed to issue regulations in which general rules are set out on trade in electricity (the current version is Regulation No. 413, which dates back to October 22, 1996). These regulations indicate the provision and conditions which must be included in electricity supply contracts.

Article 33 of the Electricity market law says that a public supplier must draft, submit for regulatory approval, and then, in accordance with procedures specified by the regulator, publish an approved standard contract for electricity supply, along with the rules of operation and the procedures for the procurement of electricity that is necessary to supply electricity to captive customers.

The government is also entitled to issue regulations in which general rules are defined for trade in the area of natural gas. Regulation No. 23 of January 20, 1998 sets out general provision and conditions for gas supply contracts.