



**2008 National Report
Office of Energy Regulation (The
Energiekamer)
to the European Commission**

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Document history

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1. Foreword

Our mission is to make energy markets work.

The Dutch office of energy Regulation (Energiekamer) is committed to making energy markets work as effectively as possible by implementing various regulatory instruments. This entails safeguarding access to networks, maintaining sufficient transparency (access to essential information) and protecting consumers against potential malpractices resulting from the (inherent) dominant position of providers.

Primary points of departure for realising this mission relate to the conditions for effective market operations. In other words, the Energiekamer aims to fulfil its mission by focusing on how to create conditions conducive to effective and efficient market functioning and the protection of consumer interests.

The Energiekamer chooses to operate in a problem-solving and issue orientated manner. It aims to tackle issues and problems which interfere with the conditions for effective market operations and consumer protection.

This national report will give you an insight on the activities and developments of the Energiekamer in the past year.

Drs. Peter Plug

Director of the Energiekamer

2. Summary \ Major Developments in the last year

2.1. Basic organisational structure of the regulatory agency

June the first 2008 the Dutch Office of Energy Regulation (DTe), has changed its name to Office of Energy Regulation (Energiekamer).

On 1 July 2005 the Energiekamer became part of the Netherlands Competition Authority (NMa). As of this date, a single market regulator has been charged with supervision of general competition law, as well as the specific regulation of the electricity and gas markets. The Board of the Netherlands Competition Authority consists of one chairman and two board members. The statutory tasks of the NMa comprise the enforcement of the Competition Act, the Electricity Act 1998, the Gas Act, the Passenger Transport Act 2000, the Railway Act and the Aviation Act. Also, the NMa is entrusted with enforcement of Article 81 and 82 EC Treaty within the Netherlands. The NMa was given sector-specific powers and authority for the energy and transport sectors. Their implementation lies with two 'chambers' within the NMa: the Energiekamer and the Office of Transport Regulation.

The Energiekamer employs staff from various disciplines, such as economics, engineering, law and public administration. Mr P.J. (Peter) Plug is Director of The Energiekamer . A delegation scheme exists granting a mandate, subprocuration authority and powers of attorney to the Director and Unit Managers for matters relating to the Electricity Act 1998 and the Gas Act and for all remaining matters dealt with by the Energiekamer .

2.2. Main developments in the gas and electricity markets

The law stipulates that energy transmission services must be legally separated from other commercial services. Just recently the Minister of Economic Affairs intervened directly into the structure of the market to prevent distortion of competition between suppliers which have or do not have their own distribution grids. The "Wet Onafhankelijk Netbeheer" (Independent Grid Management Bill) intends to bring about the economic division of energy suppliers and grid managers and has been passed by both Lower and Upper House of the Dutch parliament. Integrated energy companies will have to economically unbundle their grid and supply operations by 2011.

2.3. Major issues dealt with by the regulator

Gas Regional Initiative

In the field of gas the NMa chairs the Gas Regional Initiative for the region North/ North West. In 2007 amongst others the following achievements were made;

- A MOU was signed between the regulators in which they commit to coordinate the region. This MoU intends to fill the current regulatory gap that exists in legislation for regulators to coordinate on cross-border issues.
- A coordinated open season on Taisnières/ Blaregnies
- More flow information published by operators in the North West
- Less then 3 guidelines were published by the regulators
- An oversight has been made on the points where confidentiality has been approved or requested to regulators on basis of the less than 3 rule
- Action plan on GTF made by Energienet.dk and Lead regulator (Dera)

- Pilot project to set up a short-term day ahead auction on capacity on the cross border points Bunde/Oude Statenzijl and Ellund for primary interruptible as well as secondary firm capacity rights
- Legal paper published with all the regulatory and legal bottlenecks to establish an auction for primary capacity rights in the region North West.
- Successful Stakeholders meeting in which stakeholders voted that small, but meaningful steps had been made.

Short term gasflexibility services (combiflex).

The market for short term gas flexibility¹ has been helped in the last years because of the availability of flexibility services offered by the grid operator (so-called combiflex) due to a decision by Nma to regulate that offer in the period 2006-2008. Recently the decision has been (again) established for the period 1.1.2009 - 31.12.2011. Market parties can now continue to ask the grid operator (GTS) for products that match their need for short term flexibility.

The reason for Nma involvement is that the Gas Act stipulates that GTS must offer flexibility services to whoever requests them, when GasTerra has a dominant position in the market for flexibility services. NMA has concluded that GasTerra is dominant in the market for flexibility services. The position of GasTerra in the market(s) for flexibility services way key to NMA/DTe's decision on regulation of gas flexibility services. For more information about recent decision please consult http://www.dte.nl/nederlands/actueel/Nieuwsberichten/18-08_NMa_stelt_methodebesluit_regulering_flexibiliteitsdiensten_GTS_vast.asp

Regional integration of electricity markets

The regulators of the Central West region have published a joined action plan in June 2007 to realise further market integration. This action plan is supported in the MOU agreed upon by the regulators, operators, Ministries, market parties and exchanges of Central West. In this MOU day ahead market coupling en the regional investment plan have been chosen as priorities.

Market coupling in the CW-region

De TLC-market coupling has proven that implicit auction of transport capacity leads to more efficient use of the available transport capacity and to less and smaller price differences between the countries in the market coupling area. At the end of 2007 the NMA choose to postpone the planned implicit market coupling with the start of the Norned Cable (may 2008) as a consequence of the different GCT times in Norway and the Netherlands. Instead explicit auction was started and is working.

In 2007 TSOs and exchanges have started a project organisation with the goal to create Central West flow based market coupling.

Congestion management within the Netherlands

A number of development plans exist for new production and there has been a strong growth of decentralised production of CHP Plants. At the end of 2007 the Minister of Economic Affairs has followed the advice of the NMA and announced that Tennet has to resolve problems with transport capacity on the grid using 3 measures: pro active planning and acceleration of

¹Demand for gas flexibility arises for two main reasons:

- to meet predictable variations in the gas demand and supply balance, for example, due to predictable variations over the course of a year/week/day; and
 - to meet unpredictable variations in the gas demand and supply balance, for example, due to unpredicted temperature variations or temporary production problems over the course of a year/week/day.
- Gas flexibility products are crucial for competing in the wholesale market as they can provide an increase or decrease in gas supply with some notice period and for a period of time.

investments in the grid, introduction of mutual obligation in connection policy and a system of congestion management.

Annual capacity auction 2007

The annual auction of transport capacity at the interconnector Netherlands-Germany now involved two rounds (September and November 2006) instead of a single round, as was the case previously. A total amount of 1300 Megawatt (MW) was auctioned instead of the usual 900 MW. TenneT – the national high voltage grid operator – was granted a temporary exemption from a number of provisions in the NetCode. The exemption will be lifted as soon as the Code provides for a new transport capacity allocation scheme. The European Court of Justice rejected the present scheme put forward in the NetCode.

Norway

A new submarine cable between Norway and the Netherlands (NorNed-cable) was planned to be taken into operation at the end of 2007. After some delay this cable was put into operation in May 2008. The capacity will be allocated with an explicit auction mechanism through daily auctions only. However, the objective remains to implement an implicit auction mechanism for the NorNed cable in 2009.

3. Regulation and Performance of the Electricity Market

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

3.1.1. General

The Dutch electricity market has been fully liberalised. This market was fully liberalised on 1 July 2004. On this date, the last of three phases took effect and, as a result, small consumers were free to choose their own electricity supplier.

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

Degree of congestion

The average utilisation of available cross-border capacity is as follows:

	Germany	Belgium
Import	80%	55%
Export	9%	22%

The number of hours with full utilisation of the available capacity is as follows:

	Germany	Belgium
Import	9%	21%
Export	0%	6%

In general, congestion occurs in the direction of imports (in other words, from Germany/Belgium towards the Netherlands) on the cross-border connections with Belgium and Germany, although export (especially in night hours and towards Belgium) also exists. The prices in the import direction are therefore normally high. In the direction of exports (in other words, from the Netherlands to Belgium/Germany) there is generally no or little congestion. The available capacity with Belgium is better used due to the existence of an implicit auction (market coupling).

Transmission restrictions within the Netherlands occur less often and, in addition, are solved by the grid managers which means that all trade transactions remain unaffected. Internal restrictions are more likely to occur in the future due to the fast and strong growth of new decentralised generation capacity (CHP and wind).

The regulated system

NL-DE

The interconnector capacity available to the market between the Netherlands and Germany is allocated to market parties by means of explicit auctions. Three different categories are distinguished on the auctions: the year-ahead auction (capacity for an entire year), the month-ahead auction (capacity for an entire month) and the day-ahead auction (capacity for a particular clock hour the next day). TenneT carries out the auctions jointly with the TSOs of the

neighbouring countries. The available capacity is allocated to the various auctions in a prescribed manner. Market parties bid for both import and export capacity. If there is sufficient capacity to meet demand in full, the price for this capacity (the clearing price) is EUR 0. In the event of scarcity, that is if the demand for capacity exceeds the supply of capacity, the clearing price is equal to the lowest offer accepted.

The parties to which transmission capacity is allocated or transferred on the year-ahead or month-ahead auctions are obliged to notify TenneT at the latest by 0800 hrs on the day prior to the transmission of their intention to make use of this capacity. Capacity which is not nominated is made available for the day-ahead auction without compensation. The parties to which import capacity has been allocated on the day-ahead auction are obliged to offer the same quantity of electricity on the Dutch side of the border on the Amsterdam Power Exchange spot market, the APX. Any capacity which is not sold on the APX reverts to TenneT.

NL-BE

The day-ahead transmission capacity between the Netherlands and Belgium is auctioned through an implicit auction based on a trilateral market coupling mechanism. This trilateral day-ahead market coupling mechanism has been implemented between the Netherlands, Belgium and France and started on the 21st of November 2006. The year-ahead auction (capacity for an entire year) and the month-ahead auction (capacity for an entire month) are performed explicitly in the same way as for the NL-DE border.

NL-NO

A new submarine cable between Norway and the Netherlands (NorNed-cable) was planned to be taken into operation at the end of 2007. After some delay this cable was put into operation in May 2008. The capacity will be allocated with an explicit auction mechanism through daily auctions only. However, the objective remains to implement an implicit auction mechanism for the NorNed cable in 2009.

Intraday-allocation

Cross-border intra-day trade is not yet possible on the Dutch borders. Interim solutions for the NL-DE and NL-BE borders are in preparation and will become active in 2008. In parallel to that a harmonised solution for cross-border intra-day trade for the Central West European region will be developed. A market consultation is scheduled to take place in 2008.

Cross-border intraday trade on the NorNed cable can not be implemented as long as intraday trade is not facilitated on the Norwegian market.

Obligation to provide information

The TSO must publish the secure, available cross-border transmission capacity for the following calendar year on an hourly basis before 15 September. On a daily basis, before 0830 hours, the TSO must announce the capacity available for spot transmission for the following day, specified per connection (in all cases 30 days in advance). The capacity allocated and the corresponding price must be published immediately after the day-ahead or month-ahead auction has been held. In the case of the day-ahead auction, this information must be announced daily at 0930 hrs (a half an hour after the auction at 0900 hrs).

In regard to the implicit auction on the NL-BE border, the TSO is responsible for publishing the functioning of the implicit auction and the corresponding algorithm. Furthermore the relevant prices and volumes on the spot market, the aggregated supply and demand curves and the corresponding import/export curves must be published on an hourly basis. Also a graphic

reflection of the results of the implicit auction should be published leading to the market clearing price. Finally, information regarding paradoxical rejected block bids must be published.

Degree of integration of congestion management and wholesale markets

Congestion management is very important for the operation of the Dutch wholesale markets. Approximately 20% of consumption in the Netherlands is imported. Effective congestion management means that as much cross-border capacity as possible can be made available to the market within the limits of grid security. The available import capacity is important for price formation on the wholesale markets due to the high percentage of imported electricity. As day-ahead market coupling has been established on the NL-BE border, the efficient use of the available capacity is assured. This has also resulted in a high degree of convergence of the day-ahead prices of the Netherlands, Belgium and France. Although this is a very positive development it must be noted that most trade is done through (year ahead) OTC products. The implementation of a market coupling regime in the whole CWE region (including the NL-DE border) is foreseen to be implemented in 2009 according to the MoU signed by the five countries.

3.1.3. The regulation of the tasks of transmission and distribution companies

Number of grid companies

The Netherlands has 8 regional grid companies (DSO's) for the distribution of electricity. In this regard, grid companies which belong to a single holding company count as a single grid company. In addition, there is one national grid company (TSO), called TenneT, for the transmission of electricity.

Length of grids

The total length of the grids in the Netherlands is 268.325 km (2006), of which 2.735 km belongs to the TSO (from: *EnergieNed - Energie in Nederland 2007*).

Regulation of DSO's

The DSO's are regulated by the Energiekamer. The Energiekamer uses a system of national yardstick competition (with price cap). The allowed revenue of a company is adjusted annually by $(1+CPI-X+Q)$. CPI is the Consumer Price Index and Q represents the quality factor. X is the incentive for efficiency. The yardstick (objective in final year of a 3 to 5 year period) is equal (except some regional differences) for all DSO's and determined by the average growth in total factor productivity.

This system of yardstick competition provides incentives to increase productivity. Higher profits can be achieved if a company realises a growth in productivity which exceeds the average growth in productivity. The productivity is measured by dividing the costs of the company by their standardised output. The costs are determined according to a standardised method. Annually the Energiekamer collects actual OPEX, investments and depreciation (based on regulatory accounting rules) and volumes charged to customers.

A possible danger of the system of yardstick competition is that companies may reduce their investments to increase their productivity. By reducing investments, the quality of the grid may be reduced. Quality is measured by the System Average Interruption Duration Index (SAIDI), or the average interruption per consumer. To avoid this, the Energiekamer introduced quality regulation as of January, 1st 2005, which includes interruptions experienced by consumers on the low-voltage grid (<50kV). the Energiekamer has included quality regulation in the system of yardstick competition. The allowed revenues of a company are adjusted annually by $1+CPI-$

X+Q. If an individual company has above or below average quality, high/lower revenues are allowed. The annual average interruption duration per consumer at the low-voltage level amounted to approximately 33 minutes in 2007 (from: EnergieNed).

The allowed revenue is based on expected volumes. Given the allowed revenue each DSO each year presents a tariff proposal for all tariff components. This proposal is assessed and approved by the Energiekamer. Customers can consult the tariffs on the Energiekamer's website (www.Energiekamer.nl).

Regulation of the TSO

The TSO is regulated by the Energiekamer. the Energiekamer uses a system of turnover regulation (revenue cap) with a yardstick partly based on international benchmark combined with a frontier shift based on productivity growth of other foreign TSO-companies. The allowed revenue of the company is adjusted annually by $(1+CPI-X)$. CPI is the Consumer Price Index and X is the incentive for efficiency. Quality is not regulated with incentives for the TSO, but by setting quality standards in codes. The yardstick objective is set for the final year of a 3 to 5 year period.

This system of yardstick competition provides incentives to decrease cost efficiency. Higher profits can be achieved if the company realises a decrease in cost which exceeds the ex ante expected decrease in cost. The costs are determined according to a standardised method. Annually the Energiekamer collects actual OPEX, investments and depreciation (based on regulatory accounting rules) and volumes charged to customers.

To guarantee security of supply in the Netherlands, a separate assessment system is used for assessing investments in expansion. In other words, the utility and necessity of these investments must be assessed and, if the utility and necessity has been determined, a correction will be made to the turnover.

Given the allowed revenue the TSO each year presents a tariff proposal for all tariff components given the expected volumes. This proposal is assessed and approved by the Energiekamer. Customers can consult the tariffs on the Energiekamer's website (www.Energiekamer.nl).

As of January, 1st 2008 the Dutch Electricity Act states that the grids with voltage levels of 110 kV and higher voltage must be managed by the TSO (TenneT). Before this date the 110 kV and 150 kV grids were managed by DSO's. The transition is currently taking place.

Tariffs

The typical customers below are all customers of DSO's. All tariffs mentioned are charged by the DSO except the system charge (TSO). The tariffs are averages of all DSO's, taxes excluded.

A household with annual consumption of 3 500 kWh/ year, of which 1 300 kWh by night:

3.500 kWh (1.300 kWh night)	Volume	Tariff (EUR)	Total (EUR)
Fixed charge	1	17,07	17
Volume charge Day kWh	1.300	0,01821	24
Volume charge Night kWh	2.200	0,03763	83
System charge kWh (TSO)	3.500	0,00117	4
Total annual charge			128

A commercial customer with annual consumption of 50 MWh / year, maximum demand 50 KW:

50 kW and 50 MWh	Volume	Tariff (EUR)	Total (EUR)
Fixed charge	1	418,15	418
Capacity charge kW-peak	50	12 * 1,39 = 16,68	834
Capacity charge kW-contracted	(assumption) 50	21,09	1.055
Reactive power charge kVArh	(assumption) 1.500	0,00587	8
Volume charge kWh	50.000	0,01821	911
System charge kWh (TSO)	50.000	0,00117	59
Total annual charge			3.284

An industrial customer with annual consumption of 24 GWh/ year, maximum demand 4 000 KW:

4.000 kW and 24 GWh	Volume	Tariff (EUR)	Total (EUR)
Fixed charge	1	2616,20	2.616
Capacity charge kW-peak	4.000	12 * 1,66 = 19,92	79.680
Capacity charge kW-contracted	(assumption) 4.000	18,03	72.120
Reactive power charge kVArh	(assumption) 150.000	0,00453	679
System charge kWh (TSO)	24.000.000	0,00117	28.080
Total annual charge			183.176

Balancing in general

TenneT, the manager of the national high-voltage grid, organises the 'market' for control and reserve power. On an annual basis, TenneT contracts a certain quantity of control and emergency power. TenneT calls for bids for reserve power if an imbalance arises. The cost of this is recovered from the responsible party (the system of programme management). The market for control and reserve power is a special market, which is used by TenneT to balance real-time disruptions to the balance of the national transmission grid. Electricity is deployed through this market to maintain the balance in the Netherlands (and therefore to maintain the level of exchange with other countries).

Programme managers can offer available control and reserve power on the market for control and reserve power (or balancing market). The parties must submit their bids on the day prior to the day of execution by TenneT. The bids may be changed up to one hour prior to the actual transmission. The bids are ranked on the so-called 'bid-price ladder' according to the price per MWh at which they are offered. TenneT is the only buyer on the market for control and reserve power; as a result, the market for control and reserve power is a so-called 'single-buyer' market. At the border of the Netherlands, TenneT measures the actual balance of import and export and compares this with the balance of all electricity programmes. If there is a difference, then imbalance is said to exist. In the event of an imbalance, TenneT uses bids for control power to eliminate the imbalance. The control power offered on the market for control and reserve power is used for this in the order of the bid-price ladder, starting with the cheapest supplier. This may be capacity used to increase or to decrease power. In both instances, the price of using this power, which TenneT owes the bidders, is determined on the basis of the bid-price ladder. This is the price of the lowest bid used. On the basis of the bid-price ladder and the power required to increase or decrease capacity for a Programme Time Unit (in the Netherlands, a quarter of an hour), two balancing prices are determined: a price for increasing capacity and a price for decreasing capacity. These prices determine, amongst others, the price TenneT pays or receives from the connected parties which supply control power to TenneT. The price for power to increase capacity is determined by the price of the highest bid, which is used fully or partially, on the side of the price ladder for power used to increase capacity. On the side of the price ladder for power used to decrease capacity, the prices determined by the highest bid used for balancing (for more information see the Energiekamer's report "*Transparantie voor*

onbalanssystematiek,, Onderzoek en maatregelen ["*Transparency for the balancing system: research and measures*", The Hague, 2 June 2004"] and the technical publications by TenneT, "System Balancing in the Netherlands" and "On the value of Dutch Imbalance", 23 July 2003, <http://www.tennet.org/publicaties/technisch/>).

TenneT contracts yearly 250 – 300 MW regulating capacity from power producers. These producers are then obliged to offer their contracted capacity into the balancing market. The costs of TenneT for contracting this capacity are covered through the system service tariff that is charged to all consumers.

Balancing: specific issues

- The arrangements for balancing are set out in the technical codes adopted by the *Energiekamer*. For instance, section 2.2 of the System Code discusses the rights and obligations of TenneT with regard to the maintenance of the energy balance. Chapter 3 of the System Code discusses the topic of programme management (or balancing responsibility), while section 3.9, for instance, contains the rules for determining the balancing price. The detailed implementation rules are determined by TenneT itself. The method of programme responsibility is based on the assumption that smaller grid users can outsource their programme responsibility. As a result, positive and negative imbalances can be aggregated. This ensures that smaller parties or new entrants are not placed at a disadvantage. The determination of balancing prices therefore corresponds to the market as closely as possible. In principle, all imbalances are settled at the same price. Only in periods in which TenneT both increases and decreases capacity do settlements occur at two prices.
- The balancing interval is 15 minutes.
- There is a single balancing area which is the same as the control area and which also corresponds to the entire electricity supply system in the Netherlands. Within this area, TenneT regulates the balance between supply and demand.
- Cross-border trade in the time domain of balancing is not possible. Offers of control power must correspond to positions within the Dutch system. However, TenneT has contracted part of its emergency power from foreign TSOs. Emergency power is not offered through the bidding system.
- Bids on the market for control and reserve power can be submitted up to one hour prior to the Programme Time Unit (15 minutes).
- Changes to electricity programmes may commence every hour on the hour and must be submitted at least one hour prior to the clock hour. In 2006 a central market place for intraday trade operated by APX was started. However, cross-border intraday trade is still not possible on Dutch borders. Due to legal issues it is expected that cross-border intraday trade will be possible in 2009. Making cross-border intraday trade possible is a requirement of the regulation 1228/2006 and is an important part of the Action Plan of the CWE Region.
- Imbalances are charged to programme managers in accordance with the method set out in the System Code. The prices are determined on the market for control and reserve power.
- Settlement of balancing
The process and the timetable for settling imbalances are set out in section 3.7 of the System Code and section 4.2 of the Measurement Code. At the latest after 10 days the grid managers distribute their definitive measurement data. Payments between programme managers and TenneT occur on a monthly basis.
- Information from the TSO to the market parties
The programme managers receive data regarding the programmes, the measurement values, the imbalances and prices of the previous day(s) from TenneT before 1700 hrs on every working day. (System Code, section 3.7.5).

3.1.4. Effective unbundling

for further information on unbundling see 4.1.4

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

3.2.1. Description of the wholesale market

The Dutch Energy monitor ("Monitor energiemarkten 2007; Analyse van de ontwikkelingen in de Nederlandse groothandelsmarkten voor gas en elektriciteit") reports on the developments of the wholesale market in the Netherlands. At time of publishing this document has not been finalized yet, but can be found in September 2008 on www.Energiekamer.nl.

Key 2007 figures

Total consumption	112.398 TWh
Generation capacity	20,8 GW
Net generation volume	99.349 TWh
Import capacity	3, 65 GW
Net import volume	17.609 TWh

Market places

The Dutch wholesale market can be subdivided into various marketplaces on which supply and demand meet. The following marketplaces can be distinguished:

- the trade in bilateral contracts, or the bilateral market;
- the OTC (over-the-counter) market;
- the day-ahead market (spot market, APX); and
- the balancing market, or the market for control and reserve power.

Non-standardised contracts (these are so-called profile contracts) are entered into between producers, (large) consumers and suppliers for lengthy periods on the bilateral market. The contractual period is usually limited to a period of one to two years because the market parties have insufficient certainty with regard to the development of the market structure and market prices. The over-the-counter market (OTC) is the market on which standard quantities of electricity are traded (outside APX). On this market, electricity is often sold on numerous times through various intermediaries who clear transactions, the so-called "brokers". Various brokers are active on the Dutch market.

In addition, Endex has existed since 2003. This trading platform started at the beginning of 2003 with the clearing of electricity contracts. Endex publishes daily prices for a range of (standardised) OTC products. Since December 2004, traders can also trade standard OTC futures through Endex. The APX (Amsterdam Power Exchange) is a day-ahead market on which supply and demand for electricity meet on an hourly basis. The volume of the APX is determined to a considerable degree by the (interconnector) daily imports which have to be traded on the APX.

Finally, there is the 'market' for control and reserve power organised by TenneT, the manager of the national high-voltage grid. TenneT contracts a certain quantity of control and emergency power on an annual basis. The cost of contracting power is charged to all consumers through TenneT's system services tariff. TenneT calls for bids for control power if an imbalance arises. The cost of the energy required for this is recovered from the party responsible for this

imbalance (the system of programme responsibility). The market for control and reserve power is a special market used by TenneT to restore balance in real-time when the Dutch system is disrupted.

Within the wholesale market for electricity, there is a strong relationship between the various marketplaces mentioned above and arbitrage occurs. Financial derivatives, such as options, futures and swaps, which can be used to hedge risks, have only developed to a limited degree. The low volume of electricity traded is the main obstacle to the emergence of such products.

Market structure

Approximately 25 electricity producers are active in the Netherlands. In terms of the size of generating fleets, the Netherlands has seven large and 18 small electricity producers. The large coal- and gas-fired plants and the combined heat-power plants which provide the bulk of production in the Netherlands are owned by a few large producers. Three-quarters of the Dutch generating fleet belongs to four electricity producers. The degree of concentration in the Dutch wholesale market is measured using the Herfindahl-Hirschman Index (HHI).

HHI capacity	1592
HHI generation	1828

Description of the market for support services (for instance, frequency response):

The Netherlands distinguishes between various types of support services. Several support services are secured by means of a connection requirement in the technical codes (for instance, suitability for providing primary frequency response and voltage response). Some support services are contracted by TenneT by issuing tenders (for instance, control power, emergency power and black-start power). Finally, there is a market for control and reserve power (that is, the balancing market). Power is deployed through this market to maintain the balance of the Dutch system (and therefore to maintain the exchange with foreign countries). Programme managers can offer available control and reserve power on the market for control and reserve power. The parties must submit their bids on the day prior to the day of transmission by TenneT. TenneT. The bids may be changed up to one prior to the actual transmission. The bids are ranked on the so-called 'bid-price ladder' according to the price per MWh at which they are offered. TenneT is the only buyer on the market for control and reserve power; consequently, the market for control and reserve power is a so-called 'single-buyer' market'. At the border of the Netherlands, TenneT measures the actual balance of import and export and compares this with the balance of all the electricity programmes. If there is a difference, then imbalance is said to exist. In the event of imbalance, TenneT uses bids for control power to eliminate the imbalance. The control power offered on the market for control and reserve power is used for this in the order of the bid-price ladder, starting with the cheapest supplier. This may be capacity used to increase or to decrease power. In both instances, the price of using this power, which TenneT owes the bidders, is determined on the basis of the bid-price ladder. This is the price of the last bid used. On the basis of the bid-price ladder and the power required to increase or decrease capacity for a Programme Time Unit (in the Netherlands, a quarter of an hour), two balancing prices are determined: a price for increasing capacity and a price for decreasing capacity. These prices determine, amongst others, the price TenneT pays or receives from the connected parties which supply control power to TenneT. The price for power to increase capacity is determined by the price of the highest bid which is used fully or partially on the side of the bid-price ladder for power used to increase capacity. On the side of the bid-price ladder for power used to decrease capacity, the price is determined by the highest bid used for balancing (for more information see the Energiekamer's report "*Transparantie voor onbalanssystematiek, Onderzoek en*

maatregelen" ["*Transparency for the balancing system: research and measures*", The Hague, 2 June 2004]). The Energiekamer does not have reliable data on the degree of concentration on the market for control and reserve power. This level, of course, is expected to be higher than that of the 'normal markets' because fewer production units are technically able to participate in the Frequency Power Scheme [*Frequentie Vermogens Regeling (FVR)*].

Power exchanges

The APX is a marketplace for trading in day-ahead contracts. Standardised forward contracts are traded on Endex.

	APX	ENDEX Futures Exchange	ENDEX OTC clearing
Number of traders	54	34	34
Volumes traded	20,7 TWh	28 TWh	73 TWh

In addition to the day-ahead market, the APX launched an intraday market in September 2006. In this market, quarter hours of electricity can be traded up to two hours before delivery. A total of 30 standard forward contracts are now available on Endex: 6 monthly, 6 quarterly and 5 yearly contracts for both baseload and peakload.

Active role of buyers on the wholesale market

the Energiekamer does not have reliable data on the demand participation on the market. The Netherlands does not have an obligatory pool requiring supply/production and demand/consumption to be offered separately. Market parties trade on the basis of a portfolio which may consist of production facilities, contracts, but also demand response options. Research has been done into the contribution which industrial consumers could make to interruptible demand, for instance if prices reach very high levels (see the report "*Benutting vraagrespons in de geliberaliseerde elektriciteitsmarkt*", Research for the Ministry of Economic Affairs, 18 May 2004). It can be concluded from this research that the potential demand response amounts to approximately 1730 MW, of which approximately 1000 MW is utilised. The demand response of consumers who themselves trade is approximately 350 MW. The demand response agreed in interruptible contracts is approximately 650 MW.

Degree of integration with markets in neighbouring countries

The Dutch market is connected to the Belgian and German markets through various interconnectors. Under normal operations, the maximum transmission capacity on the five cross-border connections is 3650 MW, of which 3350 MW is available to the market. As of 1 January 2001, the allocation of the available cross-border capacity has taken place by means of an auction which TenneT organises jointly with the German and Belgian grid managers involved. The capacity is auctioned in the categories year-ahead, month-ahead and day-ahead. On November 21st 2006 the Trilateral Market Coupling with Belgium and France took place, the power exchanges are now connected and take the available capacity at the borders in consideration. Furthermore, as of May 2008 a cable between the Netherlands and Norway is operational (700 MW). Price correlation is not a good indicator of the extent of market integration. Price differences will exist when there are active restrictions on transmission capacity. It is more important to consider the efficient use of interconnectors.

Assessment of impact of mergers on competition

NMa Office of Energy Regulation has published a vision document entitled "Vision Document on Mergers in the Energy Markets" ["*Visiedocument Concentraties Energiemarkten*"], The Hague, November 2006. The aim of this document is to inform all parties involved and parties interested in the development of the energy market in the Netherlands and beyond on the investigations and subsequent market consultation which it has carried out into (i) the definition of (possible)

relevant markets in the electricity sector and (ii) the way in which NMa views possible mergers and acquisitions on these markets.

The vision document states that NMa has indications that, on the basis of the situation in 2008, the geographical market for production and wholesale trade (from the perspective of competition law) comprises (i) the Netherlands during peak hours and (ii) at least the Netherlands and Germany during non-peak hours. Only if there is a sharp increase in the available transmission capacity on be cross-border connections, would it be possible that the geographical market is larger.

3.2.2 Description of the electricity retail market

The Energiekamer does not have figures which can be broken down into the requested segments, nor does it have figures for medium-sized industrial and commercial consumers with consumption between 50 MWh and 2000 MWh or large industrial consumers with consumption exceeding 2000 MWh.

Market structure

Just as last year, the structure of the Dutch electricity retail market is characterised by some large suppliers (mainly incumbents) and a large number of (very) small suppliers. There are four electricity suppliers to small consumers with a share of the market that exceeds 5%. Three are incumbents, one of these is a new entrant (entered the market after full liberalisation in July 2004). This situation remains unchanged compared to last year's report.

C3 index	E
1 July 2004	86%
31 December 2004	84%
1 July 2005	83%
31 December 2005	80%
1 July 2006	81%
31 December 2006	82%
1 July 2007	83%
31 December 2007	82%

Table 3.2.2-a: Development of the C3 index for electricity since the liberalisation of the market

The three largest suppliers together have a market share of 81.8% in the small consumer segment. In total, there are 22 independent players (parent companies) active on the market for small consumers of electricity with various levels of activity on the market. Of these parties, 4 belong to the group of national "incumbents". This number is the same as previous year. In 2007 there have been no takeovers of customer portfolios of "original" incumbent suppliers. On 31 December 2007, there were a total of 40 energy suppliers in the possession of an electricity supply licence (not all of these are independent).

Entries and exits, and international penetration

Since full liberalisation, the following acquisitions of Dutch electricity suppliers by foreign companies took place:

<2004

Obragas and Haarlemmermeergas – RWE (Germany)

2004 / 2005

NRE - E.ON (Germany)

Intergas - Dong (Denmark)

Oxxio - Centrica (UK)

Spark Energy - Electrabel (Belgium)

2006

Cogas - Electrabel (Belgium)

Rendo - Electrabel (Belgium)

2007

None

Some (but not all) of the Dutch company names/brands have been replaced. By means of these acquisitions, the foreign companies have established a platform from which they wish to increase their share of the Dutch market.

From 1 January 2007 to 31 December 2007 three new licenses for the supply of electricity were issued and one license was revoked (voluntarily by supplier, changed name and continued to supply electricity). New applications for licences are being prepared at the moment.

Vertical integration, supply/production and distribution grid

Supply: production

The degree of integration of production and supply companies is expressed here as market shares. This relates to the market share of suppliers on the small consumer market which have at their disposal (significant) production capacity of their own in the Netherlands. In March 2004, this figure was at least 62%. If all parties with access to own generation capacity (or an unrivalled claim to a source) are viewed as being vertically integrated, at the moment this figure is close to 90%. Important to note though, is that for some of these companies the generating capacity and retail market shares are so wide apart that it is highly questionable whether these companies can benefit from having both generation capacity and a retail customer base.

Supply: grid

84% Of the retail electricity market is being supplied by companies that are in the same holding as a distribution grid operator. The rest of the market is supplied by either independent entrants or formerly integrated companies that have fully unbundled voluntarily.

Switches

Between 1 January 2007 to 31 December 2007 8,5% of all consumers switched electricity supplier. This percentage is up from the previous 12 month-period. This switch percentage is the highest since full liberalisation in 2004. The figure below provides an overview of monthly switching rates since full liberalisation.

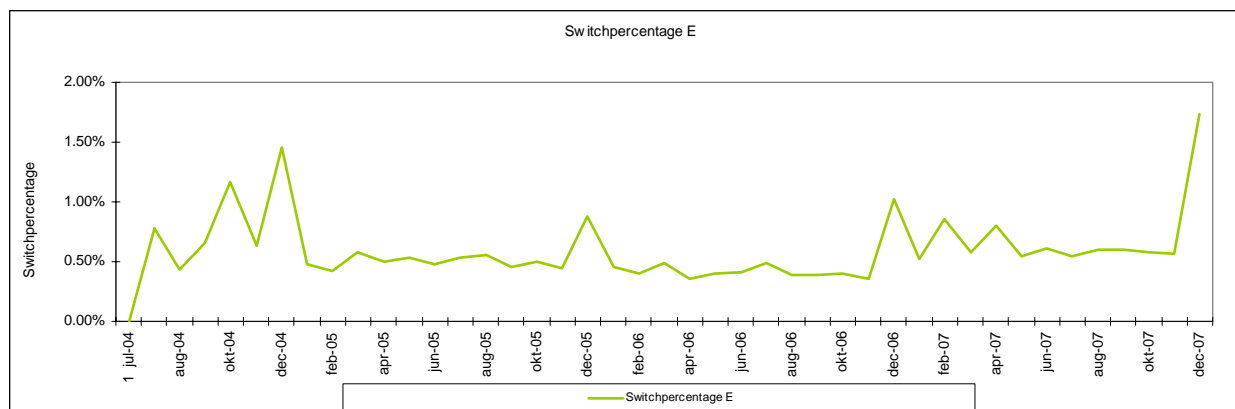


Figure 3.2.2-b: Development of monthly switch rates for electricity since market liberalisation

Switching procedures

The procedure remains unchanged compared to last year. If electricity consumers wish to switch electricity suppliers, the electricity consumers must inform the new supplier in writing or verbally (for instance, by telephone) of their intention to switch and must authorise this new supplier to request the necessary information and to take the necessary action (for instance, requesting information from the connection register of the grid manager and making arrangements in relation to programme management). In addition, the consumers must provide the meter reading. If they fail to do so, they accept that the final settlement by the former supplier will be based on an estimate of consumption. After completing the above, the consumer has done all that is necessary to switch. In this regard, the Energiekamer advises consumers to ascertain whether the new supplier respects the duration of the contract with the former supplier. The customer is then certain that he will not be faced with parallel contracts and possible cancellation fees. After this, the consumer needs not take any further action and waits for confirmation from the new supplier and the final settlement from the previous supplier.

The new supplier submits a request for a switch to the grid manager. The meter reading accompanying the switch has to be sent to the grid manager as soon as possible by the new supplier, but at the latest 15 working days after the date of the switch. Immediately after receiving the request for a switch, the grid manager carries out a number of checks (for instance, whether the application was submitted at least five days before the intended date of the switch). If the result of the checks is positive, the grid manager confirms acceptance of the switch at the latest on the working day after receipt of the notification of the switch from the former and the intended new supplier. At that moment, the grid manager also enters the change into the connection register. The grid manager passes on the meter reading(s) as soon as possible, but at the latest on the 30th working day after the date of the switch, to both the former and the new supplier. The grid manager also notifies the former supplier of the consumption so that the former supplier can draw up the final invoice.

Problems with switching

Satisfaction over switching procedures and administrative procedures in general increased slightly. The main problem with switching was/is that the majority of switches are based on meter estimates instead of actual meter readings, just as previous year. This results in consumers not

recognising their final settlement bill with the old supplier. This in result leads to complaints and requests for corrected bills.

Prices, tariffs and tax rate per component of the invoice

Transmission costs

The transmission costs (also referred to as grid costs) consist of:

1. Consumption-related costs (variable costs, with tariffs per kWh)
2. Standing transmission charges (transmission capacity)
3. Standing connection charges
4. (Any one-off connection charges)
5. System services (TSO)

The transmission costs are determined annually by the Energiekamer and are therefore regulated. The exceptions to this are the costs for metering services. In the case of metering services, consumers may choose from various suppliers and metering tariffs have also been liberalised. This will however change in 2008.

The transmission tariffs may differ from one grid manager to the next. The below overview is based on a weighted average (number of connections) of all regional network operators.

- Standing charge for the transmission service (EUR): 18,00
- kWh tariff (weighted average, EUR per kWh): 0.0329²
- Periodic connection fee (weighted average, EUR): 21,90
- System services tariff (EUR per kWh): 0.00117

For an average Dutch consumer this leads to a total of EUR 142 annually.

Metering costs

The metering tariffs³ (meter rental) are not regulated at the moment. This will change in 2008. On average the Dutch consumer paid around EUR 20 annually in 2007 for rental of a single tariff meter and around EUR 30 annually for a double tariff meter.

Supply costs

The supply tariffs are not regulated and consist of the cost of the electricity consumed and fixed costs. On 31 December 2007, a household with an average consumption (3397 kWh per annum) paid a net amount of EUR 277 in supply costs on an annual basis (approximately 16% of the consumer's total energy bill). This included fixed costs, but excludes VAT. This results in an average supply tariff (including the fixed supply costs) of around EUR 0.082 per kWh. The Energiekamer surveys the fairness of these tariffs.

Taxes

There are various taxes on the supply of electricity. In the case of electricity, the energy tax amounts to EUR 71.60 per MWh of electricity supplied on 1 January 2006. Value Added Tax (VAT) amounting to 19% is charged on the amount for electricity delivered (consumption and

² Double Tariff High: 0.0395 / Double tariff Low: 0.0189 / Single tariff: 0.0336

³ Meter rental is often reported under the item "Transmission costs" in the annual accounts, but does not actually belong there. The metering market in 2007 is still a liberalised market and the tariff is therefore not regulated. The consumer is free to choose a supplier.

non-consumption related tariffs) and the energy tax. In addition, a tax rebate of EUR 199 (excluding VAT) is applied (to the entire energy bill, so electricity and gas bills combined).

3.2.3 Measures to avoid the abuse of dominance

Competition measures

The NMa yearly monitors the competition and barriers to competition in the wholesale markets for gas and electricity. The monitoring report is published on the website of the Energiekamer: www.energiekamer.nl. Part of the monitoring project is establishing the level of concentration for the different parts of the electricity market. This exercise is however meant to monitor the concentration over the years, not to establish market dominance.

Despite the fact that the supply tariffs are not regulated, the Energiekamer has the statutory power to impose tariff reductions on supply companies if the tariffs are unreasonably high in its Energiekamer's opinion. This has never occurred.

With regard to transparency, the Energiekamer has taken facilitative measures to improve the transparency of the market and, by doing so, also to improve competition on the retail market (and prevent the abuse of market dominance). For instance, the Energiekamer conducts research annually into the correctness and completeness of data published on websites of price comparators. In 2007 the Energiekamer also scrutinised the information on energy suppliers' websites and in consequence drew up binding guidelines for information provided to consumers by energy suppliers. In addition, The Energiekamer investigates whether invoices are clear and randomly check whether invoices are correct. The Energiekamer also investigates the way in which energy suppliers handle complaints.

The contractual conditions which suppliers use in supply contracts with consumers must be transparent, fair and known beforehand. Misleading advertising is not permitted (in accordance with section 95m of the Electricity Act and section 52b of the Gas Act). This has been worked out in more detail in the following documents:

- the Policy Rule on Invoicing Deadlines for Energy [*Beleidsregel factureringstermijnen energie*] (the requirement to send a correct and complete (final) invoice to small consumers (suppliers) within two months after a change of address, switch or termination of the invoicing month, and to send consumers a statement containing a clear and comprehensible specification of the connection charges (grid management));
- the Policy Rule on Fair Cancellation Fees for Licence Holders [*Beleidsregel Redelijke Opzegvergoedingen Vergunninghouders*] of March 2005;
- the Decision in Relation to Licences for the Supply of Electricity to Small Consumers [*Besluit vergunning levering elektriciteit aan kleinverbruikers*] of May 2003 and the Decision in Relation to Licences for the Supply of Gas to Small Consumers [*Besluit vergunning levering gas aan kleinverbruikers*] of 2 June 2003. These documents state the conditions which an electricity and/or gas supplier must meet to supply small consumers. Conditions include (amongst others) the use of clear offers and agreements in which the level of the tariffs and the composition of these is stated, a transparent and fair payment scheme, a transparent and fair scheme for cancelling or dissolving agreements and the ability to process complaints adequately;
- the Ministerial Scheme for Consumers and Monitoring, Pursuant to the Electricity Act of 1998 and the Gas Act stipulates requirements with regard to supply agreements with small consumers, such as personal details and the address of the supplier, a description of the

goods and services to be supplied and the agreed quality levels in relation to these, as well as the way in which information can be attained with regard to tariffs, the contractual term (if nothing is specified in this regard, the agreement is for an unspecified period), the right to cancel the agreement and the conditions applicable to renewal or cancellation of the agreement, a description of the applicable fees and reimbursement scheme, and the way in which the dispute procedures can be invoked.

Since the beginning of 2006, The Energiekamer monitors the administrative processes (and accompanying communication) in relation to switches and changes of address on a monthly basis, so that consumers and other market parties (grid managers and suppliers) are not obstructed by any administrative processes of energy companies. The results are published once a quarter on The Energiekamer's website.

With regard to unbundling, the law stipulates that energy transmission services must be legally separated from other commercial services. Just recently the Minister of Economic Affairs intervened directly in the structure of the market to prevent distortion of competition between suppliers that own distribution grids and those that do not. The "Wet Onafhankelijk Netbeheer" (Independent Grid Management Bill) is intended to bring about the economic division of energy suppliers and grid managers and has been passed by both Lower and Upper House of the Dutch parliament. Integrated energy companies will have to economically unbundle their grid and supply operations by 1 January 2011.

Finally, the proposed mergers and acquisitions (for instance, in the energy sector) must be approved by the Netherlands Competition Authority. In this regard, the acquisition of or exercise of market dominance can and will be prevented.

4. Regulation and Performance of the Natural Gas market

4.1. Regulatory Issues [Article 25(1)]

4.1.1. General

The Dutch gas market has been fully liberalised. This market was fully liberalised on 1 July 2004. On this date, the last of three phases took effect and, as a result, small consumers were free to choose their own gas supplier.

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

Degree of congestion

There appears to be contractual congestion with regard to import capacity for H-cal gas. Although no concrete cases are (yet) known, there is also concern about future physical congestion. There are also indications that contractual congestion exists in relation to export capacity. The table below provides insight in development of congestion and usage of the capacities. It seems that there is a potential for TSO to make capacities available on an interruptible basis.

Bookings en usage of interconnection capacity in 2006 en 2007, in accordance with gas qualities (source: Monitor energymarkets NMa)

Year	Gas quality	Export				Import			
		g	g+	l	h	h			
2006	firm available	133.355	18.997	676.191	100%	591.879	100%	297.671	100%
	firm contracted	100.806	18.997	580.334	85%	421.303	71%	297.671	100%
	interruptible contracted	0	0	0	0%	31.364	5%	85.530	29%
	backhaul contracted	8.385	0	7.915	2%	57.610	10%	5.634	2%
	allocations total	36.358	5.546	255.539	36%	248.050	42%	227.627	76%
2007	firm available	119.799	19.018	658.697	100%	581.937	100%	271.220	100%
	firm contracted	101.842	19.018	585.419	89%	387.391	67%	271.220	100%
	interruptible contracted	0	0	0	0%	18.209	3%	112.517	41%
	backhaul contracted	14.776	0	23.851	5%	78.736	14%	5.524	2%
	allocations total	44.625	4.629	247.146	37%	283.246	49%	232.281	86%

The approach to congestion by GTS, the national gas network manager

GTS offers interruptible transmission in order to meet the demand for scarce cross-border transmission capacity. In addition, GTS is considering further investments to meet demand by increasing capacities as of 2012

The regulated system

In order to feed gas into the Dutch system (entry) or to take gas from the system (exit), capacity must be reserved with GTS, as the national gas TSO. A certain capacity is reserved (measured in m³/h) at a certain entry or exit point. Every entry or exit point handles gas of one quality. GTS accepts reservations of capacity on a "first-come-first-served" basis. As long as the demand for capacity does not exceed the capacity available with certainty, firm reservations are made. Often shippers use less capacity than they have reserved, because they reserve capacity on the basis of their potential peak requirement. Therefore beyond the physical capacity contracts GTS can continue to accept reservations. Reservations beyond the total available capacity are made on an interruptible basis. Interruptible capacity is cheaper than firm capacity, but is accompanied by the risk that the capacity will not be available. There are three interruptible tranches with different combinations of prices and degrees of certainty. Interruptible capacity is available on some import and export points. Firm import and export capacity can only be reserved in the direction of the physical flow of gas. Reservations against the flow (backhaul) are always interruptible.

Shippers (non-balancing), which have reserved capacity, must indicate ("nominate") one gas day in advance how much they actually wish to use. They can change these values up to two hours beforehand ("re-nomination"). Shippers can lose capacity which is reserved but not nominated ("use it or lose it").

If the actual entry deviates from the exit beyond the permissible limits, an imbalance arises.

Obligations to provide information, secondary market and allocation in general

The rules with regard to the allocation of transmission capacity Use-It-Or-Lose-It (UIOLI) and relevant market information are worked out in more detail in the Conditions for the Transmission of Gas – TSO of 30 June 2006 (see sections 2.1, 2.2, 2.4 and 4.2 up to and including 4.4 and 6). The national gas TSO must adhere to these conditions. NMa is continuously monitoring if TSO applies to these conditions.

New developments

In order to deal with congestion at cross-border points a number of projects have been launched in the Netherlands by various stakeholders:

- The ministry of Economics has announced on 18th of February 2008 to work on legislation allowing for better congestion management procedures and 2-yearly open seasons by TSO.
- The TSO, GTS, launched with a German TSO, BEB, a cross-border platform for offering interruptible capacity, so-called "EUCABO" platform.
-
- On 14 May 2008, APX and (in Germany trac-x) launched a booking platform for trade in secondary transport capacity for natural gas⁴. Both platforms offer the

⁴ Optimal availability and use of cross-border transport capacity is a crucial condition for the successful development of a regional gas market. Cross-border transport capacity is often completely sold out well in advance, but is not always actually used. A market for trading secondary transport capacity could ensure that this unused capacity is actually used. The TSO, GTS supports the APX platform and has adjusted its processes so that transactions can be processed with the required swiftness. On condition that he trades before 10 a.m., this means that a shipper can nominate the capacity that same day and is able to use it the next day.

possibility to trade day-ahead basic transport capacity at cross-over points in the Bunde-Oude Statenzijl region. Both platforms have resulted from pilot projects of the Gas Regional Initiative (GRI), and have been realized as a result of close cooperation between APX and Trac-X, market parties (represented by EFET), the national supervisory authorities including NMa and the TSOs involved. The initiative is also welcomed by the respective ministries and Commission.

4.1.3 The regulation of the tasks of transmission and distribution companies

The Netherlands has 12 regional gas network companies. These companies are regulated by the Energiekamer. The Energiekamer uses a system of yardstick competition. The allowed revenues of a company are adjusted annually by $1 + \text{CPI} - x + q$. CPI is the Consumer Price Index and q is the quality factor. The yardstick is determined by the average growth in total factor productivity (x). Each year, the gas network managers present a tariff proposal. This proposal is assessed by the Energiekamer.

Before the start of a regulatory period (three to five years), an estimate is made for the x factor, based on the general growth in productivity in the preceding period, the WACC (weight adjusted cost of capital) for the coming period, and the gap between income and costs for the network companies.

This system of yardstick competition ensures that there are incentives to increase productivity. Higher profits can be achieved if a company realises a growth in productivity which exceeds the average growth in productivity. The productivity is measured by dividing the cost of the companies by their standardised output. The costs are reported according to a standardised method. Network companies are required to adhere to Regulatory Accounting Rules (RAR).

An average household with an annual consumption of 1750m^3 pays approximately EUR 120 per year for gas distribution. The consumer's bill fluctuates between EUR 94 and EUR 124 for various gas network managers. More information on the regulated tariff structure of gas network companies can be obtained from the website:

<http://www.theEnergiekamer.nl/nederlands/gas/transmission/tariefregulering/tariefbesluiten.asp>

The balancing regime

The existing balancing regime in the Netherlands is a system in which for each individual – shipper-portfolio the entry gas and the exit gas are settled. Balance is obtained when the difference between the entry gas and the exit gas stays within specified tolerance limits.

The following tolerance limits are utilized:

- Hourly tolerance;
- Cumulative tolerance;
- Daily margin.

Imbalance occurs when the difference between exit gas and entry gas exceeds these tolerance limits.

Currently a new balancing regime is under development. The main conditions for the new regime are:

- Transparent market mechanism for both balancing the Dutch Grid and settlement of individual imbalances. Direct link between the costs of balancing and the charges to shippers.
- Market parties are stimulated to participate in the balancing of the network
- The transmission network operator obtains rights to enforce system integrity
- The transmission network operator receives a fair return on investment

In the last quarter of 2007 GTS held meetings and interviews with representative organisations and has presented the intermediate results at the beginning of 2008. During 2008 GTS will concretize the results and will set up the new business rules. After this the process of codification and implementation can start at the end of 2008. In this way the new balancing regime will be operational at the first of January 2010.

Online Balancing Information

Next to the new balancing regime in 2008 a project is started by GTS which enables the provision of sufficient online information on the balancing status of network users. Planning is that during 2009 this information will be available to the market.

The balancing regime is described in the grid codes. A shipper can conclude an agreement on regarding online balancing as described in the transmission service conditions of the national TSO (<http://www.gastransportservices.nl/shippers/voorwaarden/tsc2007-1>).

4.1.4 Effective Unbundling

How many TSOs and DSOs are there? How is the 100,000 customer rule applied?

There is a separate national network manager for gas and electricity (TenneT for electricity and GTS for gas). In addition, there are four DSOs with more than 100,000 customers (Essent netbeheer, Continuon, Eneco netbeheer, Delta netbeheer) and seven DSOs with less than 100,000 customers (Westland energieinfrastructuur, NRE netbeheer, Cogas netbeheer, Rendo netbeheer, ONS netbeheer, Obragas & Haarlemmermeer netbeheer and finally Intergas netbeheer). All the DSOs supply gas and electricity, with the exception of Obragas & Haarlemmermeer and Intergas. In the Netherlands, small gas network managers (with fewer than 100,000 customers) are not treated any differently to the large gas network managers.

All DSOs are fully owned by Dutch municipalities and provinces. These network operators were owned by a private energy company, but are in the process of being taken over by public shareholders. The TSOs are fully owned by the State of the Netherlands.

Unbundling and ownership of assets

At present, all the DSOs and TSOs are legally separated from activities unrelated to network management. The ownership of assets was also separated in the case of all gas network managers, except for the four big ones (Essent netbeheer, Continuon, Eneco netbeheer, Delta netbeheer). This means that the gas network manager is no longer part of the same group as, for instance, the supplier. For the majority of the gas network managers, the holding company is the economic owner of the network. According to the Law on the Independence of Network Operators, from mid 2008 the distribution network manager will have to be the economic owner of the network as well.

All DSOs make use of shared services. This means that in the case of most DSOs, administrative services (including invoicing, customer management and call-centre activities) are

carried out by shared service centres established as private limited liability companies. These are separate legal entities.

Almost all DSOs employ a few to at most 150 employees. With regard to the remaining activities, use is made of shared service centres. Energy companies (groups of gas network managers and other entities which carry out energy-related activities) are obliged to have an anti-discrimination programme. They are required to present a public report on this annually. The employees of the gas network managers need not work at a different location to their colleagues employed by the group companies. DSOs and TSOs are obliged to keep separate accounts. An annual report on these accounts is also drawn up according to the Energiekamer's accounting guidelines, in addition, of course, to the general accounting guidelines, and is published. The gas network manager's auditor issues an auditor's report declaring that the annual accounts have been drawn up in accordance with the Energiekamer's guidelines. The accounting standards provide methods for valuing revenues, costs, assets and liabilities. The costs that may be declared and the costs which may not appear in the gas network manager's annual accounts are also set out under the heading of "costs". If a gas network manager does not comply with the above, sanctions may ultimately be imposed in the form of, for instance, fines and penal sums. Further general legal provisions apply to this.

Is there a legal separation of DSOs and the TSO?

DSOs must be structured as separate legal entities, within or outside a vertically integrated company. Since July 2004, TSOs must be structured in such a way that their commercial and public activities are clearly distinguishable. They may still be part of a holding company in which commercial activities are carried out. With regard to DSOs, parliament has approved a bill which introduces far-reaching measures. The Law on the Independence of Network Operators stipulates that the management of electricity grids and gas networks, on the one hand, and on the other hand, the production, supply and trade in electricity and gas, may no longer occur within one and the same group of companies. In practice, this amounts to the division of the existing integrated regional energy companies into two or more (groups of) companies, whereby in any event one of the new companies will be a company comprising the electricity grid or gas network manager and in which no production, supply or trading activities will be carried out. The articles prescribing ownership unbundling will gain force on July 2008. From then on, the companies will have 2,5 years to comply with these articles. On January 1, 2011, unbundling should be completed. The Office for Energy Regulation (the Energiekamer) will supervise this process. The Act contains no provisions with regard to the way in which the division must occur, but prohibits that any costs of unbundling are passed on to consumers.

Since the national electricity grid and gas network managers are, in fact, no longer linked to producers, suppliers and traders, this Act will not require them to restructure their businesses.

More detailed explanation of the legal separation of DSOs and the TSO and a general assessment of the criteria for the independence of DSOs

Ever since the start of liberalisation of the energy market, it has been obligatory to account separately for network management activities. Stricter rules were recently added to this. The group financing of commercial activities with the network or revenues from network management as collateral is prohibited ("ring fencing"), while at the same time criteria have been set for the financial resources available for network management. New CBLs are not permitted, unless they are for network management.

With regard to the degree of unbundling between companies: TSOs must be owned directly or indirectly by the State. This is also the case in relation to gas, particularly now that the gas TSO

was separated entirely from its commercial tasks in the area of gas production and supply in 2005. DSOs must be owned by local authorities (although several exceptions do occur for historical reasons). The privatisation of DSOs is currently not possible.

The extent to which TSOs and DSOs are separate from related supply and production companies

This was entirely the case in relation to TSOs. The gas TSO was recently separated from the production and distribution branches of Nederlandse Gasunie NV. The electricity TSO has no activities in the area of production or commercial supply.

This is less the case in relation to DSOs. Partly for this reason, the Minister of Economic Affairs introduced the Law on the Independence of Network Operators. According to the Minister of Economic Affairs, there are three reasons to divide energy companies. In addition to guaranteeing the independence of the networks, the Act is premised on the liberalisation and the internationalisation of the energy market. In the recent past, it appears that network managers which were part of a group, which also included producers, suppliers or traders, were inclined to place these companies at an advantage. The present integration of network managers and producers, suppliers and traders within a single concern results in a situation where the network managers are not structurally independent. As a result of integration within a single concern, coordination always takes place between the subsidiaries. This is inherent in the choice to create a group in accordance with company law. It is precisely this coordination which jeopardises the network manager's independence relative to producers, suppliers and traders. For instance, the management of the concern has final responsibility for the operating result of the entire company and will do its utmost to maximise this result. The incentives to distort competition, resulting from integration within a single concern, easily result in cross subsidisation, the exchange of data, preferential treatment and financial advantages. These incentives undermine the transparency of the Dutch energy market and the level playing field between market parties. Removing these distorting incentives and the possibility of central management will therefore also strengthen security of supply.

After the unbundling, the network managers will be able to concentrate fully on their core task and it will no longer be possible to use the financial results from network management for production, supply and trading activities. The above is already the case currently for the network managers of the national high-voltage grid and the national gas transmission network. These network managers are no longer linked in practice to producers, suppliers and traders. As a result, the above-mentioned incentives to distort competition and practices which undermine the network managers' independence are not present in these cases. According to the minister, the guarantee of the independence of network managers should be structural and should not be dependent on contingent developments, such as the nature of the shareholder.

The explanatory memorandum of the Law on the Independence of Network Operators also refers to the advice on the independence of network management of 15 April 2004, in which the *Energiekamer* concludes that the regulations applicable at that moment are not adequate to guarantee the full independence of network managers. In this regard, the *Energiekamer* noted that it was very difficult to obtain an overview of compliance with the independence requirements. In this regard, a distinction must be made between regulation and enforcement. Although the *Energiekamer* has had a broader and more powerful range of enforcement instruments at its disposal since July 2004, enforcement – repressive action imposing sanctions – can only be used if a non-independent practice is observed. The latter is very difficult and requires considerable effort from the regulator. In its advice of 15 April 2004, the *Energiekamer*

points to the concern structure as the reason that it is very difficult to observe non-independent practices. According to the Minister of Economic Affairs, the Energiekamer's conclusion in its advice of April 2004 that the regulations applicable at the time were inadequate, still applies today to the present state of regulations. In its advice, the Energiekamer refers to recommendations made in July 2003 to the Minister of Economic Affairs in the final report on independent network management. The most important recommendation in this final report, which follows audits carried out by the Energiekamer on all network managers, is that the fundamental question as to whether network managers may form part of a group must be considered.

Another reason for the division of companies relates to the liberalisation of the energy market, which commenced in 1998 and was completed with the liberalisation of the small consumer market on 1 July 2004. The liberalisation resulted in a situation where the structure and profile of the integrated energy companies changed. Where a supplier was guaranteed a number of consumers residing in the region allocated to it prior to liberalisation, after liberalisation the supplier had to enter the market, acquire customers and retain them. The risk profile of a supplier or other activities, such as energy production or trade, was the reason that many public shareholders of integrated energy companies soon wished to dispose of their shares, at least in these risk-bearing activities.

Finally, a trend is observable in Europe towards mergers and concentrations. Energy companies in the Netherlands will in time form part of international companies which compete with each other on the various markets within Europe. The future development of the energy market is guided by the principle that it is necessary to guarantee the independence of network management structurally. After all, this impacts most directly on the public interests affected by energy supply in the Netherlands. This process of internationalisation and concentration in Europe will benefit the Dutch market if the networks play a role which is entirely independent from the supply, trade and production of energy. Through independent networks, various (international) energy companies can compete for market share of the Dutch market. The continued existence of integrated energy companies is not consistent with guaranteeing the structural independence of the Dutch networks.

In summary, this Act provides for entirely independent network management. As a result, the operation of market forces will improve and the consumer will pay network tariffs and fair market prices based on actual costs. In addition, this Act will make it possible for public shareholders to dispose of their shares in the risk-bearing activities of energy companies, taking into account international developments on the electricity and gas markets. To realise these separate aims, at a theoretical level various instruments are conceivable. The ownership unbundling of energy companies is, according to the Minister of Economic Affairs, however, the only way of realising all these aims simultaneously.

In June 2006, the Minister of Economic Affairs requested a report on the current state of affairs with regard to public and independent network operations from the Netherlands Competition Authority (NMa)/ Office of Energy Regulation (the Energiekamer). At that time, the final decision on ownership unbundling had not yet been taken by the minister. The NMa/ the Energiekamer was asked "to assess whether the present legal framework and possible supplementary measures within the confines of the current integrated structure of the companies, may sufficiently safeguard public and independent network operations in such a way that risks to

network operations can be excluded for the situation at present and in years to come (during which the North West European market will develop into an increasingly competitive market)".⁵

First of all, the NMa/ the Energiekamer assessed whether the vertically integrated companies complied with statutory requirements that are now in place. Compliance was established, with the exception of a few points, which is in line with findings apparent from standard regulatory practices. On the basis of the Law on the Independence of Network Operators additional requirements will come into effect, enhancing public and independent network operations. Partly with a view to these additional requirements, energy companies are currently in the process of implementing measures to enhance public and independent network operations. The NMa/ the Energiekamer therefore takes the view that, in comparison to neighbouring countries, public and independent network operations are doing fine. This conclusion is supported by the fact that the Dutch networks belong to the most reliable networks in Europe, with the interruption period per end user per year standing at thirty minutes.

In an unbundled situation the operational independence of the network operator is safeguarded in the strongest possible way. This eliminates the necessity to monitor for potential preferential treatment extended by the network operator to other parts of the holding. However, the risk of cross subsidization remains for as long as network operators continue to be part of a group authorized to deploy commercial, non-regulated activities, including those of an ancillary kind. On the whole, the regulatory tasks of NMa/ the Energiekamer will decrease in the scenario of ownership unbundling.

This does not alter the fact that the unbundling scenario also includes risks, so an adequate regulation of the network by NMa/ the Energiekamer will remain necessary. Current regulation of operational efficiency, financial solidity, quality and continuity as well the networks' tasks of facilitating the market must be prolonged with equal intensity.

The extent to which network managers present themselves to the public as separate entities (name and trademark)

Although by law an adequate distinction must be made in the trade name used, most DSOs operate under names which closely resemble those of the affiliated supply companies, often with the addition of "Netbeheer B.V." The Government has approved these names.

Separate accounting

By law, network managers are required to keep separate accounts. Certain rules have been drawn up for this. These include the obligation to publish annual accounts, at least by having them available for public inspection at its office address. In practice all small network managers already belong to a different group than production and supply. So these network managers will have separate accounts. For the future this will be the case for all network managers.

Requirements with regard to separate accounting: cost allocation *et cetera*

Energy legislation contains specific rules with regard to the type of activities which must be described in the separate accounts. The law may be enforced if the accounting is not adequate, for instance by imposing a fine. the Energiekamer has also drawn up accounting rules ("Regulatory Accounting Rules"). The Law on the Independence of Network Operators also contains further requirements which are also intended to guarantee the financial independence of network managers after the company has been divided ("financial ring fencing").

⁵ See NMa/EK, Research report on public and independent network operations, July 2007.

Obligatory audit?

The separate accounts require an auditor's report with regard to whether affiliated commercial entities have been placed at an advantage. Such cross-subsidisation is explicitly prohibited.

The role of the compliance officer

A compliance officer is not obligatory. Only since July 2004 has it been obligatory to have a so-called "code of conduct" for personnel. The rules must prevent discrimination when carrying out network tasks. Most network managers are involved in the implementation of such codes of conduct, which often include a form of internal audit of compliance with these.

The extent to which and the way in which costs are allocated, as well as the regulator's response

The use of shared service centres is widespread and cost allocation within concerns is often not transparent. A considerable number of network managers depend on such services and other types of facilities provided by the concern. Reference is made to so-called "lean" network managers: on paper these are independent legal entities, but in practice they are still very dependent on and interwoven with the other divisions of the concern.

The regulator has serious doubts about whether the method of cost allocation is adequate. An important reason for this is the fact that use is often made of shared service centres. These are not transparent for third parties, such as the regulator. For this reason, for the purpose of tariff regulation, the Energiekamer has developed standards for cost allocation within the vertically integrated energy company. In addition, accounting rules have been drawn up. The Energy Companies Division Bill, partly on the Energiekamer's advice, contains further rules on the types of activities which network managers must carry out themselves and the activities which they may outsource. This brings to an end the phenomenon of the "lean network manager". This Bill will definitively require network managers to have economic ownership of the assets which they manage.

The sanctions instruments of the Dutch regulator

If a network manager does not adhere to the requirements, the Energiekamer may impose a sanction, such as a fine or penal sum. In addition, it is also possible to issue binding instructions: an order without a penal sum. Finally, the Minister of Economic Affairs, in the worst case, can revoke designation of the company as a network manager and designate a different grid manager.

Number of network managers

At present, there are 8 electricity grid managers and 12 gas network managers. These network managers are not all independent of each other. Some operate within the same group.

Ownership

- Most DSOs are owned by local authorities, while the TSOs are fully owned by the State.

4.2 Competition Issues [Article 25(1)(h)]

4.2.1. Description of the wholesale market⁶

The Dutch monitor Energy Markets provides a good description of the wholesale gas market in the Netherlands. De monitor (in Dutch) and an English summary can be found at www.theEnergiekamer.nl

Market structure

The Dutch gas market is described on the basis of the tables below in relation to domestic consumption, production, import and an overview of the shippers active on the Dutch national gas transmission network.

Consumption, domestic production and import (TWh) in 2007. Source: Monitor Energy Markets

	Consumption	Production	Import	Export
High-calorific gas	134	399	232	283
Low-calorific gas	266	310	0	296

Available capacity (GWh/h) in 2007

	Production*	Import	Export	
High-calorific gas	58	31,1	20,0	
Low-calorific gas	121	0	119,2	

* Conservative estimate based on highest production in 2007

Shippers on the Dutch gas market (August 2007):⁷

Accord	Gaz de France
APX Gas NL B.V.	Gazexport Ltd.
Atel AG	Gazprom Marketing & Trading Ltd
Barclays Bank PLC	Glencore Energy UK Ltd.
BG International Limited	Hess Energy Power & Gas Company Ltd
BNP Paribas	J Aron & Company
BP Gas Marketing Limited	Lehman Brothers Commodity Services Inc.
ConocoPhillips (U.K.) Limited	Merrill Lynch Commodities (Europe) Ltd.
Constellation Energy Commodities Group Inc	Morgan Stanley Capital Group Inc.
Delta Energy B.V.	N.V. Nuon Energy Trade & Wholesale
Distrigas N.V.	Nederlandse Aardolie Maatschappij B.V.
Dong Naturgas A/S	Norsk Hydro Energie AS
E.ON Benelux Generation N.V.	Norsk Hydro Energy B.V.
E.On D-Gas B.V.	RheinEnergie AG
E.On D-Gas Storage B.V	RWE Energy AG
E.On Ruhrgas AG	RWE Energy Nederland N.V.
EconGas GmbH	RWE Trading GmbH
EDF Trading Ltd.	Sempra Energy Europe Limited

⁶ Defined as covering any transaction of gas between market participants other than final end use customers.

⁷ Source: www.gastransportservices.nl

Electrabel S.A.	Shell Energy Trading Ltd.
Elektrizitäts-Gesellschaft Laufenburg AG	Stadtwerke Hannover AG
ENECO Energy Trade B.V.	Statkraft Markets GmbH
Enel Trade Spa	Statoil ASA
Energie Data Maatschappij B.V.	Statoil Gas Trading Limited
Energiehandelsgesellschaft West MbH	Total Gas & Power Ltd
ENI UK Ltd.	TRIANEL European Energy Trading GmbH
Enoi Spa	UBS AG London Branch
Essent Energy Trading B.V.	UBS Limited
European Commodity Clearing AG	Vattenfall Trading Services GmbH
EWE AG	Vitol S.A.
ExxonMobil Gas Marketing Europe Ltd.	Wingas GmbH
Fluxys S.A.	Wintershall Nederland Transp. WNTT
Gaselys	Zarubezhgaz Management und Beteiligungsgesellschaft mbH
GasTerra B.V.	
Gasunie Zuidwending BV	

Gas (bcm) Imported in 2004 originated from Norway (6.16), Russia (2.97), Germany (4.5), UK (1.82), Denmark (2.13).⁸ The largest gas producers in the Netherlands in 2005 were: NAM, Total, GdF and Wintershall.⁹

The regional gas network managers and the national network manager (Gastransport Services; GTS) are responsible for the transmission and distribution of gas. An rTPA regime applies to both the national and regional transmission of gas and a licensing system is applied.

Nederlandse Aardolie Maatschappij (hereinafter "NAM") is one of the largest producers of natural gas in the Netherlands and is a subsidiary of Exxon (50%) and Shell (50%). To date, NAM has two installations for underground gas storage (in the Norg and Grijpskerk gas fields). Taqa has a gas storage facility in Alkmaar. These three gas existing storage facilities in the Netherlands (Alkmaar, Norg and Grijpskerk) are for the most part reserved for production purposes and preservation of the flexibility characteristics of the Groningen gasfield. On average 6% of the storage capacity is available to the market, the rest is reserved.

Due to domestic and foreign demand, various storage facilities are expected to be added in the Netherlands. For the Dutch market, Essent and Nuon make use of German salt caverns near Epe. Essent is also developing plans to convert the Waalwijk gas field into a gas storage facility. Nuon, GTS and Akzo Nobel have started a project to create a new gas storage facility in a salt cavern near Zuidwending (scheduled to come on stream in approximately 2008-2010).

Technical characteristics of gas storage in the Netherlands

⁸ Source: Cedigaz.

⁹ Source: Olie & Gas Jaarboek.

Operator	Facility	Type	Gas quality	Working volume (GWh)	Withdrawal Capacity (GW)
NAM	Grijpskerk	Gasfield	H-gas	14,654	22.4
NAM	Norg	Gasfield	L-gas	29,308	22.4
TAQA	Alkmaar	Gasfield	L-gas	4,884.5	14.7
Essent	Essent Epe (GER)	Salt Cavern	L-gas	2,423	4
Nuon	Nuon Epe (GER)	Salt Cavern	L-gas	1,551.5	4.9
RWE	Kalle (GER)	Aquifer	H-gas	2,480	4.6

The Balgzand-Bacton Pipeline (BBL), an interconnector between the Netherlands and the United Kingdom, came on-line in 2006. The BBL is a joint venture of Gasunie, Eon Ruhrgas and Fluxys. The capacity has been sold to Gasunie Trade & Supply, Eon Ruhrgas Trade and Wingas.

There is interest in developing LNG regasification capacity. The Ministry of Economic Affairs has decided positive on granting rTPA exemption on these three parties; Gate Terminal B.V. (joint venture of N.V. Nederlandse Gasunie and Koninklijke Vopak), Essent and ConocoPhillips, 4Gas (Liongas).

As of July 2008 shippers don't need to book quality conversion capacity any more. An arrangement between GTS en GasTerra achieved that quality conversion is a regular service provided by GTS. This means that the division between the low- and high-calorific gas market will be raised as soon as this step is formalized in the Dutch gas codes. Expectations are that the codes are modified on January 1st 2009.

Concentration

The concentration is measured from the Hirschmann-Herfindahl Index (HHI). A value higher than 1800 indicates a highly concentrated market. The various parts of the Dutch wholesale market are without exception highly concentrated. The low calorific gas market is traditionally highly concentrated, and parts are almost monopolistic.

Fig. 4.2.1-a: HHI in the high calorific gas market in 2006 and 2007.

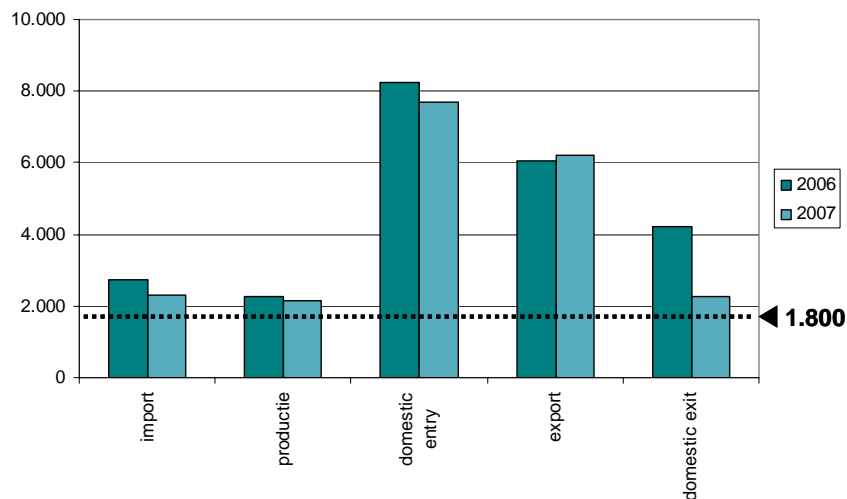
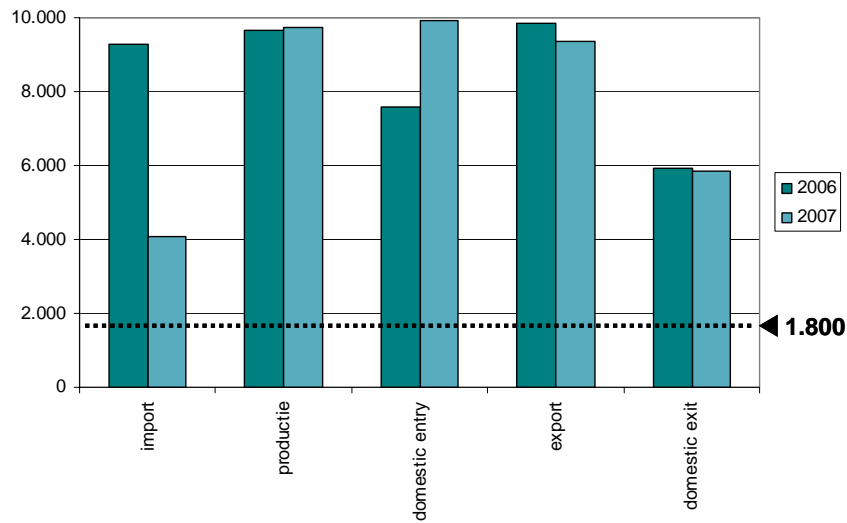


Fig. 4.2.1-b:HHI in the low calorific gas market in 2006 and 2007



Level of liquidity

In 2006 the trade on the Title Transfer Facility (TTF) increased (see Fig. 4.2.2), This indicates an improvement of the marketplace. The liquidity of TTF also improved according to the spread and volatility (see 4.2.3). The market of year-ahead contracts is more liquid than the market for day-ahead contracts.

Fig. 4.2.2:Traded and delivered volumes on TTF

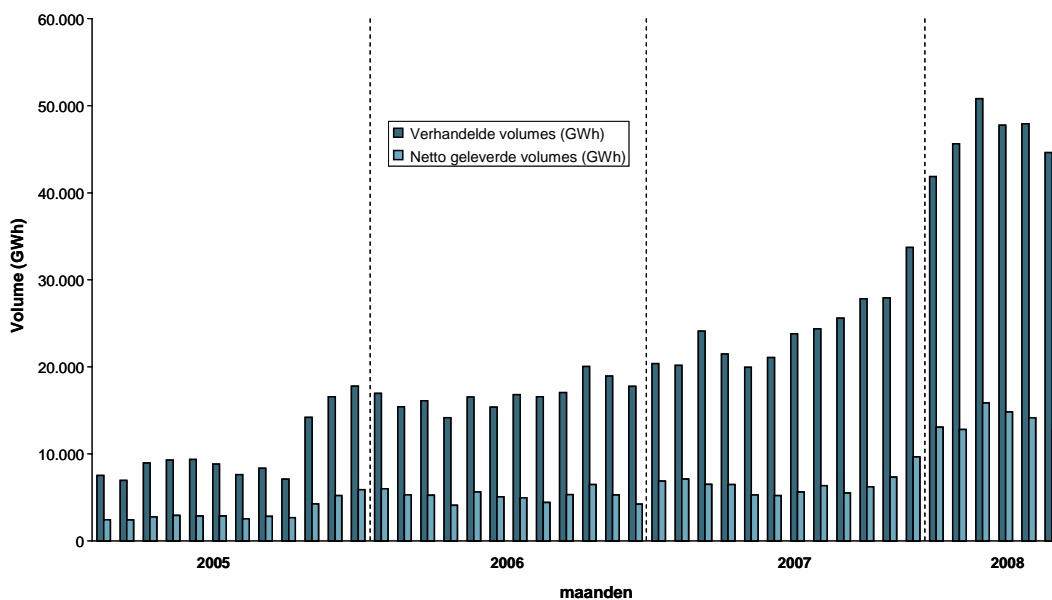
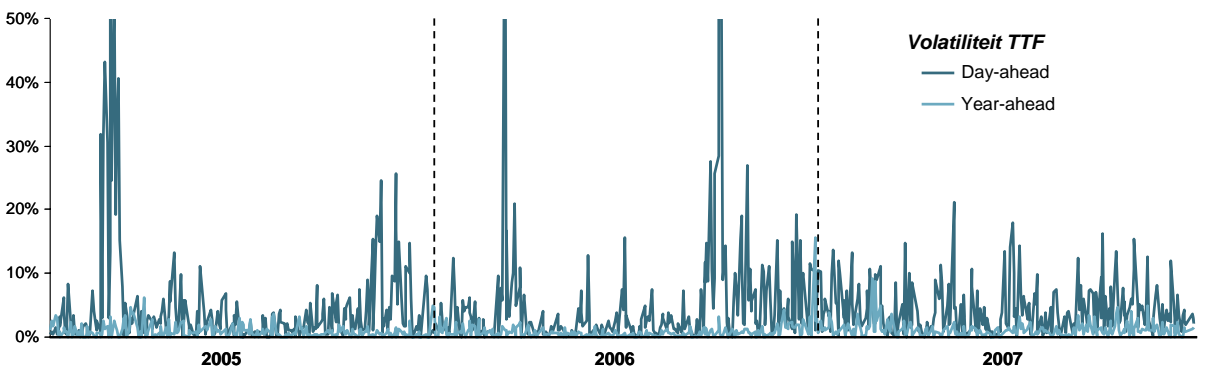
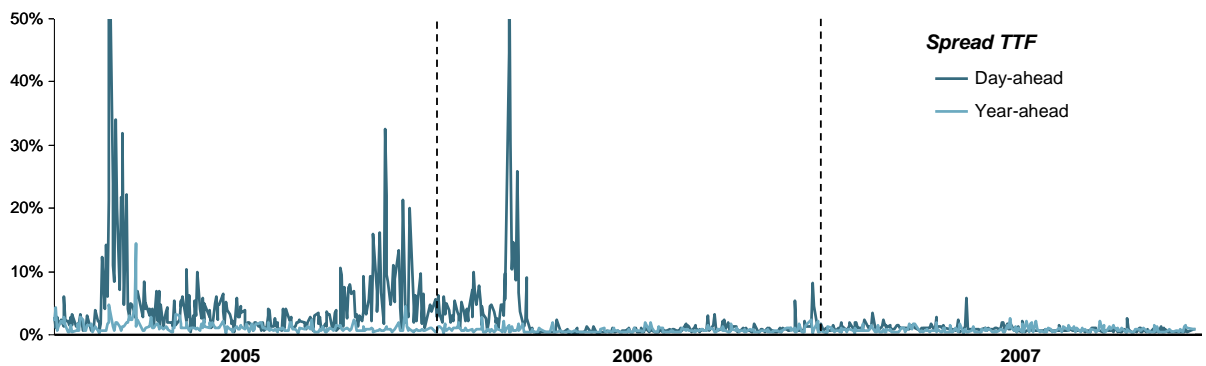


Fig. 4.2.3:Spread and volatility of Day-ahead and Year-ahead contracts on TTF



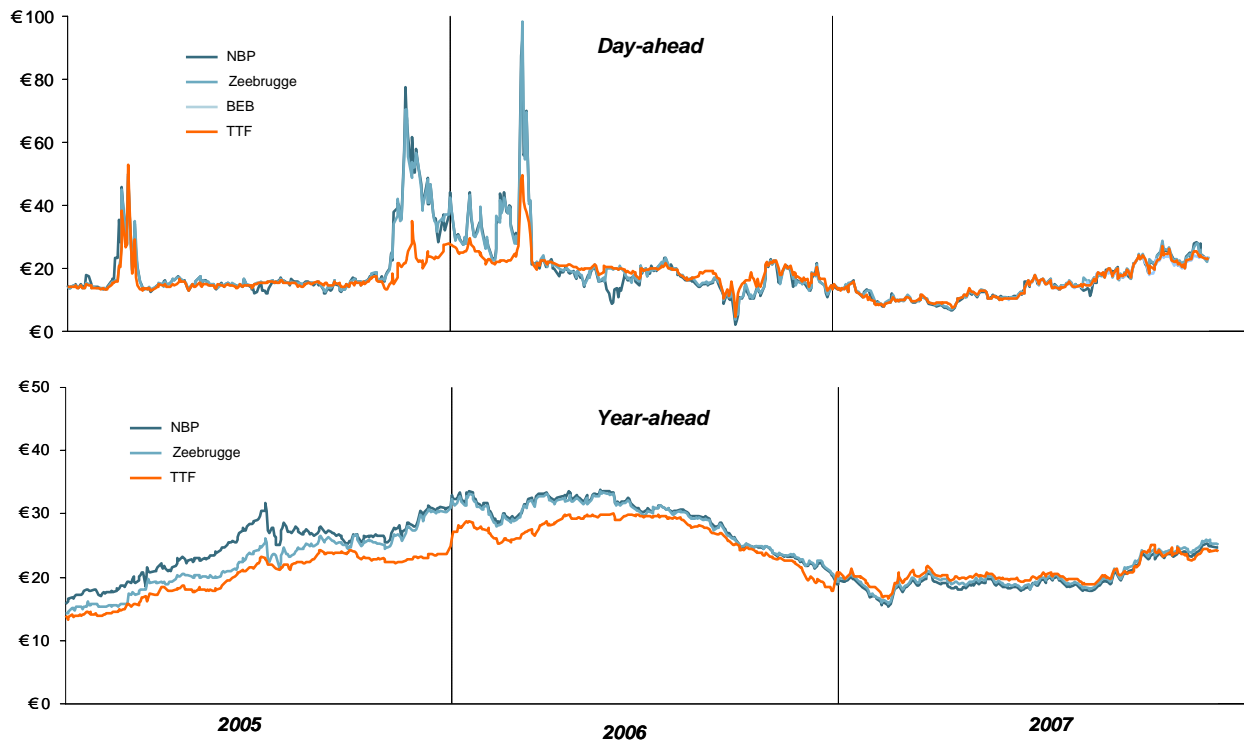
Outlook

Bearing in mind the outcome of the market monitor and judgment of the Energiekamer, the Energiekamer has prioritised the following issues:

- Improve the availability of import capacity for the market. This can be done by both building more physical import capacity and by improving the availability of unused capacity through secondary trade.
- Make sure the new balancing regime is market based system and is introduced as soon as possible.
- Stimulating trade on TTF. The absence of trade in low caloric value gas on the TTF in particular, as a result of mostly direct supplies to GOS, still poses a serious obstruction to the wholesale gas market. The minister of Economic Affairs has announced an amendment of the law which implies that all the gas intended for consumers must be delivered at TTF. When this amendment is in place it will be a big boost for liquidity at TTF.
- Improve the availability of storage capacity

Degree of integration with markets in neighbouring countries

Market integration of the Dutch wholesale market with neighbouring markets is underway. The volume on TTF is still low compared to NBP, but the prices on TTF are noticeable integrating with prices on NBP and Zeebrugge. The outlook for the (development of the) liquidity of the market is positive.



TTF is considered important on the Northwest European market. This is apparent from the assessment of the relative liquidity of several international marketplaces by market players as reported in the Energiekamer's Gas Monitor. In this regard, they were asked to compare NBP, Zeebrugge Gas Exchange, TTF and VEP-BEB in Germany. The market parties' answers resulted in the following ranking:

1. **NBP** is the most liquid market, followed by
2. **TTF** and **Zeebrugge** in a shared second place
3. Followed by **VEP-BEB**.

4.1.3. 4.2.2 Description of the gas retail market

The Energiekamer does not have figures which can be broken down into the segments requested, neither into medium-sized industrial and commercial consumers with consumption between 50 MWh and 2000 MWh, nor in two large industrial consumers with consumption exceeding 2000 MWh.

Market structure

Four suppliers on the Dutch gas market have a market share that exceeds 5% of the small consumer segment. One of these four companies entered the market after full liberalisation in 2004. The structure of the Dutch gas retail market is characterised by three large incumbent suppliers, one supplier with a market share slightly over 5% and a large number of smaller suppliers, some of which very small. The four largest suppliers together have a market share of 83.3% in the small-consumer segment. The other 18 independent players each have a market share of less than 5%. On 1 December 2007, a total of 32 parties had a licence to supply gas.

C3 index	G
1 July 2004	86%
31 December 2004	84%
1 July 2005	83%
31 December 2005	79%
1 July 2006	79%
31 December 2006	79%
1 July 2007	80%
31 December 2007	78%

Table 4.2.2-a: Development of the C3 index for gas since liberalisation of the market

Entry and exit, international penetration

Since full liberalisation, the following acquisitions of Dutch electricity suppliers by foreign companies took place:

<2004

Obragas and Haarlemmermeergas – RWE (Germany)

2004 / 2005

NRE - E.ON (Germany)

Intergas - Dong (Denmark)

Oxxio - Centrica (UK)

Spark Energy - Electrabel (Belgium)

2006

Cogas - Electrabel (Belgium)

Rendo - Electrabel (Belgium)

2007

None

Some (but not all) of the Dutch company names/brands have been replaced. By means of these acquisitions, the foreign companies have established a platform from which they wish to increase their share of the Dutch market.

From 1 January 2007 to 31 December 2007 two new licenses for the supply of gas were issued and one license was withdrawn (voluntarily by supplier, changed name and continued to supply gas). New applications for licences are being prepared at the moment.

Vertical integration of supply/production

There is no vertical integration of supply (to small-consumers) and gas production. The gas producer in the Netherlands does not sell directly to the small consumer market.

Vertical integration of supply/network

Vertical integration of the grid companies and supply companies amounts to 81%, expressed as market shares of the small-consumer market for gas. The rest of the market is supplied by either independent entrants or formerly integrated companies that have fully unbundled voluntarily.

Switches

Between 1 January 2007 and 31 December 2007 8.3% of all consumers switched gas supplier. This percentage is up from the previous 12 month-period and is the highest percentage since full liberalisation. The graph below provides an overview of monthly switching rates since full liberalisation.

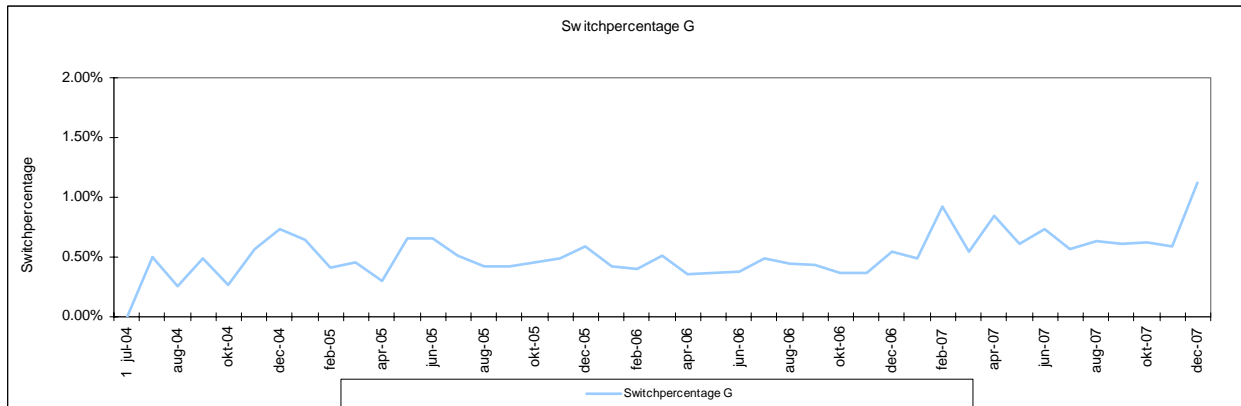


Figure 4.2.2-b: Development of monthly switch rates for gas since market liberalisation

Switching procedures

The procedure is identical to the procedure for electricity: If gas consumers wish to switch suppliers, the gas consumers must inform the new supplier in writing or verbally (for instance, by telephone) of their intention to switch and must authorise this new supplier to request the necessary information and to take the necessary action (for instance, requesting information from the connection register of the gas network manager and making arrangements in relation to programme management). In addition, the consumers must provide the meter reading. If they fail to do the latter, they accept that the final settlement by the former supplier will be based on an estimate of consumption. After completing the above, the consumer has done all that is necessary to switch. In this regard, The Energiekamer advises consumers to ascertain whether the supplier respects the duration of the contract with the former supplier. The customer is then certain that he will not unexpectedly be charged a cancellation fee. After this, the consumer need not take any further action and waits for confirmation from the new supplier and the final settlement from the previous supplier.

The new supplier submits a request for a switch to the gas network manager. The meter reading accompanying the switch has to be sent to the gas network manager as soon as possible by the new supplier, but at the latest 15 working days after the date of the switch. Immediately after receiving the request for a switch, the gas network manager carries out a number of checks (for instance, whether the application was submitted at least five days before the intended date of the switch). If the result of the checks is positive, the grid manager confirms acceptance of the switch at the latest on the working day after receipt of the notification of the switch from the former and the intended new supplier. At that moment, the gas network manager also enters the change into the connection register. The gas network manager passes on the meter reading(s) as soon as possible, but at the latest on the thirtieth working day after the date of the switch, to both the former and the new supplier. The gas network manager also notifies the former supplier of the amount consumed, so that the former supplier can draw up the final invoice.

Problems with switching

Satisfaction over switching procedures and administrative procedures in general increased slightly. The main problem with switching was/is that the majority of switches are based on meter estimates instead of actual meter readings, just as previous year. This results in consumers not recognising their final settlement bill with the old supplier. This in result leads to complaints and requests for corrected bills.

Prices, tariffs and tax rate per component of the invoice

The transmission costs

The transmission tariffs are regulated. The tariffs may differ from one regional gas network manager to the next. The below overview is based on a weighted average (number of connections) of all regional network operators.

- Standing charges per annum (EUR): 18,37
- Tariffs per unit of the volume parameter per annum (capacity-related tariff category) (EUR): 15,48. Household consumers mostly have G4 meters, so annual costs will be $4 * 15,48 = \text{EUR } 61,94$.
- Consumption-related tariff per Nm^3 (EUR per normal m^3): 0,0116
- Periodic connection fee¹⁰ (weighted average, EUR): 20.93

For an average Dutch consumer this leads to a total of EUR 120 annually.

Metering costs

The metering tariffs¹¹ (meter rental) are not regulated at the moment. On average the Dutch consumer pays around EUR 19 annually for rental of a gas meter.

Energy supply costs

The supply tariffs are not regulated. On 1 January 2006, a household with an average consumption (1664 m^3 per annum) paid a net amount of EUR 583.36 on an annual basis (approximately 33% of the consumer's total gas bill). This results in an average supply tariff (excluding VAT and including fixed costs for gas supply) of EUR 0.35 per m^3 . The Energiekamer surveys the fairness of the tariffs.

Taxes

Various taxes are levied on the supply of energy. On 31 December 2007, the energy tax amounted to EUR 0.1531 per m^3 of gas supplied. Value added tax (VAT) of 19% is charged on the entire net amount, including energy tax. In addition, a tax rebate of EUR 199, excluding VAT, is applied (to the entire energy bill, see also the Electricity section).

4.2.3 Measures to avoid the abuse of dominance

These measures are identical to those on the Electricity retail market and are therefore not repeated.

The NMa yearly monitors the competition and barriers to competition in the wholesale markets for gas and electricity. The monitoring report is published on the website of the The

¹⁰ The periodic connection fee for Gas is not regulated. Energiekamer has no direct influence on this tariff.

¹¹ Meter rental is often reported under the item "Transmission costs" in the annual accounts, but does not actually belong there. The metering market is a liberalised market and the tariff is therefore not regulated. The consumer is free to choose a supplier.

Energiekamer: www.the.Energiekamer.nl. Part of the monitoring project is establishing the level of concentration for the different parts of the gas market (see also 4.2.1). This exercise is however meant to monitor the concentration over the years, not to establish market dominance.

In 2005 the NMa established that GasTerra is the dominant supplier of flexibility. To avoid further abuse of dominance the NMa put in place regulation that obliged GasTerra to offer flexibility via the TSO Gastransportservices (GTS), so shippers can always buy flexibility via the TSO. On top of that the tariffs of GasTerra's flexibility products are checked on fairness by the NMa. In 2007 a renewed study into the dominance of flexibility was carried out, and still GasTerra was considered dominant. The afore mentioned measures are now extended to 2011.

5 Security of Supply

For further details we refer to the Monitoring Report on Security of Supply in Relation to Electricity and Gas [Monitoringsrapportage Leveringszekerheid Elektriciteit en Gas] by the Ministry of Economic Affairs, which will be sent to DG TREN of the European Commission based on article 4 of Directive 2003/54/EC (electricity) and article 5 Directive 2003/55/EC Gas.

5.1. Electricity [Article 4]¹²

Demand and Generation

In 2007, the total domestic consumption of electricity (exclusive losses) was approximately 112 TWh, which means a small increase of 0.6 TWh compared to 2006. Domestic generation increased with 4 TWh to 99 TWh and the gross import reduced with almost 4 TWh to 17.6 TWh.

At the moment the total installed generation capacity in the Netherland is approximately 23 GW. Of which renewable production capacity (mainly wind) accounts for 1,6 GW.

During 2006, about 1.4 GW new generation capacity was put into operation, of which 0.1 GW larger thermal capacity, 0.9 GW small thermal power plants (CHP) and 0.3 GW renewable generation (mainly wind).

There is a large increase of planned new generation capacity in the years 2011 and 2014. In total 13 GW new large scale thermal generation capacity has been reported for the period until 2015. The question remains which amount of new generation capacity will actually come into operation.

¹² This section may make reference to supply demand forecasts compiled by TSOs where appropriate

Framework for the construction of infrastructure

Generation

the Energiekamer does not have a direct role in investments and the granting of licences for new generation facilities. There are no implicit or explicit mechanisms to promote the construction of new production capacity. The TSO does contract control power (250 MW for 2006 and 300 MW for 2007) and emergency power (300 MW) for balancing. This is therefore a source of revenues in addition to the normal electricity market for a small part of the production capacity. The TSO reports to the Minister of Economic Affairs with regard to the development of security of supply. If necessary, the Minister may decide to invoke an additional capacity mechanism, the so-called safety net. This safety net means that the TSO will contract additional power for a number of years to create an incentive for investment. In 2006, it was again decided not to invoke this safety net for the time being.

Network

The framework for the construction of transmission infrastructure is as follows: the Energiekamer regulates the tariffs of network managers, both the TSO and DSOs.

In so far as this relates to DSOs, the Energiekamer monitors the output of network quality, the duration of interruptions per year per connection. If network quality is good, tariffs may increase. If the quality of the network is low, the tariffs will be reduced. The network managers are required to maintain the networks and finance normal expansion of the transmission networks from these tariff revenues. the Energiekamer does not play a role in this. The network managers are free to decide on the construction of infrastructure. If a special expansion of the transmission networks is planned, a special tariff increase can be requested. This application must be submitted to the Energiekamer and must be assessed by the Energiekamer.

On the other hand, the TSO must finance replacement investments from its turnover generated from tariffs (turnover regulation). A tariff increase or use of the proceeds of the cross border capacity auctions may be requested for all other investments (of course within the constraints of European and national legislation).

The planning criteria for the design of the TSO's 380 kV and 220 kV grids, including the connections with the downstream grids, are set out in the Grid Codes and the Grid Codes are approved by the Energiekamer. The TSO assesses how these criteria can be met in various growth scenarios. The TSO publishes the results in a Quality and Capacity Plan. This plan has to meet the Ministerial Regulations in Relation to Quality Aspects of Electricity Grid and Gas Network Management and must be assessed by the Energiekamer. The above-mentioned planning process also applies to the planning of the DSOs' grids.

Infrastructure projects (network)

The most important infrastructure projects are the following, of which two are international submarine cable connections:

Since 2002, construction has been in progress to strengthen and expand the 380 kV grid in the west of the Netherlands (the so-called "Randstad 380 kV Project") through the Maasvlakte - Bleiswijk and Diemen-Zaandam-Beverwijk sections of the grid. This project is of specific importance with regard to the connection of the large amount of planned new generation facilities as discussed above.

The construction of a (regulated) submarine cable connection of 700 MW between the Netherlands and Norway (NorNed) by the TSOs of these two countries was put into operation in May 2008.

On 13 June 2006, BritNed Development Ltd submitted an application for exemption to the Dutch Minister of Economic Affairs for a merchant submarine cable connection between the Netherlands and the United Kingdom. BritNed is a joint venture of NLink International B.V. (hereinafter "NLink"), a fully-owned subsidiary of TenneT Holding B.V. and National Grid International Ltd, a fully-owned subsidiary of the British National Grid plc. If the exemption is granted, BritNed expects the interconnection to come into operation in mid-2010. The average capacity of the interconnection will be 1000MW. BritNed intends to make the capacity of the cable available to users through implicit and short-term explicit auctions of rights to the capacity of the cable.

For more information on infrastructure projects, we refer you to TenneT's Quality and Capacity Plan 2008-2014 [*Kwaliteits- en Capaciteitsplan 2008-2014*].

5.2. Gas [Article 5] and 2004/67/EC [Article 5]

An overview is provided below of the present situation with regard to security of supply in relation to provision of gas in the Netherlands with regard to the aspects referred to below.

The balance of supply and demand on the national market

For a more detailed explanation, we refer you to the Quality and Capacity Document and the document Transport Insight, published by GTS and available from the website <http://www.gastransportservices.nl/>.

The graph below shows that the Netherlands has more than sufficient gas reserves to meet domestic demand. From 2012 onwards, there is a clear decline in domestic production. This includes a cap on production from the Groningen field. This cap has been set at an annual volume of 425 bcm for the period from 2006 to 2015. This means an average annual volume of 42.5 bcm. In 2006 and 2007 this volume wasn't reached.

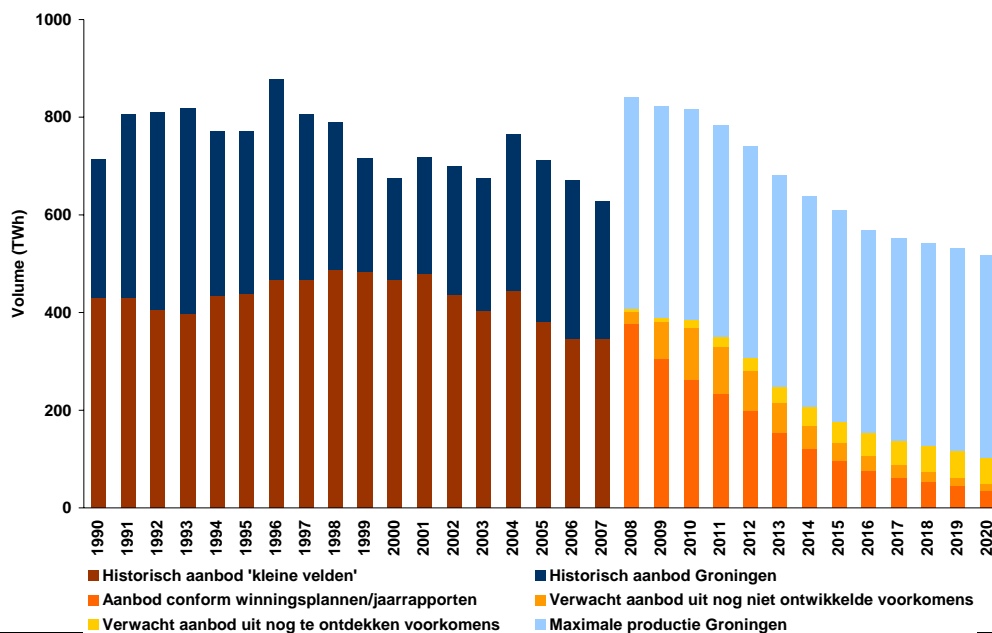


Figure 5.2-a: expected domestic production up to 2020. Source: TNO-NITG

Translation:

Historic production 'small fields' (non-Groningen)	Historic production Groningen
Production conform planning / reports	Expected production from sources to be developed
Expected production from sources to be discovered	Maximum production Groningen (ten year average)

Additional production and network capacity planned or under construction

In answer to the questions with regard to additional production capacity planned, we refer you to part (a), in which the total quantity of production and the production cap set for the Netherlands are discussed.

As a result of a further fall in production from small fields (in this regard, see also GTS's report "Overview of Estimates for Gas from Small Fields" ["*Overzicht ramingen gas uit kleine velden*"], published at <http://www.gastransportservices.nl/>), additional quantities of gas will have to be imported to maintain security of supply.

Imported gas can be supplied by pipeline. At several entry points in the Northeast of the Netherlands, shippers have already shown a concrete need to contract additional entry capacity. The transmission network will have to be expanded for this. As a result of an open season procedure GTS has announced an investment of EUR 1,1 billion in expansion of the north-south route through the Netherlands. As a result more import capacity will be available.

In addition, there are plans to transmit gas originating from NEGP through the Dutch gas network. In addition to a fall in production from small fields, in time production from the Groningen field will also decline. Additional import capacity will also be necessary to compensate for this.

Finally, there will be a need for additional gas storage. The decline of gas production from Groningen implies an decline in available flexibility as well. To compensate for this other sources for (seasonal) flexibility are needed in the future.

Measures taken for peak load or the default of one or more suppliers

Measures in relation to peak load

In accordance with Directive 2004/67/EC in relation to measures to secure the supply of natural gas, Member States undertake to protect the supply of gas to domestic consumers, for instance in the event of extremely cold weather conditions. In the Netherlands, the Decision in Relation to Security of Supply Pursuant to the Gas Act [*Besluit Leveringszekerheid Gaswet*] (*Netherlands Bulletin of Acts and Decrees*, 2004, No. 170) was drawn up for this. To avoid a situation where small consumers are left in the cold during an extremely cold day due to a shortage of production and transmission capacity, this decision stipulates that the gas transmission network operator is responsible for reserving volume and capacity for the additional demand from small consumers if the effective temperature during the day falls below -9°C. The volume and capacity is limited to the hours in which the hourly consumption by small consumers exceeds the maximum hourly consumption of a "-9°C day". The licence holder obtains this volume and capacity on an obligatory basis through the manager of the national gas

transmission network. Together with the freely contactable basic supply for -9°C and warmer, the licence holder can therefore offer small consumers full supply up to and including -17°C . The manager of the national gas transmission network is required to charge tariffs which are in line with the European market for the supply of gas during peak demand. This ensures that the network manager's position as the sole supplier of gas to meet peak demand is not abused. At the same time, the manager of the national gas transmission network is compelled to obtain the necessary supplies as efficiently as possible.

6. Public Service Issues [Articles 3(9) electricity and 3(6) gas]

Liberalisation of the small consumer market

Since 1 July 2004, the energy market has been fully liberalised. In addition to the phased liberalisation of large consumers at an earlier stage, as of 1 July 2004 small consumers have also been able to choose their own supplier of gas and or electricity. The supply tariffs are no longer regulated as of 1 July 2004, although The Energiekamer surveys the fairness of supply tariffs. This liberalisation of the small consumer market requires extra awareness of the interests of the small consumer. Legislation and regulations have been amended for this. For instance, Addendum A of Directive 2003/54/EC on regulations in relation to the protection of consumers has been implemented in Dutch energy regulations. The role of The Energiekamer in this regard is strictly to monitor (and ultimately enforce) compliance with the rules governing the protection of small consumers and to ensure that the operation of market forces reaches an adequate level. The protection of small consumers is therefore one of The Energiekamer's core tasks. This protection has been implemented in various ways. An important theme in this regard is promoting a transparent market. The Energiekamer therefore informs small consumers of the current and actual development of the small consumer market by publishing indicators with regard to price trends and the exercise of freedom of choice. For instance, price comparator websites are monitored with regard to their independence, correctness and reliability. In addition, small consumers are given insight into the number of complaints, ordered according to topic, which The Energiekamer receives about the various energy companies. The Energiekamer also investigates complaint handling by energy suppliers once a year. In addition, the administrative processes (including the invoicing problems) of various energy companies have also been the subject of investigation. On a quarterly basis, The Energiekamer publishes an overview of the administrative performance of suppliers on its website.

Supply licence

A supplier which supplies small consumers has to have a supply licence. When a supply licence is granted, The Energiekamer assesses whether the supplier has the necessary organisational, financial and technical qualities to carry out its task properly and whether it has shown to The Energiekamer's satisfaction that, within reason, it can be expected to comply with the obligations applicable to suppliers under the Gas Act and the Electricity Act. In addition, The Energiekamer assesses whether a supplier uses clear offers and agreements which state the level of the tariffs and their composition. In addition, The Energiekamer assesses whether the supplier has a transparent and fair payment scheme and a transparent and fair scheme for cancelling and dissolving agreements. A supplier will also have to show that it is able to process complaints and disputes adequately. In this regard, most energy companies make use of an independent arbitration board which adjudicates disputes between small consumers and energy companies. Further conditions may be included in specific supply licences, which ensure further protection of small consumers, such as rules relating to telephone canvassing and the supplier's obligation to notify small consumers of changes to supply tariffs.

In addition, in cooperation with the industry, The Energiekamer has drawn up general rules with which suppliers have to comply. For instance, the legislation offers the possibility of limiting the cancellation fee which a supplier may charge if a small consumer cancels his contract prematurely. By promulgating a policy rule, The Energiekamer has made use of this possibility. The Energiekamer has also drawn up a policy rule that guarantees the timely dispatching of (final) settlements and a policy rule that specifies some basic requirements for information given to consumers by energy suppliers. In addition, The Energiekamer and the sector have drawn up rules on a voluntary basis which have resulted in clear energy bills.

Safety-net regulation

Although the supply tariffs for small consumers are not regulated by the Energiekamer, the various supply tariffs charged to small consumers are checked by the Energiekamer with regard to their fairness. If the Energiekamer deems certain supply tariffs unfair, a maximum tariff may be set. This protects small consumers from excessive tariffs. Every year the Energiekamer hears several suppliers about the level of their supply tariffs. The suppliers in question will have to explain the level of the tariffs set. A possible explanation may be that the superior quality of the product offered justifies a higher price. If the explanation is not adequate, the supplier is required to adjust the tariffs. To this day however the Energiekamer has not had to determine a maximum tariff for a supplier.

Power labelling

Obligatory power labelling also relates to creating greater transparency. As of 2005, energy suppliers are obliged to provide consumers annually with data relating to the way in which the power supplied in the previous year was generated. For this reason, consumers receive a so-called power label with their energy bill stating the source of the electricity supply at. The consumer can use this information when deciding to switch from one energy supplier to another.

Customer acquisition and retention - Code of Conduct

The Energiekamer still receives questions and complaints about the way customers are acquired, although the number of complaints has decreased compared to last year. This relates mainly to complaints about telephone canvassing and supply contracts entered into by door-to-door salesman. Partly due to the problem of customer acquisition, in consultation with the energy sector, The Energiekamer has drawn up a code of conduct. This code of conduct has been signed by almost all energy suppliers on the market. The parties which have not signed the code will be monitored (more) closely. In the case of energy companies which adhere to the code of conduct, the code may function as a 'quality mark' of proper acquisition practices. If the Energiekamer receives reports that a company has infringed the code of conduct, the Energiekamer will intensify its supervision and conduct an investigation.

Disconnection policy

Following an increasing stream of questions and complaints from small consumers about disconnections in 2006, The Energiekamer has analysed the disconnection and debt collection policies of network managers and suppliers. A Ministerial Rule (MR) is now in place for the winter period (October through April). The MR prevents network operators and suppliers from disconnecting a consumer if the consumer is in the process of debt restructuring with a recognised body. Only if a consumer refuses to enter debt restructuring or if the consumer is turned down by the restructuring authority, then the network company/supplier can disconnect the consumer.