



# **2011 National Report of Energiekamer to the European Commission**

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## 1. Foreword

### *Our mission: to make energy markets work*

The Dutch office of Energy Regulation (hereafter: Energiekamer) is part of the Netherlands Competition Authority and committed to making energy markets work as effectively as possible. To fulfil this mission, Energiekamer aims to create conditions that ensure an effective and efficient market functioning and protect consumer interests if necessary. As a result, access to networks should be safeguarded, transparency should be sufficient and consumers should be protected against any malpractices.

### *Our approach*

Energiekamer operates in a problem-solving and issue orientated manner and aims to tackle issues and problems that hamper the conditions for effective market operations and consumer protection. As such, Energiekamer not only enforces the rules that are laid down in legislation (such as European Directives and the Dutch Electricity and Gas act), but also actively seeks debate with market participants. Also, the development of the energy market is closely monitored in order to identify (potential) market problems. All these efforts are aimed to make the energy market work as effectively as possible. This national report provides an insight into (the developments of) the Dutch energy market for both electricity and gas in 2010.

Peter Plug  
Director of Energiekamer

## 2. Main developments in the gas and electricity markets

### Regulation and unbundling

The regulatory tasks for Energiekamer are laid down in the Dutch Electricity act and the Dutch Gas Act. These acts also issue several legal instruments, such as injunction and civil penalty that can be applied. In 2010, Energiekamer has issued several injunctions and civil penalties with the aim to ensure that market participants are compliant to the rules (these legal instruments are therefore used as a tool and are not a goal in itself). The proposed implementation of the third package (coming into force as of 3 March 2011) also has several effects on the regulatory tasks of Energiekamer, although the actual effects will become visible once the third package has come into force (3 March 2011) and is transposed into national law.

As National Regulatory Authority, Energiekamer is (next to ensuring that retail companies follow the law) responsible for regulating both Transmission System Operators (hereafter: TSOs) and Distribution System Operators (hereafter: DSOs). The tasks of TSOs are laid down in the Dutch Electricity act and the Dutch Gas act. In particular, TSOs are obliged to ensure that their transmission system is in use under economic conditions, maintain and develop the network in such a way that it safeguards safety, efficiency and reliability of the network. Energiekamer is of the opinion that both TSOs fulfil an important role as market facilitators and therefore – next to setting the appropriate tariffs – monitors the way both TSOs fulfil these tasks. As such, Energiekamer expects that the development of the energy market can place in an effective manner.

With regard to unbundling of TSOs, no major developments have taken place in 2010. It is to be expected that the entry into force and transposition into national law of the third package will lead to new developments, in particular the certification of the owners of transmission systems. At the end of 2010, all (but two) DSOs were separated (fully ownership unbundled) from the integrated company. Due to a court decision part of the law on unbundling lost force. As a result, the two integrated companies that are not yet unbundled, announced to postpone their activities regarding unbundling. The Ministry of Economic Affairs, Agriculture and Innovation lodged an appeal in cassation by the Supreme Court of the Netherlands, the decision is scheduled in October 2011.

### Wholesale market

#### Gas

Access to infrastructure (capacity) and tradability of gas (commodity) are essential for a properly functioning wholesale market. In 2010 the sector prepared itself for a number of measures that take effect on the 1st of April 2011. These measures are meant to improve the functioning of the wholesale gas market. One measure is that as of 1 April 2011 all traded gas in principle should be delivered on the Title Transfer Facility TTF (the Dutch gas hub). Also on 1 April 2011 a new market based balancing regime starts allowing shippers to better handle their imbalance positions.

Looking at the development of TTF in 2010 the traded gas volume increased 40% compared to the previous year to a total of 1122 TWh. The delivered gas volume on TTF amounted to 330 TWh in 2010, an increase of 28% compared with 2009. Volumes on the gas exchanges are also on the rise. APX ENDEX (the Dutch gas and power exchange) spot market volumes went up to 5,8 TWh in 2010 (compared to 1,8 TWh in 2009) and the futures volumes rose to 119,1 TWh in 2010 (compared to 40,6 TWh in 2009).

### Electricity

Being able to trade electricity freely, not only with respect to origin and destination of generated electricity but also, as much as possible, between the different timeframes contributes to competitive wholesale prices and to maximizing social welfare. As in past years, Energiekamer has put continuous and substantial effort in the integration of the Dutch wholesale electricity market with the surrounding markets. An important achievement in 2010 has been the day-ahead market coupling within the CWE-region. In combination with the simultaneous integration of the CWE-market with the Nordic electricity market by means of a tight volume coupling meant a big step forward in reaching the goal of the internal energy market. During 2010 the decision for including NorNed in this tight volume coupling was prepared and entered into force beginning 2011. Another milestone was the introduction of the Elbas platform for intraday trade on the Dutch-Belgian border. This has enabled the start of continuous implicit trading on this border.

The day-ahead trading on APX exchange recorded a volume of 33,5 TWh in 2010, up by 15% year-on-year. In the coming years Energiekamer will continue its efforts with vigour, with the ultimate perspective of finalizing the integrated European market. In order to do so, it will use its responsibilities to ensure that the use and availability of interconnector capacities with neighbouring countries are optimized further and national regulations harmonized and adapted. The next important steps foreseen will be the integration of the entire NWE day-ahead market through a price coupling mechanism, the switch to flow-based capacity calculation within the CWE-region and the introduction of continuous implicit intraday trading in the NWE-region.

At the same time, Energiekamer has to ensure that the ambitious investment programme for the Dutch grid will be implemented smoothly and efficiently. These investments are necessary to connect the large amount of extra generation that is expected to come online in future years and to transport the extra electricity that will be generated. In addition, increasing cross-border flows and supplies of renewable energy will have to be accommodated.

### **Retail market**

The share of the large three companies in the electricity and gas market steadily declines every year, and is now beneath 80%. The number of customers that switched supplier has decreased slightly compared to 2009: between January 1st 2010 and December 31st 2010, 8.8% of all customers for electricity and 8.9% for gas switched supplier. The annual consumer survey of Energiekamer in 2010 has revealed that consumers are less worried about the hassle that consumers think is involved when switching supplier. This is mainly a result of the fact that consumers are getting more familiar with switching supplier.

The popularity of price comparison websites for energy is increasing rapidly. In order to increase consumer confidence in this channel, Energiekamer has once again conducted research into these websites. As a result price comparison websites have improved the quality of their information. A more persistent problem remains the usage of wrong or unjustly estimated metering data on energy bills. While the large scale roll-out of smart meters will eliminate this problem in the long run, energy companies and the Energiekamer have made an agreement based on which most of the problems related to metering data will be solved on the short run.

## Infrastructure and Security of Supply

### Gas

In general the domestic demand for gas and the export obligations are largely covered by a guaranteed supply of both domestic production and import from e.g. Norway and Russia. The decline of production in the Netherlands will ask for investments in new infrastructure. (New) investments should ensure that more sources of flexibility are available and that infrastructure can accommodate changing gas flow directions and demand patterns.

Based on an integrated open season held in 2009 by Gas Transport Services (used to determine future capacity needs of market parties), several new projects are undertaken that aim to enlarge the existing gas transmission system. One of these project is the so called North-South connection, an important connection for transmission of gas. The proposed North-South route will provide the Netherlands with the extra kilometres of pipeline and compressor stations its needs. Planning permission and consent is now therefore being sought.

With regard to storage, Gasunie (the owner of Gas Transport Services) continued construction activities to built a salt cavern storage in Zuid-Wending. This storage has approx. 200 million m<sup>3</sup> of working volume , with 1.6 million m<sup>3</sup>/h withdrawal capacity and 0,8 million m<sup>3</sup>/h injection capacity. At the end of November 2010, the caverns were ready for use, official use will start in January 2011. TAQA is planning to built one of the largest storages in Europe (Bergermeer) with a working volume of 4bcm. In 2010, the decision making process as to whether the storage could actually be built was fully on its way and it is expected that in 2011 the final go/ no go decision will be taken. Finally, GATE continued construction for their LNG terminal in Rotterdam. This terminal (with an initial throughput capacity of 12 bcm and four storage three tanks of each 180.000 m<sup>3</sup>) is expected to become operational in 2011. No requests for article 22 exemptions were received for any gas related infrastructure in 2010.

### Electricity

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 construction of new 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 2010 it proved unnecessary to invoke this safety net. Domestic production has increased and will do so for the coming years. The sharp increase of new production capacity being connected lead to the introduction of a congestion management mechanism in the summer of 2010. The waiting line and the "first come first serve" principle was previously only applied under rare circumstances. New legislative measures for congestion management, based on the 'Connect and manage principle' have been approved by parliament. The ongoing increase of domestic generation will result in a generation surplus. A development which was visible in the increase of export and decrease of import volumes as published monthly by TenneT as shown below:

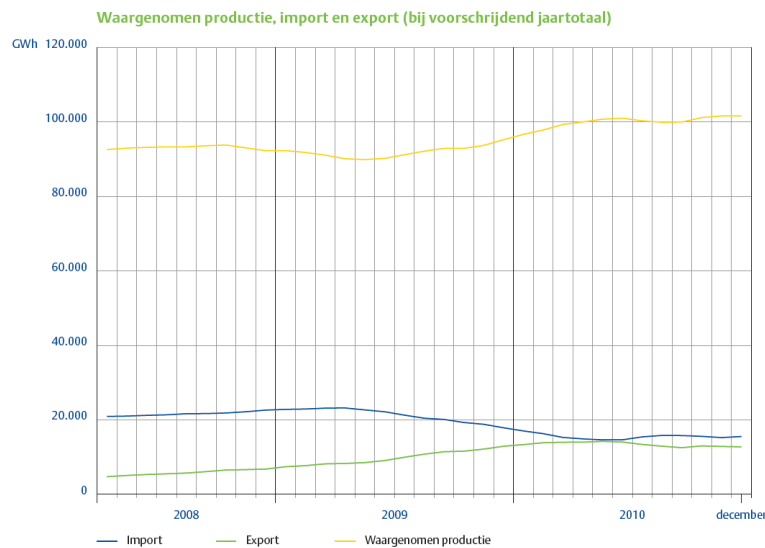


Figure 1: Increase of export and decrease of import volumes as published monthly by TenneT

TenneT is increasing the capacity of the transmission network by means of two main projects. The 'Randstad 380 kV project' strengthens and expands the 380 kV grid in the west of the Netherlands. This project is of specific importance for increased consumption in the region as well as the connection of the aforementioned large amount of planned new generation facilities. For the same reasons TenneT is planning an expansion of the 380 kV grid in the northwestern and southwestern part of the Netherlands (North-West 380 kV project & South-West 380kV). These projects are planned to be completed in 2016.

The most recent expansion of interconnection capacity for the Netherlands was done with two HVDC submarine cables:

- NorNed, a regulated connection of 700 MW between the Netherlands and Norway and built by the TSOs of these countries, was put into operation in May 2008.
- BritNed, a merchant interconnection of 1GW between the Netherlands and the United Kingdom will be commissioned in April 2011. BritNed is a joint venture of NLink International B.V., a fully-owned subsidiary of TenneT Holding B.V. and National Grid International Ltd, a fully-owned subsidiary of the British National Grid plc.

A fourth AC interconnection with Germany – between Doetichem and Wesel - is in the preparatory phase and research is underway for the COBRA cable, an HVDC interconnection between the Netherlands and Denmark, with an option to connect offshore generation. Investment decision are planned for the end of 2012.

### Changes in national legislation and the third package

Several changes have been introduced in the Dutch Electricity and Gas Act in 2010 (such as smart metering, a new market model for gas and congestion management rules for electricity) in order to improve the Dutch energy market. With respect to the third energy package, changes to existing legislation are being proposed by Dutch government as to comply with the new rules. In 2011, these changes will be discussed within Dutch Parliament.

### 3. Regulation and Performance of the Electricity Market

#### 3.1. Regulatory Issues

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

###### *Preface*

The regulators of the Central West European regional initiative have published their regional monitoring report on the use of interconnection capacity and the applied congestion management methods in the fourth quarter of 2010. For further details we refer to this document.

###### **Degree of congestion on the interconnectors**

The average utilisation in 2010 of available cross-border capacity is not (yet) calculated.

###### **Degree of congestion within the national system**

The development of new production capacity in the Netherlands has further materialized in combination and increased the risk of congestion within the national transmission and distribution system. The development plans include larger thermal units, windproduction as well as small CHP-plants. Although currently congestion only occurs within a part of the distribution grid, more congestion is expected in the coming years. In 2009 the National Regulatory Agency has put down a vision how to handle national congestion and parliament has passed ministerial rules how to improve current mechanisms.

###### **Congestion management methods as applied under the Regulation 1228/2003**

The interconnector capacity available to the market on the borders of the Netherlands is allocated to market parties by means of different systems. Currently methods for four different timeframes are in place: the year-ahead timeframe (capacity for an entire year), the month-ahead timeframe (capacity for an entire month), the day-ahead timeframe (capacity for every hour for the next day) and the intraday timeframe (capacity for a particular clock hour for the next/current day). Currently different auction methods are used for different timeframes on the Dutch Borders. The table outlines these different methods used in 2010.

Border	Germany	Belgium	Norway
Timeframe			
Year	Explicit	Explicit	Not available
Month	Explicit	Explicit	Not available
Day-ahead	Explicit / Implicit <sup>1</sup>	Implicit	Explicit
Intraday	FCFS-OU <sup>2</sup>	Improved pro-rata	Not available

*Table 1: Congestion management methods applied*

<sup>1</sup> Implicit auctioning replaced the explicit auction at the German border on the 9<sup>th</sup> of November 2010.

<sup>2</sup> The intraday mechanism on the German border is a first-come-first-serve obligatory use system.



In the paragraphs below the congestion management methods will be handled per timeframe

### **Yearly and Monthly allocation**

For the Dutch borders CASC-CWE, a subsidiary of all the CWE TSOs, carries out the explicit auctions. 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. Since the beginning of 2010 these auctions are performed under a harmonized set of rules for all the explicit auctions on the internal borders of the CWE-region.

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 0900 hrs on the day prior to the transmission of their intention to make use of this capacity (this is the "nomination"). Capacity which is not nominated is made available for the day-ahead auction. The current rules apply Use-it-or-lose-it at the time of nomination. The new auction rules for the CWE-region will introduce a use-it-or-sell-it mechanism at the time of nomination.

In September 2008 TenneT introduced netting of long-term import and export capacities on the Dutch borders. With netting the net value of the nominated commercial import and export flows is taken into account when calculating the residual capacity for the day-ahead stage. The implementation of netting significantly improved the level of day-ahead capacity on the Dutch borders.

### **Day ahead allocation**

On the 9th of November 2010 the day-ahead implicit auction transmission capacity between the Netherlands and Belgium was extended towards the borders of Germany. At the same time the CWE price coupling algorithm was linked the Nordic market through an interim tight volume coupling between Germany and Denmark<sup>3</sup>. The combination of these two separate algorithms requires a tight time schedule with defined deadlines for fall-back in order to ensure the delivery of market results by 13.00 CET. Since the start of CWE and ITVC market coupling the price convergence – which was 69% between already coupled markets - has risen up to more than 70% of the time.

The price convergence between Germany and the Netherlands was exceptionally high in the first months – reaching numbers as high as 99% price convergence. For the implicit auction on the Dutch borders, 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 bides must be published<sup>4</sup>.

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<sup>3</sup> In November 2010 NMa announced the inclusion of NorNed in this mechanism which started on the 18th of Januari 2011.

<sup>4</sup> From the 9th of May this obligation is changed in the possibility to request this information at APX-ENDEX.

Up till the 9th of November the day-ahead capacity on the German border was auctioned with an explicit mechanism. 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). The parties to which import capacity has been allocated 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. With the start of CWE market coupling this obligation to bid in on the exchange was cancelled as was already the case on the Belgium border since 2006.

With the start of CWE market coupling the CWE TSOs also introduced a capacity calculation method which includes improved coordination in case of expected overloads in the network. This coordinated mechanism is a first step towards a flow-based mechanism. In 2008 and 2009 TSOs and Power Exchanges of the CWE-region have started the development of a flow-based market coupling in order to implement implicit auctioning on the German borders. Because of the highly meshed networks within the CWE-region this market coupling mechanism requires a capacity calculation system which takes into account the discrepancies between physical and commercial flows. In the first quarter of 2010 market coupling is planned to be introduced on the German borders.

A new submarine cable between Norway and the Netherlands (NorNed-cable) was, after some delay, put into operation in May 2008. In 2008 and 2009 and 2010 the capacity allocation was done only with a daily explicit auction mechanism. As mentioned above: with the introduction of market coupling on the Dutch-German border also the grid code changes were approved that allowed inclusion of NorNed in the ITVC-mechanism which started on the 18th of January 2011.

### **Intraday-allocation**

In December 2008 TenneT introduced an intraday capacity allocation platform on the German borders. This platform offers the residual capacity which is left unused after the day-ahead stage. The platform explicitly allocated capacity on a First-come-first-serve basis with obligatory use. This means that when capacity is allocated to a certain market party at his request, this allocation also obliges him to use the capacity. If he fails to do so this will result in imbalance charges on both sides of the border. In the Dutch-Belgium border an intraday platform was introduced in May 2009 which is the same as the system implemented on the border between Belgium and France. In parallel to the development of interim solution on the Dutch borders regulators in the CWE-region are working, together with market parties, on a harmonised solution for cross-border intra-day trade for the Central West European region.

### **Degree of integration of congestion management with the wholesale markets**

Congestion management is very important for the operation of the Dutch wholesale markets. Due to economic developments import and export volumes were roughly the same in 2010 and were both in the range of 15-20%. 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 all Dutch borders, the efficient use of the available capacity is now assured. This has also resulted in a high degree of convergence of the day-ahead prices of the Netherlands, Germany, Belgium and France. Although this is a very positive development, it must be noted that most trade is done through (year and month ahead) OTC products.

### **An assessment of the computation of transmission capacity by the TSOs**

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 11:15 hours, the TSO must announce the capacity available for spot transmission for the following day, specified per border. In 2008 the cross-border transmission capacity has increased by the NorNed-cable and a new 380kV-substation in Borssele, although the latter has not increased the capacity available for the market.

### **3.1.2. The regulation of the tasks of transmission and distribution companies**

#### **Regulation of TSOs**

TenneT is the only national grid company for the transmission of electricity in the Netherlands and regulated by Energiekamer. To do so, Energiekamer uses a system of turnover regulation (revenue cap) for the transmission tariffs with a yardstick that is partly based on international benchmark (best practice), combined with a frontier shift based on productivity growth of other foreign TSO-companies. The yardstick objective is set for the final year of a 3 to 5 year period. The current period will finish at the end of 2013. The allowed revenue of the company is adjusted annually by  $(1+CPI-X)$ , in which CPI is the Consumer Price Index and X is the efficiency incentive. The quality is regulated through quality standards (laid down in codes) and not with financial incentives. The system of yardstick competition provides incentives to increase cost efficiency. Higher profits can be achieved if the company achieves higher cost savings than expected, or vice versa. For costs for energy (a.o. netlosses) and power (a.o. balancingpower) a bonus/malus is applied to the difference between expected efficient costs and actual costs. This means that since 2011 TenneT faces a risk (or opportunity) of 25% of the first 20% difference (symmetric).

Costs are determined according to a standardised method. Annually, 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 system is used for assessing expansion investments. Energiekamer will assess to what extent investments have been performed efficiently. Also, the utility and necessity of these investments must be assessed. If the investment is useful and necessary, the revenue cap and tariffs will be corrected, but only for the amount of the investment that has been found to be efficient. Based on the revenue cap, TenneT will draft (on a yearly basis) a tariff proposal for all tariff components (given expected volumes). This proposal is assessed and approved by Energiekamer. Customers can find the tariffs on the website of Energiekamer or TenneT.

The tariff structure is laid down in a so called 'Tariffcode' and can be adjusted by Energiekamer. The adjustments are usually proposed by (a majority) of Dutch grid companies. For information on balancing, please see description of the wholesale market. "

#### **Regulation of DSOs**

In the Netherlands, DSOs are also regulated by Energiekamer and a system of national yardstick competition (with a price cap) is used to do so. The allowed revenue of a company is adjusted annually by  $(1+cpi-x+q)$ . In this formula cpi is the consumer price index, q represents the quality factor and x is the efficiency incentive. The yardstick (objective in final year of a 3 to 5 year period) is equal (except some regional differences) for all DSOs and is determined by the sector average cost per output, including an estimate of the growth in total factor productivity during the regulatory period. The regulatory period ends in 2010. Energiekamer has published the regulatory method for the period of 2011 until 2013 in the summer of 2010.

The system of yardstick competition provides incentives to increase productivity. A DSO can achieve higher profits when productivity exceeds the average productivity. Productivity is measured by dividing the costs of the DSO by its standardised output and the costs are determined according to a standard method. Annually, Energiekamer collects audited data on actual OPEX, investments and depreciation (based on regulatory accounting rules) and volumes charged to customers.

A (possible) theoretical risk of the system of yardstick competition is that DSOs may invest less than is socially optimal in order to reduce their costs and therefore increase their profit. By investing less on the long term, the quality of the grid may be reduced. Quality is measured by the System Average Interruption Duration Index (SAIDI), which is the average interruption per consumer. To avoid a reduction in quality, Energiekamer uses quality regulation to give DSOs the incentive to invest in quality. This quality incentive comes from the q-factor, which is calculated based on interruptions experienced by consumers on the low-voltage grid (<50kV). Energiekamer includes the q-factor into the system of yardstick competition. Therefore, if an individual company performs above or below average quality, higher or lower revenues are permitted. The annual average interruption duration per consumer at the low-voltage level amounted to approximately 25 minutes in 2010.

In 2010, Energiekamer has published a report on investment decisions and policies of DSOs. In this report, PwC concludes that until now quality of electricity networks in the Netherlands has been very high. The research did not provide indications that the aforementioned risk of underinvestment actually had happened. However, Energiekamer also found that DSOs do not have sufficient insight into the physical state of their network as to be able to assess the need for replacement investments. It will therefore be a priority for Energiekamer to have DSOs increase their insight into the state of their networks.

The allowed revenue is based on expected volumes. Given the allowed revenue, each DSO presents a tariff proposal to Energiekamer for all the tariff components each year. This proposal is assessed and either approved or adjusted by Energiekamer. Customers can consult the tariffs on the website of Energiekamer or on the website of their DSO.

### **Balancing**

Since its introduction in 2001 the Dutch balancing mechanism has been fully market based. The combination of program responsibility, imbalance settlement and reserve provision has so far resulted in low average costs for balancing, incentives for market participants to balance their production and demand and both a tender process for longer term contracts for reserve provision and obligation to bid in any surplus of every production unit larger than 60 MW. Next to that the Dutch imbalance settlement is open for "passive contributions" which help TenneT reduce imbalances. This possibility was introduced in 2005.

## **3.2. Competition issues**

### **3.2.1. Effective unbundling**

#### TSOs

TenneT is the national TSO in the Netherlands. In 2010 BritNed prepared for start of operation of a transmission cable between Maasvlakte and Isle of Grain in 2011. As for DSOs, there are eight operators that supply gas and electricity, two only supply gas. In the Netherlands, operators of small distribution systems (with fewer than 100,000 customers) are not treated any differently than operators of large distribution systems. TenneT is fully owned by the State of the Netherlands, while all DSOs are fully owned by Dutch municipalities and provinces

No further developments regarding the unbundling of TenneT have taken place in 2009. Since July 2005, TSOs must be structured in such a way that their commercial and public activities are clearly distinguishable. TenneT has complied with this obligation since that date. TSOs may still be part of a holding company in which commercial activities are carried out.

However, members of the executive board and the majority of the supervisory board of the TSOs are not entitled to have direct or indirect ties with producers, traders, nor suppliers in electricity or gas, nor their shareholders. In 2008, a law went into force that further enhances and secures unbundling of TSOs, by introducing more detailed obligations with regard to the organisation and financial management of TSOs. In case of TenneT, the commercial holding company is 'TenneT Holding' and TenneT TSO performs the legal tasks that are applicable on the transmission system operator.

BritNed is an exempted interconnector co-owned by National Grid and TenneT Holding.

#### DSOs

At the end of 2010, all (but two) DSOs were separated (fully ownership unbundled) from the integrated company. Due to a court decision part of the law on unbundling lost force. As a result, the two integrated companies that are not yet unbundled, announced to postpone their activities regarding unbundling. The Ministry of Economic Affairs, Agriculture and innovation lodged an appeal in cassation by the Supreme Court of the Netherlands, the decision is scheduled in October 2011.

## **3.3. Competition Issues**

### **3.3.1. Description of the wholesale market**

The Monitor Energy Markets reports on the developments of the wholesale market in the Netherlands. At time of publishing of this national report, the market monitor for the year 2010 has not been finalized yet. It will be published on the website of Energiekamer.

### Trading venues

The Dutch wholesale market can be subdivided into the following marketplaces where supply and demand meet:

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

*Day ahead trading on the power exchange: APX provides a representative spot market price*  
 APX is a marketplace for trading in day-ahead contracts. In addition to the day-ahead market, APX also operates an intraday and a strips market. ENDEX is a marketplace for trading standardised forward contracts. At the moment, 17 standard forward contracts are available on ENDEX: 6 monthly, 6 quarterly and 5 yearly contracts for baseload, peakload 12hours and peakload 16hours. In the table below, the number of traders and volumes traded are presented.

	Power exchanges 2010	
	APX (spot)	ENDEX (futures)
Number of traders	55	41
Volumes traded	33,5 TWh	24,7 TWh

Table 2: Number of traders and volumes traded on the power exchanges in 2010

The next two graphs show the development in volumes of APX and ENDEX exchanges.

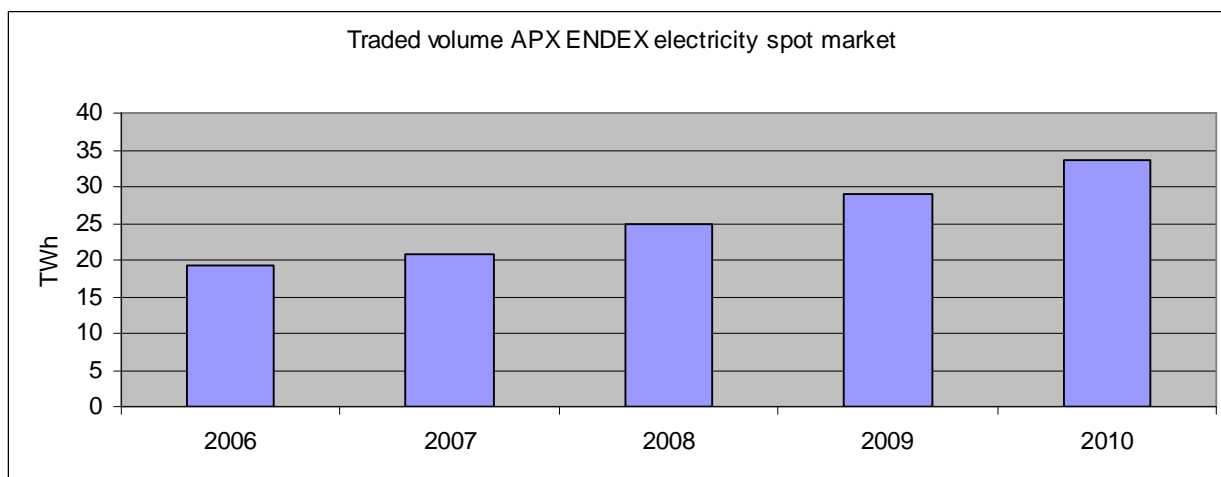


Figure 2: APX day ahead volumes in TWh 2006-2010

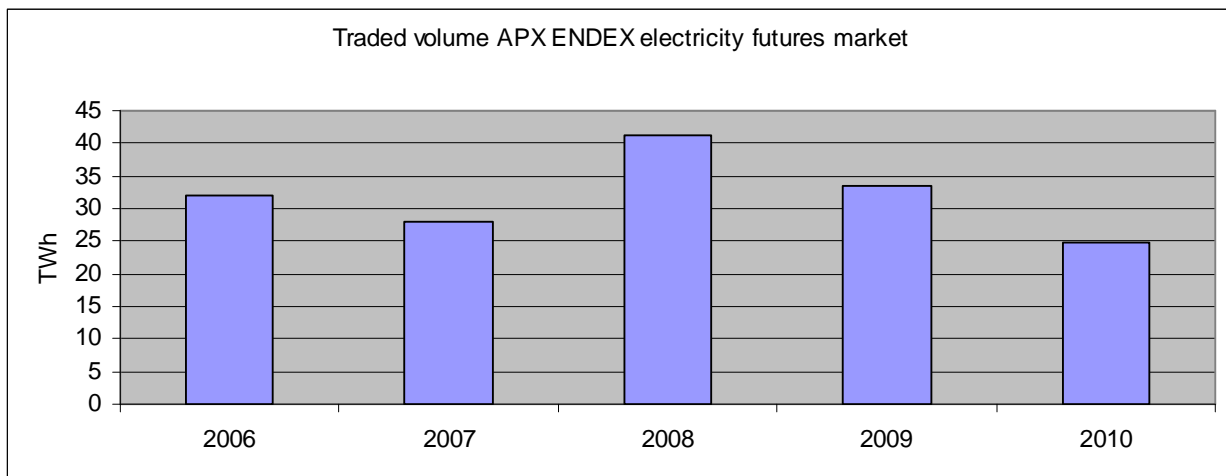


Figure 3: ENDEX volumes (all contracts) 2006-2010

#### *The market for control and reserve power*

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 are recovered from the party responsible for this imbalance (through 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. Emergency power is used when the Dutch system is disrupted.

#### **Degree of integration with markets in neighbouring countries**

Being able to trade electricity freely, not only with respect to origin and destination of generated electricity but also, as much as possible, between the different timeframes contributes to competitive wholesale prices and to maximizing social welfare. As in past years, Energiekamer has put continuous and substantial effort in the integration of the Dutch wholesale electricity market with the surrounding markets. An important achievement in 2010 has been the day-ahead market coupling within the CWE-region. In combination with the simultaneous integration of the CWE-market with the Nordic electricity market by means of a tight volume coupling meant a big step forward in reaching the goal of the internal energy market. During 2010 the decision for including NorNed in this tight volume coupling was prepared and entered into force beginning 2011. Another milestone was the introduction of the Elbas platform for intraday trade on the Dutch-Belgian border. This has enabled the start of continuous implicit trading on this border.

The day-ahead trading on APX exchange recorded a volume of 33,5 TWh in 2010, up by 15% year-on-year. In the coming years Energiekamer will continue its efforts with vigour, with the ultimate perspective of finalizing the integrated European market. In order to do so, it will use its responsibilities to ensure that the use and availability of interconnector capacities with neighbouring countries are optimized further and national regulations harmonized and adapted. The next important steps foreseen will be the integration of the entire NWE day-ahead market through a price coupling mechanism, the switch to flow-based capacity calculation within the CWE-region and the introduction of continuous implicit intraday trading in the NWE-region.

At the same time, Energiekamer has to ensure that the ambitious investment programme for the Dutch grid will be implemented smoothly and efficiently. These investments are necessary to connect the large amount of extra generation that is expected to come online in future years and to transport the extra electricity that will be generated. In addition, increasing cross-border flows and supplies of renewable energy will have to be accommodated.

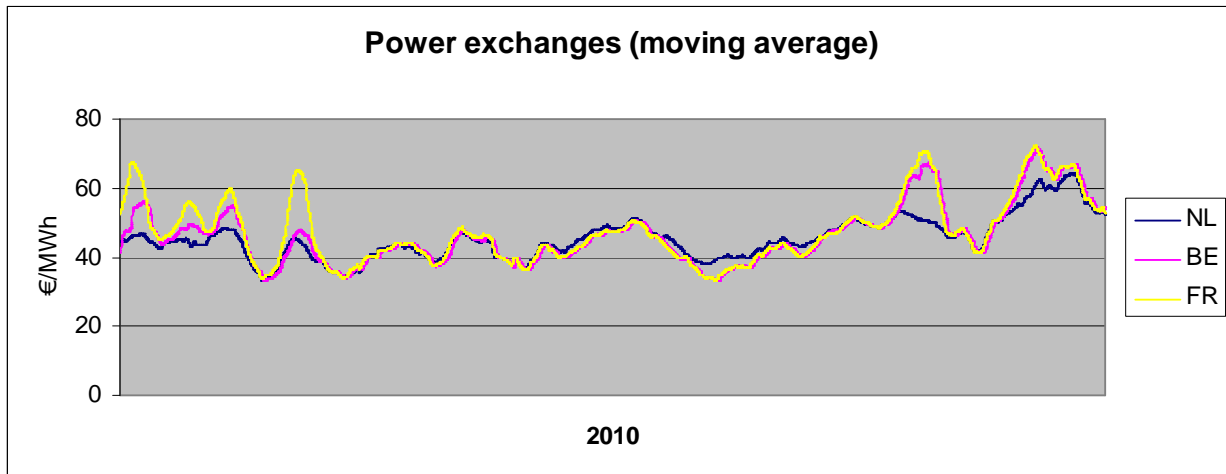


Figure 4: Day ahead prices on the exchange in NL, Belgium and France

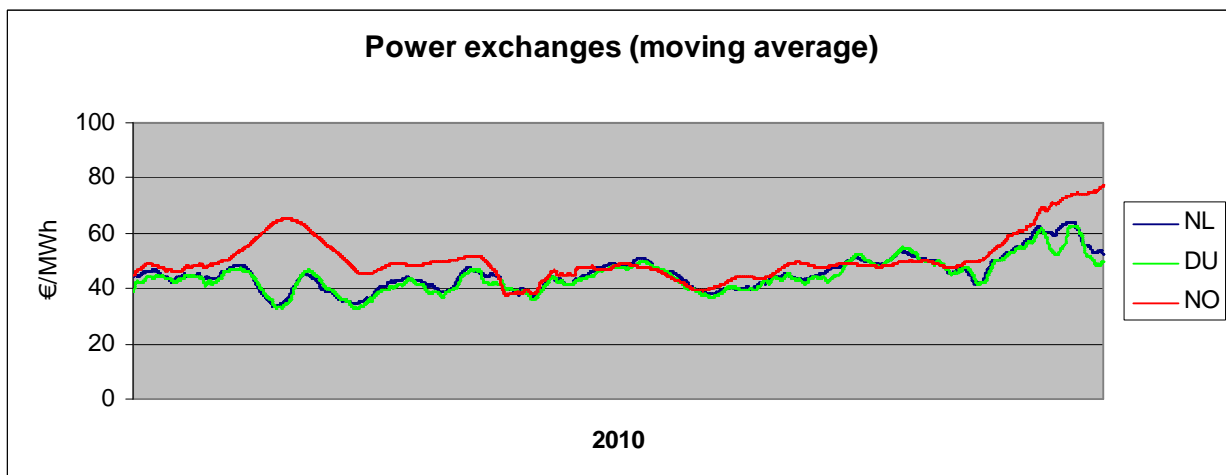


Figure 5: Day ahead prices on the exchange in NL, Germany and Norway

### Assessment of impact of mergers on competition

Energiekamer has published a vision document entitled "Vision Document on Mergers in the Energy Markets".<sup>5</sup> 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 Energiekamer views possible mergers and acquisitions on these markets.



Approximately 25 producers are active in the Netherlands. In terms of the size of generating fleets, the Netherlands has seven large and eighteen 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), both on generation capacity and actual production.

YEAR	Capacity	Production
2006	1604	1700
2007	1592	1828
2008	1551	1742
2009	1433	1810
2010	No figures available yet	

### 3.3.2. Description of the retail market

#### Market structure

The structure of the Dutch electricity retail market is characterised by three very large suppliers (all incumbents), four relatively small suppliers and a large number of very small suppliers. The three very large suppliers that supply electricity to small consumers have a market share that exceeds 80%. All of these are incumbents. Of the four relatively smaller suppliers, one is an incumbent and three are new entrants who entered the market after full liberalisation in July 2004. There have been no changes since last year's report.

C3	Electricity
1 juli 2004	86,0%
1 jan. 2005	84,0%
1 juli 2005	83,0%
1 jan. 2006	79,7%
1 juli 2006	82,0%
1 jan. 2007	81,6%
1 juli 2007	82,6%
1 jan. 2008	81,9%
1 juli 2008	81,0%
1 jan. 2009	80,4%
1 jul. 2009	80,0%
1 jan. 2010	81,1%
1 juli 2010	80,6%
1 jan 2011	80,3%

Table 3: Development of the C3 index for electricity since the liberalisation of the market

The three largest suppliers have a total market share of 80,3% in the small consumer segment. After the takeover of Essent by RWE, which resulted in a slight increase in the C3 index (visible in January 2010), the C3 index declined again as is shown in the table above.

In total, there are 24 independent parties (parent companies) active on the market for small consumers of electricity. These are active in various levels of the market and four of them are national "incumbents". This is the same as previous year.

In 2010 no customer portfolios of “original” incumbent suppliers were taken over. On December 31st, 2010, there were a total of 35 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 takeovers 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  
2008: None  
2009: Nuon – Vattenfall (Sweden), Essent – RWE (Germany)  
2010: None

Some (but not all) of the Dutch company names and brands have been replaced. By means of the takeovers, foreign companies have established a platform from which they wish to increase their share of the Dutch market. In 2010, 6 new licenses for the supply of electricity was issued and 2 licenses were revoked (all of those voluntarily by the suppliers, because they changed name and continued to supply electricity, or because they decided to not supply electricity to small consumers any longer). 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 in 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%.

#### **Supply: grid**

Of the retail electricity market 24,8% is 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 since the implementation of the ‘Splitsingswet’ (Unbundling act), which makes it an obligation for integrated energy companies to unbundle their activities by January 1st 2011.

#### **Switches**

Between January 1st, 2010 and December 31st, 2010, 8,8% of all consumers switched electricity supplier. This is a decrease from the previous 12 month-period (11%). The figure below provides an overview of monthly switching rates since June 2005. Switching rates show a slight decrease, which is consistent with the lower switch incentive. On the positive side, the perceived switching threshold has gone down. Consumers feel less unsure about available information, and are less afraid of administrative problems. The most important switching threshold is the low interest value of the “product” energy, and the fact that the majority of consumers are very satisfied with their current supplier.

## Switching procedures

The procedure remains unchanged from the previous year. If electricity consumers wish to switch their electricity supplier, they must inform the new supplier verbally (for instance, by telephone) or in writing and must then authorise this new supplier to request the necessary information and take the necessary action (for instance, requesting information from the connection register of the grid operator and making arrangements in relation to programme management). In addition to this, the new supplier has to ask the consumer for their meter readings. If they fail to do so, or if the meter readings are incorrect, the final settlement by the former supplier will be based on an estimate of consumption. In this regard, 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 doesn't need to take any further action and can wait for confirmation from the new supplier and the final settlement from the previous supplier.

### *The switch procedure*

The new supplier submits a request for a switch to the grid operator. The meter reading accompanying the switch has to be sent to the grid operator 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 operator 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 operator 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 operator also enters the change into the connection register. The grid operator 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 operator also notifies the former supplier of the consumption so that the former supplier can draw up the final invoice.

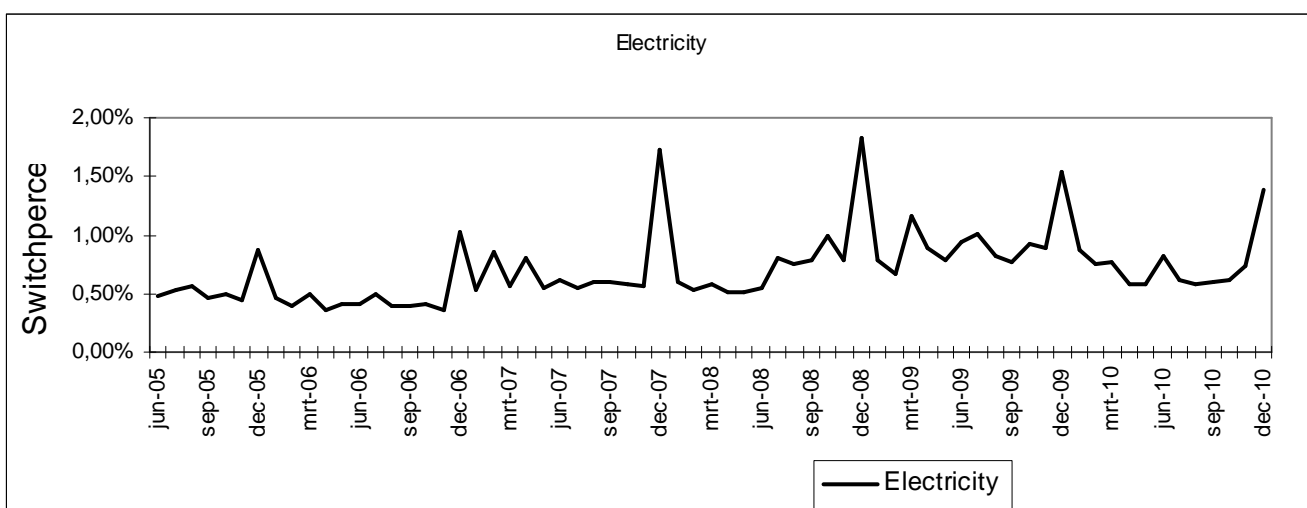


Figure 6: Monthly switching figures for 2010

### Problems with switching

Satisfaction regarding switching procedures and administrative procedures has generally increased since 2007. The main problem with switching still is that many switches are based on meter estimates instead of actual meter readings. This results in consumers not recognising their final settlement bill with the old supplier. This in turn leads to complaints and requests for corrected bills. This problem should be eliminated by the introduction of the smart meters which is foreseen from the year 2012 onwards. In the meanwhile, energy suppliers and grid owners have agreed to improve processes in order to avoid using estimated meter readings.

### Prices, tariffs and tax rate per component of the invoice

#### Transmission costs<sup>5</sup>

The transmission costs (also referred to as grid costs) for 2010 consist of:

1. Standing transmission charges;
2. Capacity based tariff;
3. Standing connection charges;
4. Any one-off connection charges;
5. System services (TSO).

The transmission and distribution tariffs are determined annually by the Energiekamer and are therefore regulated. Since January 1st, 2008 the tariffs for electricity metering services are regulated (because of legislative reasons the gas metering tariffs are not yet regulated). The Energiekamer sets a, national, maximum tariff each year. The distribution tariffs for 2010 may differ from one grid operator to the next. The following overview is based on a weighted average (number of connections) of all regional network operators.

- Standing charge for the transmission service (EUR): 18,00
- Capacity based tariff (weighted average, EUR per kWh): 107,51
- Periodic connection fee (weighted average, EUR): 19,32
- System services tariff (EUR per kWh): 0,00151

For an average Dutch consumer this leads to an annual total of EUR 150,28. The overview above has changed since January 1st 2009, the grid costs are no longer based on electricity consumption, but on a capacity based tariff.

#### *Metering costs*

The electricity metering tariff (meter rental) has been regulated from January 1st 2008. When considering that the regulated tariff is a maximum, actual tariffs charged could be lower. However in practice we see that in 2010 all Dutch consumers paid the same electricity metering tariff of EUR 25,33.

#### *Supply costs<sup>6</sup>*

The supply consist of the cost of the electricity consumed and fixed costs. Supply tariffs are not regulated. There is however a form of tariff "supervision" whereby Energiekamer has to approve all individual (new) tariff proposals by suppliers.

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<sup>5</sup> Energiekamer does not have figures that can be broken down into all the segments that are requested, neither are there 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 available.

<sup>6</sup> Tariffs as of July 1st 2010

On July 1st, 2010, a household with an average consumption (3430 kWh per annum) paid a net amount of EUR 267 in supply costs on an annual basis (approximately 16% of the consumer's total energy bill). This is including fixed costs, but excluding VAT. The result is an average supply tariff (including the fixed supply costs) of around EUR 0,07792 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 111,40 per MWh of electricity supplied on 31 December 2010. A Value Added Tax (VAT) of 19% is charged on the amount of electricity delivered (consumption and non consumption related tariffs) and the energy tax. In addition, a tax rebate of EUR 318,62 (excluding VAT) is applied (to the total energy bill, electricity and gas combined).

### **3.3.3. Measures to avoid abuses of dominance**

#### **Competition measures**

Energiekamer monitors the competition and barriers to competition in the retail markets for gas and electricity yearly, the monitoring report is published on the website of Energiekamer. Part of this monitoring project is aimed at establishing the level of concentration for the different parts of the electricity market. However, this exercise is meant to monitor the concentration over the years, not the establishment of market dominance.

Despite the fact that the supply tariffs are not regulated, Energiekamer has the statutory power to impose tariff reductions on supply companies if the tariffs are determined to be unreasonably high. Until now, this has never occurred.

With regard to transparency, 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, Energiekamer investigates the correctness and completeness of data published on websites of energy companies and websites that make price comparisons. Also there is a Policy Rule on information requirements. This Policy Rule is applicable to all communication channels. Energiekamer actively uses this new Policy Rule to enforce these information requirements. In 2008, Energiekamer also started a comparison site for energy suppliers where all other service aspects besides prices are compared. This comparison site is called "Energiewijzer" (this can be translated to "Energy Guide").

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

- the Policy Rule on Invoicing Deadlines for Energy [Beleidsregel factureringstermijnen energie]. This requires the sending of 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 to 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 January 2008. This limits the cancellation fee which a supplier may charge if a small consumer cancels a contract prematurely;
- ❑ 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 June 2nd, 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. The Electricity Act of 1998 and the Gas Act stipulate requirements regarding 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 concluded 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, Energiekamer monitors on a monthly basis the administrative processes (and accompanying communication) in relation to switches and changes of address, to ensure that consumers and other market parties (grid operators and suppliers) are not obstructed by any administrative processes of energy companies. The results are published on the energy comparison website and are also used for enforcement purposes. With regards to unbundling, the law stipulates that energy transmission and distribution services must be legally separated from other commercial services. Finally, the proposed mergers and acquisitions (for instance, in the energy sector) must be approved by the Netherlands Competition Authority (NMa).

## 4. Regulation and Performance of the Natural Gas market

### 4.1. Regulatory Issues

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

##### **Technical capacity**

The technical capacity on border points is calculated via a computed model representing the entire high pressure system of Gas Transport Services. Prerequisite is the maintaining of adequate pressure on national exit points, in each of a series of pre-set scenario's in which temperature and flow-direction of the gas are an important part. The assessment of the technical available capacity on interconnection points is thus the outcome of this scenario-study. The scenario's can be quite extreme, which is why the 'technical capacity' must be seen as the capacity which can be offered firm at all times. This makes the methodology of Gas Transport Services fairly robust. However, this also means that it is a cautious assessment of firm capacity on IP's, which is the reason why the sold interruptible capacity is hardly ever interrupted.

##### **Capacity allocation**

GTS allocates all firm capacity via a online click and book application on the basis of the First Come First Served. There are no reservations or separate conditions for transit contracts. In case the firm capacity on an entry or exit point is fully booked, GTS offers the requesting shipper interruptible capacity. In addition, Gas Transport Services started in 2008 the so-called Eucabo booking service with the German TSO, Gasunie Deutschland. This service implies the booking of combined interruptible exit and entry capacity on a day-ahead and week-ahead basis. This is only applicable for the (contractual congested) German-Dutch IP Bunde/Oude Statenzjl. Gas Transport Services also offers booking of capacity against the physical flow direction (backhaul reservations). This capacity is always offered on interruptible basis. The swaps of capacity make up for an ever larger percentage of capacity.

##### **Congestion management**

The interconnection capacity (especially import capacity to the Netherlands) is subject to a substantial degree of contractual congestion. In some hours of the year the congestion on the import side is even physical. The table below shows all the interconnection points (entry and exit) and indications of availability of firm capacity in the years 2008, 2009 and 2010. More detailed information on capacity per interconnection point is available on the website of GTS ([www.gastransportservices.nl](http://www.gastransportservices.nl)).

The offering of interruptible capacity is the only congestion management mechanism in place during the years 2008 – 2010. GTS offers three tranches of interruptible capacity, where the possibility of interruption is reflected in the price. The proceeds from the selling of interruptible capacity adds to the income of GTS.

Interconnection Point	2008		2009		2010	
	entry	exit	entry	exit	entry	exit
Bocholtz TENP (OGE-ENI)						
Bocholtz Vetschau (Thyssengas)						
Dinxperlo (RWE)						
Emden EPT (Gassco)						
Emden NPT (Gassco)						
's Gravenvoeren (Fluxys)						
Haanrade (RWE)						
Hilvarenbeek (Fluxys)						
Julianadorp (BBL)						
Obbicht (Fluxys)						
Oude Statenzijl (EWE-G)						
Oude Statenzijl (EWE-H)						
Oude Statenzijl (GUD-G)						
Oude Statenzijl (GUD-H)						
Oude Statenzijl (OGE)						
Oude Statenzijl Renato (OGE)						
Oude Statenzijl (Wingas-H)						
Tegelen (OGE)						
Vlieghuis (RWE)						
Winterswijk (OGE)						
Zandvliet (Fluxys-G)						
Zandvliet (Fluxys-H)						
Zandvliet (Wingas-H)						
Zelzate (Fluxys)						
Zevenaar (OGE)						

	No capacity offered
	No firm capacity available during the whole year
	No firm capacity available during part of the year
	Firm capacity available during the whole year

Table 4: Availability of capacity at Interconnection Points (source: website GTS)

### Secondary market

Shippers can trade their capacity rights and usage rights amongst each other, notifying GTS. Trading occurs bilaterally mostly aided somewhat by the bulletin board that GTS operates. The amounts traded are relatively low, while indications are that market parties will be more active when a proper and anonymous platform for secondary capacity exists. This convinces the NMA that secondary trading can be improved much.



Due to the fact that GTS gets income out of the selling of interruptible capacity, the TSO has in fact a disincentive to improve the secondary market much without further regulation. It must be noted that some efforts have been made to improve secondary trading. A fairly successful Gas Regional Initiative project has resulted in a Secondary Trading Platform. From May 2008, unused capacity can be offered at this Trading Platform by capacity holders and bought via an auction or a buy-it-now procedure. Though only applicable at the IP Bunde-Oude Statenzijl at the present time, the project is set to be expanded to other border points, also outside the Netherlands. The NMa doesn't regulate or monitor the tariffs for the secondary market.

#### **4.1.2. The regulation of the tasks of transmission and distribution companies**

##### **Regulation of TSOs**

In 2008, the Board of the Netherlands Competition Authority (hereafter: the Board) has established methods of regulation for the period from 2009 until 2012 in order to calculate the efficiency factors for the legal tasks of the TSO concerning transport and transport related services, the performing of balancing services and the quality conversion service.

These methods led to efficiency factors and to tariffs for 2009 and 2010. In the Netherlands tariffs are set for each entry- and exit point on the basis of cost reflection. It is the regulator who approves the tariffs. Apart from the methodology, which takes into account all the legal obligations that tariffs have to adhere to, Gas Transport Services has a legal obligation to submit a tariff proposal for all the tariffs.

Income can be generated by tariffs, which are approved by Energiekamer. Since the TSO has the incentive to keep its costs below its income, there is an incentive for the TSO to work in an efficient manner. The regulation is done per legal task that is assigned to the TSO. In determining the efficiency factor, costs are estimated for operational costs (including labour and energy costs) and capital costs (RAB, WACC and depreciation).

When setting individual tariffs, assumptions are made concerning volume. It is the TSO that carries the burden of the so-called 'volume risk'. This means that when it sells more than expected, it is allowed to keep the extra income. This gives an incentive to use the network as efficiently as possible whilst offering a good quality of services.

In June 2010 the Trade and Industry Appeals Tribunal has annulled the methods of regulation for the period from 2009 until 2012. The Tribunal decided that the Minister of Economic Affairs was not the competent authority to issue a policy ruling on which the Energiekamer's methods of regulation were based. The policy rule set the capital costs by prescribing the RAB, WACC and depreciation periods. In addition, the Tribunal has decided that the Board should still determine methods of regulation for the period from 2006 until 2008.

In order to give clarity on the past, present and future tariff level as soon as possible, the Board is now focussed on determining methods of regulation for Gas Transport Services from 2006 onwards. These methods of regulation are expected to be published in the Fall of 2011. This would enable the establishment of tariffs based on these new methods of regulation from 2012 onwards. In the meantime, i.e. in 2011, the same tariffs as set for 2010 are being used.

## Regulation of DSOs

Like the TSO, the DSOs are regulated by Energiekamer. To do so, Energiekamer uses a system of national yardstick competition (with a price cap). The allowed revenue of a company is adjusted annually by  $(1+cpi-x)$ . In this formula cpi is the consumer price index and x is the efficiency incentive. The yardstick (objective in final year of a 3 to 5 year period) is equal (except some regional differences) for all DSOs and is determined by the sector average cost per output, including an estimate of the growth in total factor productivity during the regulatory period. The current regulatory period ends in 2010. Energiekamer has published the regulatory method for the period of 2011 until 2013 in the summer of 2010.

This system of yardstick competition provides incentives to increase productivity. A DSO can achieve higher profits when productivity exceeds the average productivity. Productivity is measured by dividing the costs of the DSO by its standardised output. The costs are determined according to a standard method. Annually, Energiekamer collects audited data on actual OPEX, investments and depreciation (based on regulatory accounting rules) and volumes charged to customers.

A (possible) theoretical risk of the system of yardstick competition is that DSOs may invest less than is socially optimal in order to reduce their costs and therefore increase their profit. By investing less on the long term, the quality of the grid may be reduced. Currently, Energiekamer does not use incentive regulation for gas, because it doesn't want DSOs to make a trade-off between quality and profit. Because reducing quality might lead to dangerous situations (such as explosions), Energiekamer thinks quality should be as high as possible. Quality of gas networks is not monitored by Energiekamer, but by Staatstoezicht op de Mijnen (SodM).

In 2010, Energiekamer has published a report on their research of investment decisions and policies of the DSOs. This report concludes that so far quality of gas networks in the Netherlands has been very high. The research gave no indication that the aforementioned risk of underinvestment actually had happened. However, Energiekamer also found that DSOs don't have sufficient insight into the physical state of their network as to be able to assess the need for replacement investments. It will be a priority for Energiekamer to have DSOs increase their insight into the state of their networks.

The allowed revenue is based on expected volumes. Given the allowed revenue, each DSO presents a tariff proposal to Energiekamer for all the tariff components each year. This proposal is assessed and either approved or adjusted by Energiekamer. Customers can consult the tariffs on the website of Energiekamer or on the website of their DSO.

## Balancing

On 1 April 2011, Gas Transport Services introduced in close cooperation with market parties and the national regulator a new balancing system. The key principle of this system is to reduce the role of the TSO in balancing, making the balancing system more market based. The new system gives shippers hourly information about their balancing position and the position of the gas system. With this information the shippers can keep themselves and in the system in balance. If balancing gas is needed the TSO buys gas from a balancing platform where market parties can offer their flexibility sources in competition. Since the TSO has hourly information, he can target the balancing costs to the shippers causing the imbalance, making the system cost reflective. Since the introduction the system has worked very well and hardly any interference of the TSO was needed to keep the system in balance. After the first winter the NRA will evaluate the system.

### 4.1.3. Effective Unbundling

#### TSOs

Just as is the case for electricity, there is only one national TSO for gas in the Netherlands (Gas Transport Services). BBL Company exploits a gas pipeline between Bacton and Balgzand that started operations in december 2006. As already explained, eight DSOs supply gas and electricity, two only supply gas. Just as for electricity, small operators (with fewer than 100,000 customers) are not treated any differently than large operators. Gas Transport Services is fully owned by the State of the Netherlands, while DSOs are fully owned by Dutch municipalities and provinces.

#### TSO

Since July 2005, TSOs must be structured in such a way that their commercial and public activities are clearly distinguishable. Gas Transport Services has complied with this obligation since that date. TSOs may still be part of a holding company in which commercial activities are carried out, though no activities with supply or production interests may be undertaken. In case of Gas Transport Services, the commercial holding company is 'Gasunie' and Gas Transport Services performs the legal tasks that are applicable on the transmission system operator, owning the grid. Finally, TSOs are obliged to keep separate accounts (also per legal task).

BBL is an exempted interconnector co-owned by Gasunie BBL B.V., E.ON Ruhrgas BBL B.V. and Fluxys BBL B.V.

Zebra Gasnetwerk B.V. is co-owned by DELTA Netwerkbedrijf B.V. and Enexis B.V., both DSOs that are owned by Dutch municipalities and provinces.

#### DSOs

At the end of 2010, all (but two) DSOs were separated (fully ownership unbundled) from the integrated company. Due to a court decision part of the law on unbundling lost force. As a result, the two integrated companies that are not yet unbundled, announced to postpone their activities regarding unbundling. The Ministry of Economic Affairs, Agriculture and innovation lodged an appeal in cassation by the Supreme Court of the Netherlands, the decision is scheduled in October 2011.

## 4.2. Competition Issues

### 4.2.1. Description of the wholesale market

The Dutch monitor Energy Markets provides a good description of the wholesale gas market in the Netherlands. The monitor can be found on the website of Energiekamer.

#### **Market structure**

A regulated TPA regime applies to both the national and regional transmission of gas and a licensing system is applied. The Nederlandse Aardolie Maatschappij (hereafter "NAM") is the largest producer of natural gas in the Netherlands and is a subsidiary of Exxon (50%) and Shell (50%). NAM operates the Groningen production field and the majority of small fields. Among other producers operating small fields are GDF Suez, Total and Wintershall. Concentration on the supply side in 2010 expressed in c3 (share of three biggest producers) was 93% and in HHI (squared market shares of all producers) was 6535.

The Dutch gas trading company Gasterra has exclusive access to Groningen gas and also has the obligation under the small fields policy to take gas from these fields at a representative market price. In January 2011 Gasterra announced the provision of a virtual gas storage for seasonal flexibility to the market for a total of 19 TWh working volume per april 2011. Table 7 gives an overview of the physical storage capacity in the Netherlands in 2010. As of January 2011 Gasunie has taken a new storage facility in Zuidwending (salt cavity) in operation with 2 TWh working volume available to the market. Taqa which is already operating the peak gas installation in Alkmaar (depleted field) is planning to develop the Bergermeer storage (depleted field) for seasonal flexibility with a working volume of 46 TWh where operation is planned to start in 2015.

Operator	Facility	Type	Gas quality	Working volume (TWh)	Withdrawal Capacity (GW)
NAM	Grijpskerk	Gasfield	H-gas	15	22.4
NAM	Norg	Gasfield	L-gas	30	22.4
TAQA	Alkmaar	Gasfield	L-gas	5	14.7
Essent	Essent Epe	Salt Cavern	L-gas	2,5	4
Nuon	Nuon Epe	Salt Cavern	L-gas	1,5	4.9
RWE	Kalle	Aquifer	H-gas	2,5	4.6

Table 5: Technical characteristics of gas storage in the Netherlands (including German storages directly connected to the Dutch grid) in 2010

### Trading venues

The following graph shows the development of the TTF, the trading hub for natural gas in the Netherlands.

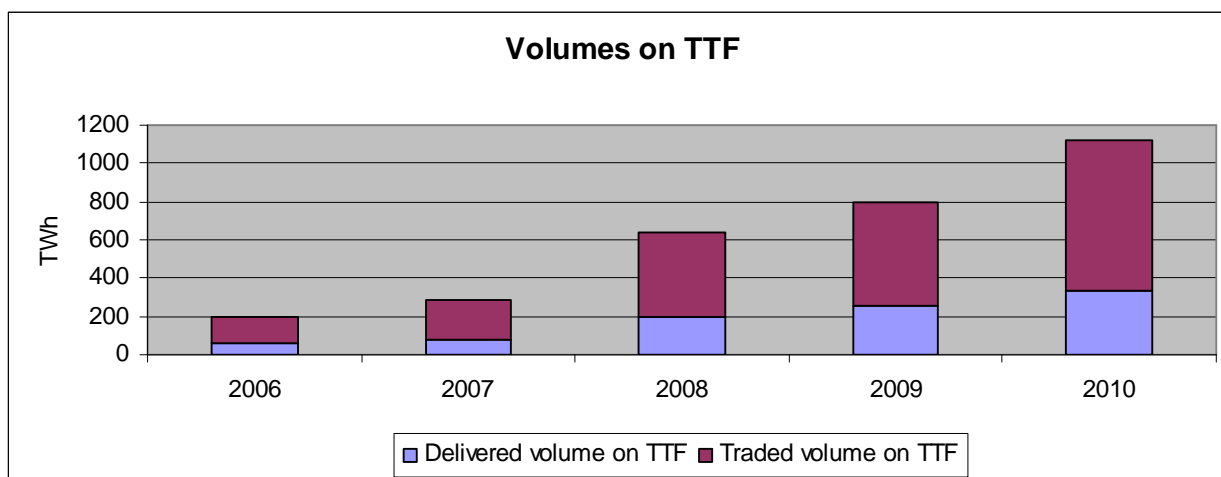


Figure 7: Traded and delivered volumes on TTF in 2010

The Dutch wholesale market can be subdivided into the following marketplaces where supply and demand meet:

- the trade in bilateral contracts, or the bilateral market;
- the OTC (over-the-counter) market;
- the gas exchanges (APX, ENDEX).

TTF day ahead provides a representative spot market price.

APX is a marketplace for trading in day-ahead contracts. In addition to the day-ahead market, APX also operates a within-day market. ENDEX is a marketplace for trading standardised forward contracts. 14 standard forward contracts are now available on ENDEX: 3 month, 4 quarter, 4 season and 3 yearly contracts for baseload gas.

Gas exchanges 2010			
	APX (spot)	ENDEX (futures)	
Number of traders	26	46	
Volumes traded	5,83 TWh	119,1 TWh	

Table 6: APX trading figures

The next graphs show the development in volumes of APX and ENDEX exchanges.

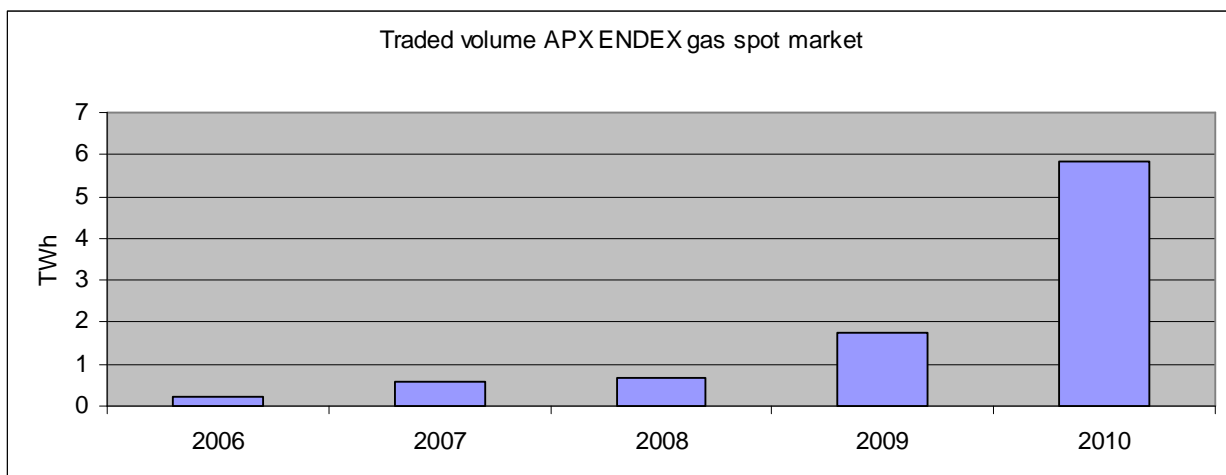


Figure 8: APX day ahead volumes in TWh 2006-2010

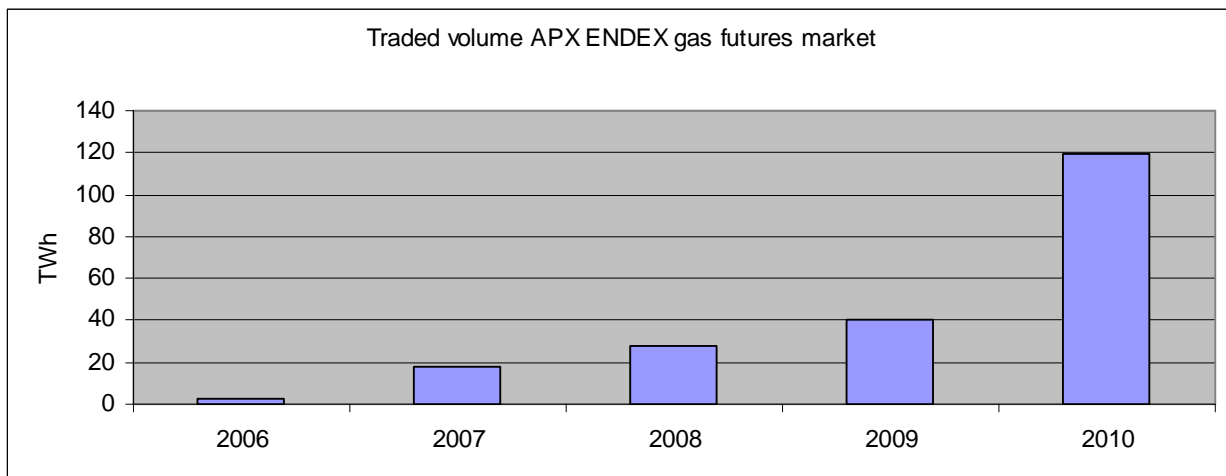


Figure 9: ENDEX volumes (all contracts) 2006-2010

The Netherlands imports high calorific gas at border points with Germany and Belgium, for which Gas Transport Services makes firm transmission capacity of more than 38 GW available to the market. The Netherlands exports high calorific gas at border points with Germany, Belgium and the United Kingdom. For this purpose, Gas Transport Services makes firm capacity of more than 66 GW available to the market. For exports of low calorific gas at border points with Germany and Belgium, more than 87 GW is available.

GTS allocates the capacity on a FCFS basis. Bookings are made on a firm basis as long as the capacity permits. Thereafter, bookings are registered on an interruptible basis. Firm capacity is fully booked, some interruptible capacity still available. In 2008 two initiatives were launched to make short-term capacity available to the market. In February the TSOs Gas Transport Services and BEB started a platform (EUCABO) on which shippers can book day-ahead interruptible capacity. In May the APX and Trac-X gas exchanges started secondary trading in firm day-ahead capacity. The EUCABO platform is being used to a limited extent; in the secondary market there is evidence of some activity on the German side in particular. The next graph gives day ahead gas prices traded on the Dutch TTF and surrounding hubs:

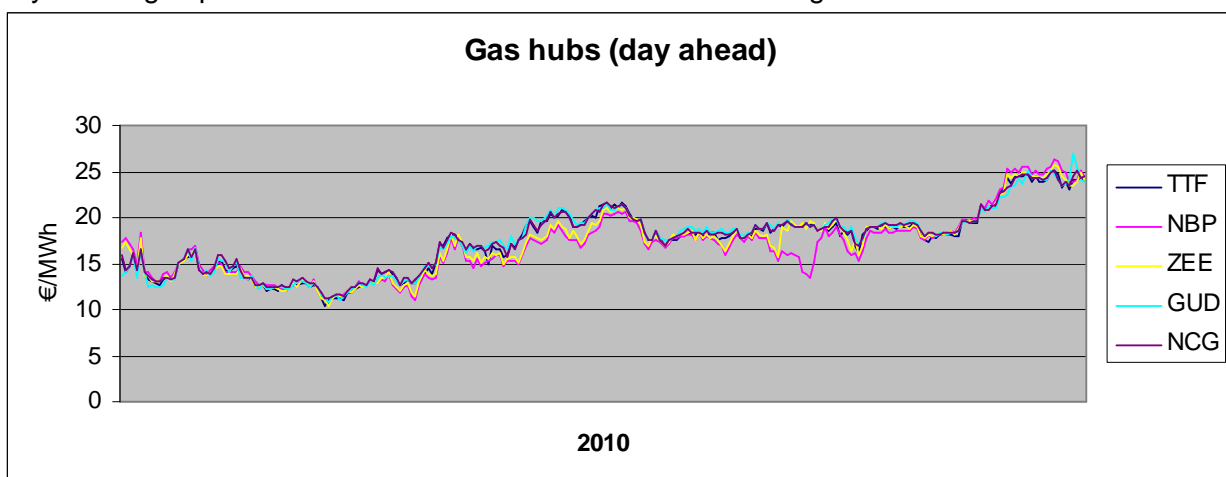


Figure 10: Day ahead prices traded on Dutch TTF and surrounding hubs

#### 4.2.2. Description of the retail market

##### Market structure

The structure of the Dutch gas retail market is characterised by three very large suppliers (all incumbents), four relatively small suppliers and a large number of very small suppliers. The three very large suppliers that supply gas to small consumers have a market share that is close to 80%. All of these are incumbents. Of the four relatively smaller supplier one is an incumbent and three are new entrants who entered the market after full liberalisation in July 2004. There have been no changes since last year's report.

C3	Gas
1 juli 2004	86,0%
1 jan. 2005	84,0%
1 juli 2005	83,0%
1 jan. 2006	79,1%
1 juli 2006	79,4%
1 jan. 2007	79,2%
1 juli 2007	79,9%
1 jan. 2008	78,1%
1 juli 2008	78,0%
1 jan. 2009	77,0%
1 jul. 2009	76,3%
1 jan. 2010	79,4%
1 juli 2010	78,8%
1 jan 2011	78,6%

*Table 7: Development of the C3 index for gas since liberalisation of the market*

The three largest suppliers have a total market share of 78,6% in the small consumer segment. After the takeover of Essent by RWE, which resulted in a slight increase in the C3 index (visible in January 2010), the C3 index declined again as is shown in the table above.

In total, there are 20 independent parties (parent companies) active on the market for small consumers of gas. These are active in various levels of the market and four of them are national "incumbents". In 2009 no customer portfolios of "original" incumbent suppliers were taken over. On December 31st, 2009, there were a total of 32 energy suppliers in the possession of an gas supply licence (not all of these are independent).

##### Entry and exit, international penetration

Since full liberalisation, the following takeovers 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

2008: None

2009: Nuon – Vattenfall (Sweden), Essent – RWE (Germany)

2010: None

Some (but not all) of the Dutch company names or brands have been replaced. By means of these takeovers, the foreign companies have established a platform from which they wish to increase their share of the Dutch market. Between January 1st, 2010 and December 31st, 2010, 6 new licenses for the supply of gas were issued and 1 license was revoked (voluntarily by a supplier who 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 biggest 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 25,3%, 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.

**Switches**

Between January 1st, 2010 and December 31st, 2010, 8,9% of all consumers switched gas supplier. This is a decrease from the previous 12 month-period (11,8%) The graph below provides an overview of monthly switching since June 2005.

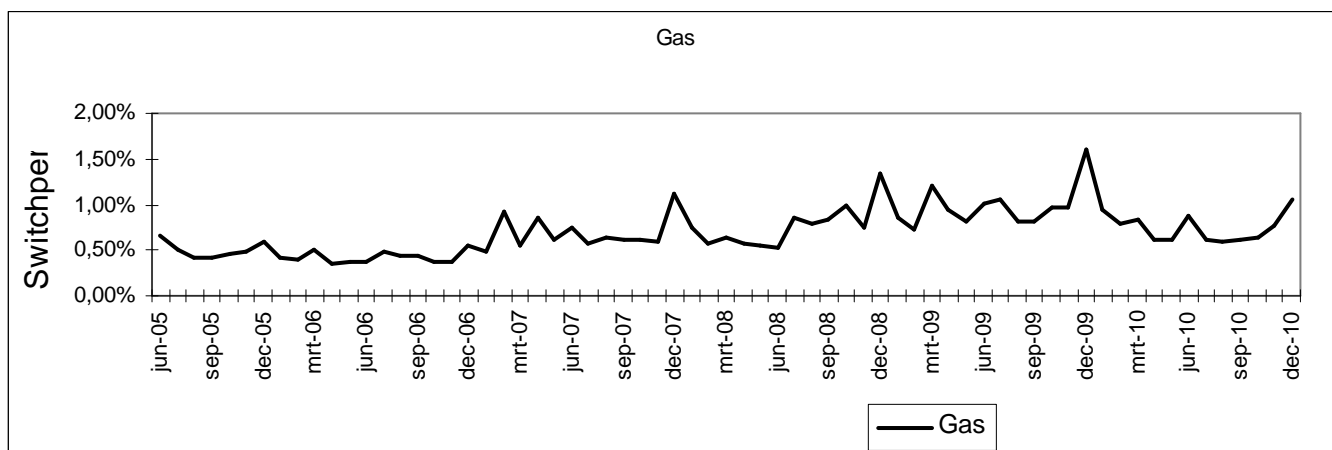


Figure 11: Day ahead prices traded on Dutch TTF and surrounding hubs

Switching rates show a slight decrease, which is consistent with the lower switch incentive. On the positive side, perceived switching threshold has gone down. Consumers feel less unsure about available information, and are less afraid of administrative problems. The most important switching threshold is the low interest value of the “product” energy, and the fact that the majority of consumers are very satisfied with their current supplier.

**Switching procedures**

The procedure is identical to the procedure for electricity:



The procedure remains unchanged from the previous year. If gas consumers wish to switch their gas supplier, they must inform the new supplier verbally (for instance, by telephone) or in writing and must then authorise this new supplier to request the necessary information and take the necessary action (for instance, requesting information from the connection register of the grid operator and making arrangements in relation to programme management). In addition to this, the new supplier has to ask the consumer for their meter readings. If they fail to do so, or if the meter readings are incorrect, the final settlement by the former supplier will be based on an estimate of consumption.

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 doesn't need to take any further action and can wait for confirmation from the new supplier and the final settlement from the previous supplier.

#### *The switch procedure*

The new supplier submits a request for a switch to the grid operator. The meter reading accompanying the switch has to be sent to the grid operator 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 operator 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 operator 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 operator also enters the change into the connection register. The grid operator 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 operator also notifies the former supplier of the consumption so that the former supplier can draw up the final invoice.

### **Problems with switching**

Satisfaction regarding switching procedures and administrative procedures has generally increased since 2007. The main problem with switching still is that many switches are based on meter estimates instead of actual meter readings. This results in consumers not recognising their final settlement bill with the old supplier. This in turn leads to complaints and requests for corrected bills. This problem should be eliminated by the introduction of the smart meters which is foreseen from the year 2012 onwards. In the meanwhile, energy suppliers and grid owners have agreed to improve processes in order to avoid using estimated meter readings.

### **Prices, tariffs and tax rate per component of the invoice**

#### *The transmission costs<sup>7</sup>*

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

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<sup>7</sup> The Energiekamer does not have figures that can be broken down into all the segments that are requested, neither are there figures for medium-sized industrial and commercial consumers.

- ❑ Standing charges per annum (EUR): 18,00
- ❑ Tariffs per unit of the volume parameter per annum (capacity-related tariff category) (EUR): 22,92. Household consumers mostly have G4 meters, so annual costs will be  $4 * 22,92 =$  EUR 68,75
- ❑ Periodic connection fee<sup>8</sup> (weighted average, EUR): 22,41

For an average Dutch consumer this amounts to an annual total of EUR 109,16. The overview above has changed slightly since January 1st, 2009. From that moment onwards the grid costs were no longer based on gas consumption. The consumption based Nm<sup>3</sup> tariff has been replaced with a capacity based tariff.

#### *Metering costs*

The metering tariffs (meter rental) are not regulated at the moment. On average the Dutch consumer pays around EUR 19,45 a year for gas meter rental. From 2011 onward the metering tariffs will be regulated, and set by the NMa.

#### *Energy supply costs<sup>9</sup>*

Supply tariffs are not regulated. There is however a form of tariff “supervision” whereby the Energiekamer has to approve all individual (new) tariff proposals by suppliers. On July 1st, 2010, a household with an average consumption (1609 m<sup>3</sup> per annum) paid a net amount of EUR 517 on an annual basis (approximately 31% of the consumer's total energy bill). This results in an average supply tariff (excluding VAT and including fixed costs for gas supply) of EUR 0,3214 per m<sup>3</sup>. The Energiekamer assesses the fairness of these tariffs.

#### *Taxes*

Various taxes are levied on the supply of energy. On December 31st, 2010, the energy tax amounted to EUR 0,1629 per m<sup>3</sup> of gas supplied. A Value added tax (VAT) of 19% is charged on the entire net amount, including energy tax. In addition, a tax rebate of EUR 318,62, excluding VAT, is applied to the entire energy bill (see also the Electricity retail market section).

### **4.2.3. Measures to avoid abuses of dominance**

#### **Competition measures**

Energiekamer monitors the competition and barriers to competition in the retail markets for gas and electricity yearly. The monitoring report is published on the website of Energiekamer. Part of this monitoring project is aimed at establishing the level of concentration for the different parts of the electricity market. However, this exercise is meant to monitor the concentration over the years, not the establishment of market dominance. Despite the fact that the supply tariffs are not regulated, Energiekamer has the statutory power to impose tariff reductions on supply companies if the tariffs are determined to be unreasonably high. Until now, this has never occurred.

With regard to transparency, 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, Energiekamer investigates the correctness and completeness of data published on websites of energy companies and websites that make price comparisons.

<sup>8</sup> The periodic connection fee for Gas is not yet regulated for the year 2010. NMa has no direct influence on this tariff. From the year 2011 onwards the periodic connection fee for Gas will be regulated.

<sup>9</sup> Tariffs as of July 1st 2010

Also there is a Policy Rule on information requirements. This Policy Rule is applicable to all communication channels. Energiekamer actively uses this new Policy Rule to enforce these information requirements. In 2008, Energiekamer also started a comparison site for energy suppliers where all other service aspects besides prices are compared. This comparison site is called "Energiewijzer" ("Energy Guide").

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

- ❑ the Policy Rule on Invoicing Deadlines for Energy [Beleidsregel factureringstermijnen energie]. This requires the sending of 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 to 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 January 2008. This limits the cancellation fee which a supplier may charge if a small consumer cancels a contract prematurely;
- ❑ 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 June 2nd, 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. The Electricity Act of 1998 and the Gas Act stipulate requirements regarding 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 concluded 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, Energiekamer monitors on a monthly basis the administrative processes (and accompanying communication) in relation to switches and changes of address, to ensure that consumers and other market parties (grid operators and suppliers) are not obstructed by any administrative processes of energy companies. The results are published on the energy comparison website and are also used for enforcement purposes. With regards to unbundling, the law stipulates that energy transmission and distribution services must be legally separated from other commercial services. Finally, the proposed mergers and acquisitions (for instance, in the energy sector) must be approved by the Netherlands Competition Authority (NMa).

## 5. Security of Supply

### 5.1. Electricity

#### **Demand and Generation**

In 2010, the total consumption of electricity (excluding losses) was approximately 113.06 TWh. This is a small decrease of 2009 113.986 TWh.<sup>10</sup> Domestic production reached up to 114.735 TWh, of which 33 % came from decentralized generators. The export of electricity continued its growth, up to 12.808 TWh in 2010. The import is steady since 2009 with 15.584 TWh. Peak demand was 19.283 MW<sup>11</sup>

In 2010 the total installed generation capacity in the Netherlands was approximately 25.1 GW. Renewable production capacity (mainly wind) accounts for 2,3 GW of this number. There is a large increase of planned new generation capacity between 2010 and 2017. In total, 14 GW new large scale thermal generation capacity has been reported for the period until 2017. Of which 1.5 GW in 2011 and a further 7 GW in the period 2012-2014. The increase in capacity will lead to a surplus in domestic production capacity. Plans have been reported of new coal fired or nuclear capacity after 2017. The question remains which amount of new generation capacity will actually come into operation.

#### **Framework for the construction of infrastructure**

##### **Generation**

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 (300 MW for 2007 and 300 MW for 2008) 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.<sup>12</sup> 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 2010, it proved unnecessary to invoke this safety net.

##### **Network**

The framework for the construction of transmission infrastructure is as follows: Energiekamer regulates the tariffs of network operators, both TSO and DSOs. In so far as this relates to DSOs, Energiekamer monitors the output of network quality. The frequency and duration of interruptions, is monitored and used to influence network tariffs. The network operators are required to maintain the networks and finance normal expansion of the transmission networks from these tariff revenues. Energiekamer does not play a role in this. The network operators 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 and assessed by Energiekamer.

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<sup>10</sup> CBS Elektriciteitsbalans; aanbod en verbruik.

<sup>11</sup> TenneT Quality and capacity document.

<sup>12</sup> Rapport Monitoring Leveringszekerheid 2010-2026.

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

The planning criteria for the design of the TSOs grids, grids from 110kV, including the connections with the downstream grids, are set out in the Grid Codes that have to be approved by 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 Energiekamer. The above-mentioned planning process with the Quality and Capacity Plan also applies to the DSOs.

The sharp increase of domestic production capacity lead to the introduction of congestion management in summer of 2010, the waiting line as well as the principle "first come first serve" was only applied under rare circumstances. New legislative measures for congestion management, based on the 'Connect and manage principle have been approved by parliament, in 2011.

#### ***Infrastructure projects (network)***

The most important infrastructure projects are the following:

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 for increased consumption in the region as well as the connection of the large amount of planned new generation facilities as discussed above. Next to the expansion in the west, for the same reasons the TSO is planning an expansion of the 380 kV grid in the north of the Netherland (the North-West 380 kV project). The project is now in the preparation phase and the construction is planned to be completed in 2016. The new grid with a length of 220 kilometres will connect the Eemshaven in the north with Diemen in the west.

Recently the interconnection capacity of The Netherlands has been expanded with two HVDC submarine cables:

- NorNed, a regulated connection of 700 MW between the Netherlands and Norway by the TSOs of these countries was put into operation in May 2008.
- BritNed, a merchant interconnection of 1GW between the Netherlands and the United Kingdom will be commissioned in april 2011. 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.

The fourth AC interconnection with Germany is in the preparatory phase. Furthermore, research is underway for the COBAR cable, and HVDC interconnection between the Netherlands and Denmark, with an option to connect offshore generation. Investment decision are planned for the end of 2012.

## 5.2. Gas

In this paragraph, a qualitative overview is provided of the present situation regarding the Security of Supply of gas in the Netherlands. This was done on the basis of three reports. For a more detailed and quantitative explanation, we refer to those three reports, the Security of Supply report, the Quality and Capacity Document and the yearly Transport Insight report (all published by GTS).<sup>13</sup>

### ***Gas consumption and demand***

The expected level of consumption in 2012 is 48.2 bcm, of which 23 bcm is distributed by distribution system operator to, mainly, households, 16,4 is used by industrial facilities and 9 bcm is used for power generation. According to macro economic projections domestic gas demand is likely to modestly rise in the coming two decades. This is mainly caused by industrial and power plant demand and not by households, whose demand will decline as a result of better isolation and increasing energy efficiency. Overall, total demand is expected to increase to 51.3 bcm in the year 2021 and 55.4 bcm in the year 2031.

### ***Gas Supply***

Total Dutch gas production for the year 2012 is expected to be 83.7 bcm. A central characteristic of the whole of the North-West European gas market is the strong decline of domestic production. The Netherlands is not an exception in that respect and is experiencing a decline in domestic production. The expected production for the year 2021 58.9 bcm.

### ***Supply/demand Balance and long term contracts***

The figure below shows the balance between supply and demand on the Dutch market, based on a shipper inquiry about their expectations for their future portfolios (what volume will they be shipping and to what extent has that been contracted yet). Please note that GTS works with a low and a high scenario. The low scenario is based on the question to what extent there has been contracted enough gas right now to meet the gas demand in the future. The figure below is the high scenario, which is not only based on the current contracted gas volumes but also on the gas volumes which aren't contracted by the shippers yet. Volumes entering the Netherlands are above the 0-line, volumes leaving the Netherlands are below. The green and red parts are the surplus respectively shortage of volumes related to the availability of the volume for Dutch demand (dotted line). The gradual decline is the result of the fact that long term contracts expire and no new contracts are entered into force yet. As a result of the development of the liquidity at the virtual gas hub TTF, shippers may be relying more on the short term than before.

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<sup>13</sup> <http://www.gastransportservices.nl/corporate/publicaties/rapporten>

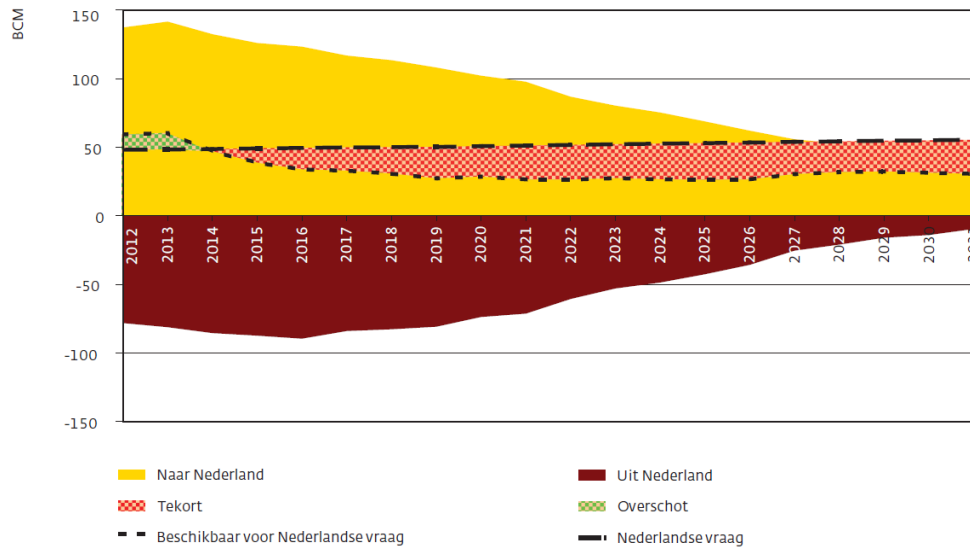


Figure 12: Gas balance in the Netherlands from 2012 – 2031: the Netherlands could be experiencing a shortage as of 2014 (Source: GTS).

Translation: Yellow: gas volume to NL, Purple: gas volume from NL, Red: shortage, Green: surplus, Dotted line: availability for Dutch market, Striped line: Dutch gas demand.

### Diversification of supply and LNG

It is the policy of the Dutch government to ensure the security of the gas supply in the future by diversifying supply sources (LNG, countries of origin). The first Dutch LNG Terminal will become operational in mid-2011. Moreover, the Dutch small fields policy ensures an efficient depletion of domestic resources by allowing production from small fields to take precedence over production from the Groningen field.

### Storage

Flexibility in the Netherlands is largely supplied by the Groningen field. In the future more investments in other sources of flexibility will be needed and storage capacity is one of those. In the near future several new activities in storage for peak supply (salt caverns) are planned, also just across the Dutch border in Germany. One project for seasonal storage is far advanced and set to become operational in 2014.

In 2010, the total working gas volume of physical storages in the Netherlands was 5.0 bcm, of which 0.5 bcm comes from a peak gas installation. In addition, the storages in Germany operated by Dutch companies and available for the Dutch market account for around 0.5 bcm of working gas. The development of the new Bergermeer storage (seasonal) would lead to an additional +/- 4 bcm by 2015 (according to the current planning).

**Quality and maintenance of the networks**

The Netherlands has currently one of the most reliable networks in Europe. To ensure that this will continue to be the case, continuing maintenance is a necessity. For this reason, Energiekamer has started a research in 2010 into the compliance of the Ministerial ruling regarding "quality aspects electricity and gas". This research (performed every two years and expected to be finalized in the summer of 2011) judges de quality and capacity documents that each network operator needs to draft. Through these documents, network operators need to show that they have ensured the quality of their activities and have sufficient capacity to transport electricity and gas from a source to the (final) offtaker.

**Investments – planned and under construction**

In general the trigger for extra investment is the Open Season procedure. In total three Open Season procedures have taken place so far, the results of which have led to investments that reinforce the transmission network and make it able to accommodate future flows inter alia arising from the entry of LNG gas in the West of the country. In the coming years an additional €500 mln will be invested in additional capacity.

**Investments – Legal framework**

Currently investments are not ex ante approved by the regulator. In the near future a new regime will be introduced in which the Ministry of Economic Affairs decides on the necessity of an investment (taking into account the advice from the regulator) and the regulator ex post decides on its efficiency.

**Emergency measures and Security of Supply**

Directive 2004/67/EC obliged Member States 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 was drawn up for this purpose.

With the entry into force of the Security of Supply Regulation (EU) 994/2010 the Dutch Gas Act will be amended at several points. The Ministry of Economic Affairs will be the competent authority. The aforementioned Decision however will stay in place since the supply standard laid down in that Decision is more strict than the Regulation. To prevent situations that leave small consumers without heating during an extremely cold day, due to a shortage of production and transmission capacity, this decision stipulates that the TSO (instead of the regular supplier or 'licence holder') 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 TSO. Together with the freely contactable basic supply for -9°C and warmer, the licence holder can therefore fully supply small consumers up to and including -17°C. The TSO is required to charge tariffs that are in line with the European market for the supply of gas during peak demand. This ensures that the TSO as the sole supplier of gas to meet peak demand will not be abused. Also, under supervision of the regulator the TSO is obliged to obtain the necessary supplies as cost efficiently as possible.



## 6. Public Service Issues

### **Liberalisation of the energy market for 'small consumers'**

Since July 1st 2004, the energy market for residential customers and small businesses ('small consumers') has been fully liberalised. In addition to the phased liberalisation of large consumers at an earlier stage, as of July 1st 2004 small consumers are also able to choose their own supplier of gas and or electricity. From this date the supply tariffs are no longer regulated, although Energiekamer assesses the fairness of supply tariffs. The 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 regulation. The role of Energiekamer is to monitor (and ultimately enforce) compliance with the rules for 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 Energiekamer's core tasks. This protection has been implemented in various ways. An important theme is promoting a transparent market. Energiekamer therefore informs small consumers of the current and actual development of the small consumer market by publishing indicators regarding price trends and the exercise of freedom of choice. For instance, price comparison websites are monitored with regard to their independence, correctness and reliability. In addition to this, small consumers are given insight into the number of complaints, which Energiekamer receives about the various energy companies. In addition to this, the administrative processes (including the invoicing problems) of various energy companies have also been the subject of investigation. Energiekamer publishes an overview of the (administrative) performance of suppliers on a dedicated website, called Consuwijzer.

### **Supply licence**

A supplier for small consumers is obliged to have a supply licence. These licenses are issued by Energiekamer. When a supplier applies for a license, Energiekamer assesses whether the supplier has the necessary organisational, financial and technical qualities to carry out its task properly. Also it has to prove that, within reason, it is able to comply with the obligations applicable to suppliers under the Dutch Gas Act and the Dutch Electricity Act. In addition to this, Energiekamer assesses whether a supplier uses clear offers and terms of agreements. Furthermore, 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 also has to show that it is able to process complaints and disputes adequately. In this regard, most energy companies make use of an independent alternative dispute resolution body 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 in supply tariffs. In addition to this and in cooperation with the industry, Energiekamer has drawn up general rules with which suppliers have to comply. For instance, 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, Energiekamer has made use of this possibility. Energiekamer has also drawn up a policy rule that guarantees the timely dispatch of (final) settlements and a policy rule that specifies some basic requirements for information given to consumers by energy suppliers. In addition, Energiekamer and the sector have drawn up guidelines which should result in clear energy bills.

**Tariff surveillance**

Although the supply tariffs for small consumers are not regulated by Energiekamer, the various supply tariffs charged to small consumers are assessed by Energiekamer with regard to their fairness. If Energiekamer deems certain supply tariffs unfair, a maximum tariff can be set by means of a public decision. This protects small consumers from excessive tariffs. Each year Energiekamer requires several suppliers to give an explanation 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 must adjust the tariffs. Every year, some supplier(s) need(s) to adjust their tariffs in order to be considered fair. To this day Energiekamer hasn't needed to determine a maximum tariff for a supplier by means of a public decision.

**Policy Rule on information requirements for energy suppliers**

The Policy Rule on information requirements of January 2010 is applicable to all communication channels used by energy suppliers. The aim of this Policy Rule is to provide the consumers with correct, transparent and complete information about the tariffs and conditions that are connected to a contract. The Policy Rule specifies what is meant by correct, complete and transparent information on tariffs and conditions. The Policy Rule differentiates between information that is actively requested for by a consumer (through a supplier's website for example) and information that is given to the consumer without request (for example: acquisition call by telephone). This is because information provided on a website can be more extensive than information that is given during a phone call (the risk of information overload is significant during a phone conversation). Therefore, the most essential information necessary to make an evaluation of the offer must be provided during the call and all the rest should be provided in a confirmation letter. Energiekamer actively uses this new Policy Rule to enforce these information requirements.

**Electricity Disclosure**

Electricity disclosure also relates to creating a greater measure of transparency. Energy suppliers are obliged to annually provide consumers with information on the source used to generate the electricity for a specific product and for the total fuel mix of the supplier. The consumer can use this information when making a decision about a switch from one energy supplier to another.

**Customer acquisition and retention - Code of Conduct**

Energiekamer still receives questions and complaints about the way (potential) customers are approached and acquired, although the number of complaints has decreased compared to previous years. This relates mainly to complaints about telephone canvassing and supply contracts entered into by door-to-door sales. In consultation with Energiekamer, the energy sector has drawn up a code of conduct. This code of conduct has been signed by almost all energy suppliers that are active on the market. The code of conduct functions also as a 'quality stamp' of proper acquisition practices. If Energiekamer receives reports that a company has infringed the code of conduct, it will intensify its supervision and conduct an investigation.

**Disconnection policy**

A Ministerial Decree on disconnections is in place for the winter period (October through April). The decree prevents network operators and suppliers from disconnecting a consumer if the consumer is in the process of debt recovery with a recognised body. Only if a consumer refuses to enter debt recovery or if the consumer cannot enter a debt recovery programme, then the network company/supplier can disconnect the consumer.

**Empowering the consumer – Consuwijzer**

Together with the Consumer Authority and the Authority for Post and Telecommunications, Energiekamer has initiated Consuwijzer. Consuwijzer is the government information desk that provides practical advice to consumers regarding their rights as a consumer. In 2010, consumers consulted the website of ConsuWijzer, over two million times. Also, 10,000 consumers received individual advice with regard to their rights on the subject of energy. The type and amount of complaints and inquiries reported through Consuwijzer are an important indicator for Energiekamer. On the basis of these complaints and inquiries Energiekamer can decide to start an investigation into the (mal)functioning of a certain energy company or the (mal)functioning of the energy market with regards to a certain topic. In 2010, most complaints and inquiries were related to sales activities (such as telephone sales and canvassing). Also billing related issues such as wrong metering data and unclear billing, were important sources for complaints and inquiries. As a result Energiekamer has, amongst others, drawn up a Code of conduct on customer acquisition and produced a Guideline on billing.