

**2012 National Report  
to the European Commission  
Denmark**



**DANISH ENERGY REGULATORY AUTHORITY**

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## **1 Foreword**

The adoption of Act no. 466 of 18 May 2011 implemented the EU's Third Energy Liberalisation Package into Danish legislation and established the DERA Secretariat as an independent institution. With the Third Energy Liberalisation Package, the European Commission aims to ensure that regulators are independent of all economic, administrative and political interests at a European level.

The Danish energy regulator has always been an independent authority with secretariat assistance from a special body in the Danish Competition and Consumer Authority. Establishing the DERA Secretariat as an independent institution has ensured the formal framework for the independence of the Secretariat's work required by the Third Energy Liberalisation Package.

Finn Dehlbæk  
Director General  
Danish Energy Regulatory Authority

## 2 Main developments in the gas and electricity markets

In 2011, DERA cut the revenue caps for electricity grid companies by DKK 104 million, so efficiency regulation of electricity grid companies in the period 2008-2012 has reduced the companies' revenue caps by approximately DKK 460 million. By the end of 2011 this adds up to a reduction of the companies' revenue caps by approximately 5 %. Analyses by DERA indicate continued potential for efficiency improvements at the companies.

Furthermore, DERA is working to support the development of well-functioning free markets for energy. In 2011, DERA stated that in the opinion of the Authority, tariffs charged by DONG for transport in the upstream system were too high and that transparency with regard to production conditions etc. should be improved. These are factors that have an impact on the wholesale market for natural gas.

Spurred on by the European Union's Third Energy Liberalisation Package, the Danish TSO Energinet.dk applied for certification as being unbundled in 2011. In this context unbundling means that the ownership of the general grids in the energy sectors is separated from production and trade in energy. DERA certified Energinet.dk as being unbundled, provided that certain conditions were met. Energinet.dk thus became the first certified transmission company in Europe. The certification requirement also applies to regional transmission companies in the electricity sector, unless they are purchased by Energinet.dk, which has submitted offers to buy the companies.

The national frameworks and goals for the Danish energy sectors are also undergoing change. The new energy policy agreement has set the framework for Danish energy policy from 2012 to 2020. The agreement entails a large number of initiatives which will affect DERA: regulatory supervision of grid companies, analysis of the role of district heating in future energy supply, and establishment of the so-called "wholesale model" that will enforce a single point of contact for the customer, who will receive only one bill from the electricity supplier. It is important for DERA that regulation provides the right incentives for energy companies to act in accordance with societal goals for energy policy etc.

## 3 The electricity market

### 3.1 Network regulation

#### 3.1.1 Unbundling

##### **Certification**

##### Certification of Energinet.dk as TSO for electricity in Denmark

In July 2011 DERA received the first two notifications from Energinet.dk – one for electricity and one for natural gas. Energinet.dk applied for certification after the rules on ownership unbundling. In October 2011 DERA adopted its draft decision on the certification of Energinet.dk.

DERA found that Energinet.dk complies with the conditions on ownership unbundling in section 19 a in the Danish Electricity Supply Act. The decision had two conditions. Firstly that the minister for Climate, Energy and Building is prevented from exercising control and rights over Danish North Sea Fund/Nordsøfonden from the time the fund joins Dansk Underground Consortium (DUC). Secondly that it will be established that the minister for Climate, Energy and Building and the managing director of Energinet.dk complies with the condition in section 19 a subsection 4 in the Danish Electricity Supply Act regarding persons entitled to appoint members of the legal bodies in Energinet.dk.

DERA received the Commission's opinion on the draft decision in January 2012. The Commission expressed agreement with the draft decision, and did not express any disagreements with the assessments and conclusions in DERA's draft decision.

On that basis DERA adopted its final decision on the certification of Energinet.dk in February 2012. This decision was identical with the draft decision.

##### Certification of the 10 regional TSOs for electricity in Denmark

The 10 regional TSOs for electricity in Denmark have not yet been certified. The 10 regional TSOs are negotiating with Energinet.dk for a joint sale of the transmission net to Energinet.dk. Shortly before submission of the National Report, Energinet.dk issued a press release, stating that sales and purchase agreement has been made. The agreement is subject to be approved by the owners. Formally the share transfer will happen as of 1st January 2012.

Because of this process and the expected sale, the 10 regional TSOs have not yet decided which model they will apply for in case they need to be certified separately. DERA has not estimated if a joint sale of the 10 regional TSOs to Energinet.dk call for a reopening of the certification of Energinet.dk. As this depends on the sale and the conditions of the sale, DERA will not be able to decide this until the sale has been finalised.

Such acquisitions will result in synergies for Energinet.dk and entail that the regional transmission companies' revenues of approximately DKK 600 million will shift from efficiency regulation to non-profit regulation. In this connection it should be noted that the Council of European Energy Regulators (CEER) will initiate an international benchmarking of the efficiency of transmission companies, including Energinet.dk, in 2012. DERA will be involved in this work.

**Unbundling of distribution system operators**

The Danish Energy Agency has implemented the obligations in art. 26 in the Danish Electricity Supply Act, as well as in the executive order number 890 of 2011. According to these legal acts the DSOs have to fulfil a number of obligations to ensure that they can act without being affected by commercial interests of other vertically integrated associated companies.

Amongst these obligations are requirements to the management of the DSO. The management must be free of incentives to discriminate between associated and independent companies. To ensure that the management of the DSO is not affected by the interest of the other companies within the group, it is decided that neither, the directors, the board members, nor other influential employees with significant decision powers can participate in the management of the group's electricity production or trading companies.

Regarding the restriction on the parent company's involvement in day-to-day operations, this is prohibited on a general level by the Danish company law, which regulate the division of powers between the directors, the board and the shareholders.

With respect to the communication and branding of the DSOs, DERA monitors the communication surface toward the customers. Several decisions have been made regarding the DSOs' websites and also on the use of a common group logo. The monitoring is executed to ensure that the branding of the DSO supports their own independent identity and thereby prevent that any associated company can benefit from the branding of the DSO (which otherwise would discriminate any independent competing company).

Furthermore, the DSOs are obliged to annually turn in a compliance programme as well as an annual report describing the measures carried out to ensure their fulfilment of the compliance program. DERA receives both the compliance program and the annual report and monitors the DSO's fulfilment of the requirements of art. 26.

The abovementioned obligations apply to all DSOs with more than 100,000 connected customers, according to art. 26(4). In Denmark, 6 DSOs are met with the requirements of art. 26.

The license to distribute electricity provides some limitations for the DSOs regarding the activities that the company can engage when having the DSO license. Due to the licenses the DSOs are restricted to act only within an independent company and to only participate in license related activities. These requirements also contribute to ensure that the resources within the DSO company are kept in the regulated company, and only surplus is possible to distribute to associated companies. The DSOs' surplus is regulated as well to prevent misuse of the DSOs' monopoly.

### 3.1.2 Technical functioning

#### **Balancing services, security and reliability standards and quality of service and supply**

37(6)(b): The model for balancing services for electricity used by Energinet.dk uses a set of common Nordic principles for balancing services, e.g. two separate imbalances with different pricing (one & two price model). This model is considered the optimal compromise between a numbers of conflicting goals.

37(8): Being a state owned non-profit company, the primary goal for Energinet.dk is maximizing social welfare when deciding on market design etc.

The Government has in June 2012 established a committee to investigate the present and future regulation of the Danish electricity sector, especially Energinet.dk and the DSO's. The focus is on the incentives for these companies to promote the political goals regarding green energy, competition, consumer protection etc. The comprehensive analysis will be completed in 2014.

37(1)(h): Energinet.dk co-operates with Community TSOs and third-country TSOs (e.g. Statnett from Norway) within the TSO organization ENTSO-E (41 TSOs from 34 countries). On a European level ENTSO-E co-operates within four main areas: System development, system operation, market and R&D. Further to this ENTSO-E have established several regional groups, where Energinet.dk participates in those relevant for Denmark. Energinet.dk also co-operates bilaterally with the Norwegian TSO (Statnett) and in addition to this the Nordic TSOs (Energinet.dk, Svenska Kraftnät, Fingrid and Statnett) co-operate on specific Nordic issues.

#### **Monitoring time taken to connect and repair**

Energinet.dk is focused on minimizing costs to the market due to repairs. The method and timing of repairs are chosen to achieve a minimum of disturbance to the market.

#### **Monitoring technical co-operation between Community and third-country TSOs**

37(1)(s): Energinet.dk can indirectly assist the Danish Energy Regulatory Authority by providing continuous information on Energinet.dk activities relating to:

- Performance of scheduled maintenance works
- Revision of maintenance systems or procedures
- Report of incidents on the transmission network due to third party interference
- Provision of data to ENTSO-E for preparation of e.g. ENTSO-E Winter and Summer Outlook Reports
- Monthly reports for operations and projects
- Provision of plant maintenance reports created in SAP, the ERP system used by Energinet.dk
- Future implementation of Asset Management system at Energinet.dk in accordance with the PAS55 standard.

### Monitoring safeguard measures

37(1)(t): In Denmark responsibility for contingency planning and crisis management in the different energy sectors, including the power sector, lies with the Danish Energy Agency.

Energinet.dk is responsible for the overall coordination of tasks with respect to contingency planning and crisis management in the power sector (and natural gas sector).

All the companies in Denmark providing electricity production, transmission, and distribution pursuant to the Danish Electricity Supply Act, together with Energinet.dk, have prepared the necessary planning and taken the necessary steps to safeguard the electricity supply during crises and other extraordinary situations. This involves:

- Vulnerability analyses, general contingency plans, detailed contingency plans, and security plans
- Training, exercises, reporting of relevant incidents, statistics, etc.
- Operational matters during a crisis.
- Inspection of the companies' work regarding contingency planning and crisis management.

In case of a crisis the power sector plan states that Energinet.dk decides how to minimize market disturbance based on an evaluation of the specific crisis and the rules laid down in the Market Regulations prepared by Energinet.dk.

#### Nordic Crisis Management:

Energinet.dk and the Danish Energy Agency are members of NordBER (Nordic contingency Planning and Crisis Management Forum) together with the other Nordic TSOs and the Nordic energy authorities.

NordBER's mission is to strengthen the Nordic TSOs' emergency preparedness and facilitate mutual assistance in case of crisis.

### 3.1.3 Network tariffs for connection and access

Annually DERA determines a revenue cap for each of the Danish distribution network companies and regional transmission companies. For a given distribution company, the revenue cap is fixed as a "regulatory price" per kWh multiplied by kWh transported. A similar model is applied for the regional transmission network companies.

Since 2007 DERA has performed a benchmarking of the distribution network companies' and regional transmission companies' economic efficiency. Based on the results from this benchmarking, DERA set individual efficiency requirements for the network companies and regional transmission companies. Since 2008 the benchmarking has also contained an assessment of the quality of supply, and since 2011 the benchmarking also includes the duration of interruption in quality of supply in addition to frequencies of interruptions.



DERA can increase a company's revenue cap in order to cover "necessary investments" due to public requirements falling outside the general obligation of distribution network companies to maintain and develop the network.

DERA approves the companies' tariff methodology and terms of connection and access to national networks, and the approvals are conditioned on the tariff being set in a fair, objective and non-discriminatory manner. Once approved, a distribution network is free to set its tariffs as long as the company does not violate its maximum return on assets and revenue cap. In 2011 DERA has begun a re-evaluation and approval of all the companies' methodology.

Before the final approval of a company's methodology, the company will have a chance to comment on a draft of the approval.

DERA has the authority to require transmission and distribution system operators to modify their terms and conditions including tariffs, if these are inconsistent with the Danish Electricity Supply Act, and DERA can approve provisional tariffs if the approval is delayed due to the failure of the companies to report the required information, and can decide on compensatory measures, if these are in favour of the customer.

To prevent cross-subsidization between transmission-, distribution- and supply activities the companies must comply with the rules regarding entity-, accounting- and management unbundling.

### 3.1.4 Cross-border issues

#### **Access to cross-border infrastructure, including the procedures for the allocation of capacity and congestion management**

In general the interconnectors from Denmark to neighbouring countries are having the same access rules and procedures for allocation of capacity and congestion management as in the previous year.

All cross-border capacity is given to the day-ahead market coupling (ITVC). Flows and prices are determined through implicit auctions. Residual capacity that is not used in the day-ahead market is given to the intraday market.

The only exception to this is the border of Western Denmark to Germany. Here 150 MW are auctioned explicitly in yearly auctions in both directions, up to 200 MW are sold in monthly auctions in both directions.

A novelty in 2011 in the management of long term auction, were the conditions for the physical transmission rights (PTRs) on this border. While the PTRs were sold with a use-it-or-lose-it (UIO-LI) condition until 2010, it was changed to use-it-or-sell-it (UIOSI) in 2011. DERA approved the change in late 2010. UIOSI is a necessary condition for PTRs to be compliant with the target model, laid out in the CACM Framework guidelines.

In 2012 DERA is preparing the implementation of Financial Transmission Rights on both borders to Germany as a pilot project from 2013. DERA is cooperating with Bundesnetzagentur on the issue.

### **Monitor TSO Investment Plans**

In 2011 the duties laid down in article 37 (1)(g) of the directive 2009/72/EC have been implemented into Danish law (secondary legislation)<sup>1</sup>. Herein it is stated that DERA has the task of monitoring the national TSO's ten-year network development plan and examining the consistency with the community-wide ten year development plan. The assessment shall be published on DERA's homepage.

Furthermore Energinet.dk shall report to DERA with regards to the concrete investments made. This is monitored by DERA and checked for consistency with the community-wide development plan and if it is in accordance with the aim of fostering the internal market for electricity.

On the basis of above described monitoring, DERA has the power to post requests to Energinet.dk with the aim of increasing competition and fostering the internal market for electricity.

In 2011 there was no monitoring activity yet. DERA is currently finalizing the specific process of the task and will start monitoring Energinet.dk's national development plan in 2012.

### **Cooperation**

DERA cooperates with other NRAs and the Agency with regard to cross border issues. In 2011, ACER focused mainly on the development of cross regional roadmaps within four crucial cross-border topics<sup>2</sup>, in order to achieve a single internal energy market by 2014.

As a part of the work on day-ahead, DERA is heavily involved in the work of the NWE (North-West Europe) price coupling project. Together with Bundesnetzagentur, DERA took over the lead on the regulatory side. The two lead regulators hosted two Implementation Group (IG) meetings for the NWE project in 2011 and more in 2012. The cooperation with TSOs and PXs is ensuring coordination amongst the relevant parties and smooth processes on for example necessary approvals.

DERA is also actively involved in the work related to the intraday market, which is led by Ofgem from the regulators side for the NWE region. In 2011, DERA also started working bilaterally with Bundesnetzagentur on the local intraday implementation project on the border Denmark West – Germany. The regulators cooperated in order to get a new continuous trading solution implemented on the border, compared to the current DBS (Deutsche Börse Systems) platform.

Furthermore DERA cooperates with regulators from the Northern Europe Electricity Regional Initiative on the cross border long-term market. The aim is to find solutions that are as harmonized as possible for all interconnectors between the Northern region and the continent.

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<sup>1</sup> Paragraph 15 of legal instrument no 891 of 17 August 2011, known as "Systemansvarbekendtgørelsen".

<sup>2</sup> The topics are: Day-ahead, intraday, Long-term and Capacity calculation

Within NordREG, DERA also cooperates with Nordic NRAs on a multitude of cross border topics. One is the future of the long term market and the questions, if CfDs should be kept as the primary long term hedging product in the Nordic region. Furthermore issues with regards to Nord Pool Spot and mainly the functioning of the day-ahead market are discussed frequently.

### 3.1.5 Compliance

#### **Compliance of regulatory authorities with binding decisions of the Agency and the Commission and with the Guidelines**

It is implemented in the Danish Electricity Supply Act that DERA is obligated to comply with any legally binding decisions of the Agency and of the Commission.

#### **Power to carry out investigations and impose measures to promote competition etc.**

Furthermore DERA has the competence to cooperate with any other regulatory authority within the EU as well as the Commission. The conditions for extradition of information are a) that the authority receiving the information shall keep the information under the same confidentiality restriction as the information would have been within DERA, and b) that the receiving authority only can pass the information on when obtaining DERAs approval.

Regarding the obligation to carry out investigations into the functioning of the electricity market, DERA shall ensure the transparency of prices, tariffs, and conditions by carrying out investigations of the market according to the Danish Electricity Supply Act. During 2011 DERA has worked on an analysis of the competition on the retail electricity market and giving recommendations to improve the level of competition. The analysis is expected to be finalised September 2012.

#### *The independency of DERA*

With respect to the obligations within art. 35 (5)(b) DERA is an independent authority. The adoption of Act no. 466 of 18 May 2011 implemented the EU's Third Energy Liberalisation Package into Danish legislation and established the DERA Secretariat as an independent institution.

The Danish energy regulator has always been an independent authority with secretariat assistance from a special body in the Danish Competition and Consumer Authority. Establishing the DERA Secretariat as an independent institution has ensured the formal framework for the independence of the Secretariat's work required by the Third Energy Liberalisation Package.

DERA's decisions are made without reference to any political body. DERA is not subject to any ministry instruction and the decisions of DERA can only be appealed to The Energy Board of Appeal – an independent appeal authority. The Energy Board of Appeal is the final administrative appeal body for decisions by public authorities under various laws governing the energy sector. The Board consists of a chairman and deputy chairman as well as a number of experts in all aspects of energy-related issues.

The annual budget of DERA is separated from the other remaining energy authorities. The budget of DERA is allocated on an annual basis with regards to the obligations imposed on the authority,

e.g. the implementation of Third Energy Liberalisation Package increased the workload and thus the resources given to DERA were enhanced.

### **Power to ask any information from electricity undertakings**

DERA as well as the Climate-, Energy- and Building Ministry and The Energy Board of Appeal have the power to ask for any kind of information from both DSOs, TSOs, suppliers with a license to supply, electricity production companies, electricity suppliers and their associated companies along with consumers and other buyers of electricity. The power to ask for information is provided when addressing an issue, monitoring the market, in connection with a case of DERA's own initiative or on the basis of an enquiry by an enterprise or consumer<sup>3</sup>. Furthermore the power to ask for information provides the users of the collective grid the information necessary for a secure and effective use of the grid.

### **Compliance of transmission and distribution companies, system owners and electricity undertakings with relevant Community legislation, including cross-border issues**

In the Danish Electricity Supply Act it is implemented that DERA has the competence to order compliance whenever a breach of Regulation No. 714/2009 is registered. Furthermore it is implemented that DERA has the power to carry out inspections, and the possibility to impose fines when an order to comply is not observed.

#### **3.1.6 Dispute settlement**

The Energy Supplies Complaint Board handles all consumer complaint relating to energy. This means consumer complaint regarding electricity, heating and gas.

The Board has a mandate to handle disputes arising from the contractual relationship between energy consumers and an electricity supply undertaking, natural gas supply undertaking and district heating supply undertaking.

There are no thresholds as regards to the value of the dispute. The Board does not take up disputes settled by court judgement. On the other hand, a case which is being dealt with by a Court of Law must be postponed and transferred to the Board.

The Energy Supplies Complaint Board is established in co-operation between the Consumer Council and the Association of Danish Energy Companies, DONG (Danish Oil and Natural Gas), HMN Natural Gas, Natural Gas Funen and Danish District Heating Association.

The Board is composed of a neutral chairperson and four members. The chairperson is a city court judge. The Consumer Council appoints two members, and two members are appointed to represent the respective energy trade area.

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<sup>3</sup> The Electricity Supply Act § 84.

The Danish Competition and Consumer Authority's Center for Consumer Regulation, Private Complaint Boards and International Consumer protection serves as secretariat to the Board.

Handling of cases cost a fee of DKK 160 (approximately EUR 21.5). The fee is to be paid back, if the Board upheld the consumers' contention. In this case, the energy company has to pay a fee of DKK 7,000 (approximately EUR 941.6) to the board.

The further handling of the case is in writing. The secretariat shall secure that all relevant information is presented, and that the defendant is given the opportunity to comment upon the case. The secretariat shall take a neutral attitude. It may take an initiative to an amicable solution, or present an opinion based on previous decisions made by the Complaint Board.

In cases brought before the Complaint Board, the secretariat shall present a summary with an adequate overview of the case and the comments of the parties. The Complaint Board shall state the reasons for its decision, and whether the decision is unanimous. If the decision is split, it shall be indicated which representative(s) that dissent, and the reason for the dissent.

The average time of complaint handling is five months. When the Board has made a decision, either party can take the matter to court. Decisions are not binding or enforceable. However, if the Board's decision is not complied with, the secretariat can send the case to the Consumer Rights Division of the Danish Competition and Consumer Authority. The Division will then take the matter to the court, at the request and on behalf of the consumer.

If the consumer does not want to bring the decision to court, the Board shall publish the decision on its website with name and address of the energy company. Nevertheless all companies have so far complied with the decisions of the Board.

If a complaint does not fall within the competence of Complaint Board, DERA has the power to make decisions regarding the obligations of the DSO and TSO, whenever the complainant has an individual and significant interest in the matter. These complaints must be handled within two month, according to the executive order no. 1216 of 2011. The period can be extended with another two months if necessary. After four months the period can only be prolonged after agreement of the complainant.

The decisions of DERA have binding effect and can only be appealed to the Energy Board of Appeal.

Regarding art. 37 (4)(c) DERA has the power to ask for any kind of information from both DSOs, TSOs, suppliers with a license to supply, electricity production companies, electricity suppliers and their associated companies along with consumers and other buyers of electricity. The power to ask for information is provided when addressing an issue, monitoring the market, in connection with a

case of DERA's own initiative or on the basis of an enquiry by an enterprise or consumer<sup>4</sup>. Furthermore the power to ask for information provides the users of the collective grid the information necessary for a secure and effective use of the grid.

Regarding art. 37(5)(c), DERA has the power to act as dispute settlement authority regarding TSOs.

In 2011, 94 complaints on electricity were settled and 467 inquiries were answered. There are no statistics available on the nature of the complaint/inquiry.

## 3.2 Promoting Competition

### 3.2.1 Wholesale Markets

Net production in Denmark in 2011 was 33.4 TWh, out of these 30 % was wind power and the rest was thermal. Physical imports were 11.7 TWh and exports were 10.38 TWh, resulting in net exports in 2011 of -1.32 TWh. In 2011 there was a large import from Norway and Sweden and export to Germany. This was caused by lower marginal costs in especially Norway and Sweden, whereas marginal costs were higher in Germany.

**Table 1: Import and export of electricity**

Import from / exports to	Imports to Denmark, TWh	Exports from Denmark, TWh	Net Exports TWh 2011 (2010)	
Norway	3.60	2.41	-1.19	(2.60)
Sweden	5.23	2.78	-2.45	(2.24)
Germany	2.87	5.18	2.32	(-3.70)
<b>Total</b>	<b>11.70</b>	<b>10.38</b>	<b>-1.32</b>	<b>(1.14)</b>

Source: Danish Energy Agency

#### 3.2.1.1 Price monitoring

DERA has established a team of economists and lawyers to monitor the wholesale market. The team will among other things monitor the daily development in the market and quarterly publish a market report concerning monitoring. Regarding price monitoring, the market report will compare national prices (DK1 and DK2) and compare Danish prices to system prices of Nord Pool Spot, the EPEX GER/AUS day-ahead price for Germany/Austria, and the APX day-ahead price for Netherlands. In addition, prices in DK1 will be compared to EPEX GER/AUS and DK2 to SE4 (bidding area Malmö), to monitor price correlation. Besides the report, the DERA secretariat expects to monitor the occurrence of restrictive contractual practices, including exclusivity clauses.

Figure 1 show day-ahead prices in Eastern and Western Denmark (DK1 and DK2) as well as the system price of Nord Pool Spot, the EPEX GER/AUS day-ahead price for Germany/Austria, and the APX NL day-ahead price for the Netherlands. From January 2010 and until April 2011 the prices in DK1, DK2, and the NPS system price were higher than the day-ahead prices in Germa-

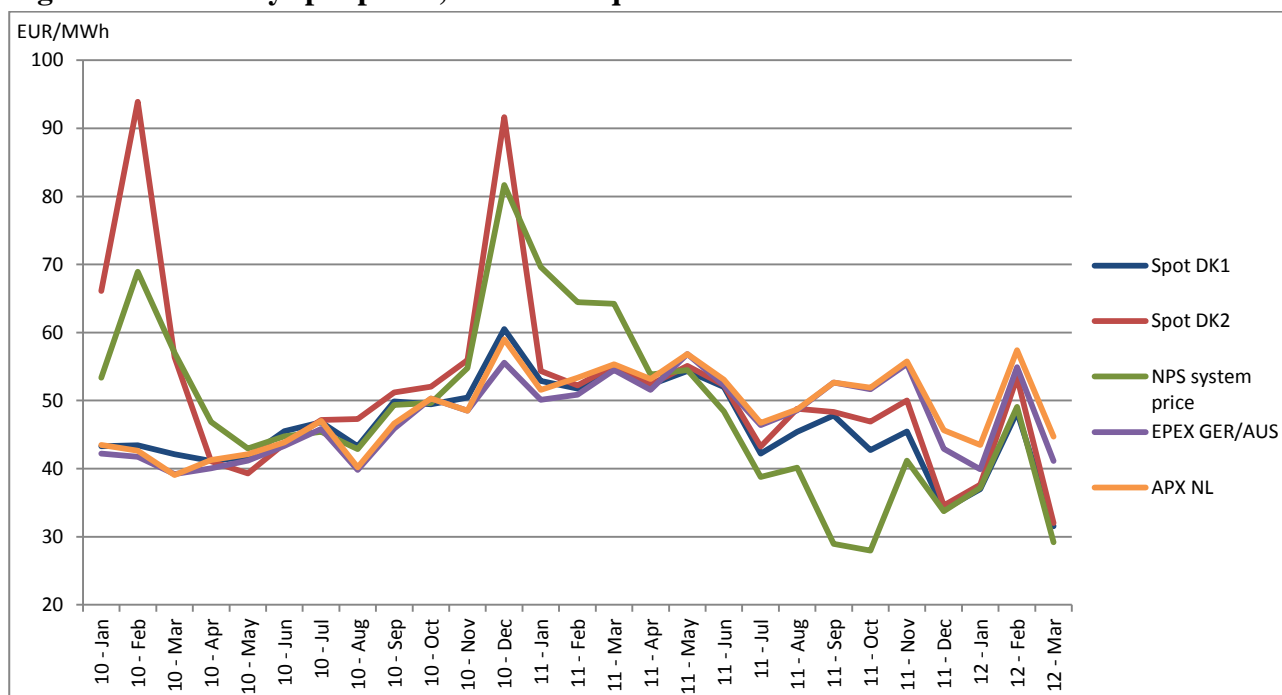
<sup>4</sup> The Electricity Supply Act § 84.

ny/Austria and the Netherlands. Normally the prices are lower in the Nordic countries, but several circumstances in 2010 and first half-year of 2011 changed this. Low levels of precipitation in Norway and Sweden and low temperatures in early and late 2010 lead to higher prices in the Nordic countries. In the same period there were long periods of maintenance for Swedish nuclear plants.

After this period the trend went back to normal, and from April 2011 until March 2012 the prices have been lower in the Nordic countries. This is caused by cheaper energy generation methods (hydro and nuclear energy in Sweden, Norway, and Finland), whereas Continental Europe is more dependent upon thermal based production.

Prices for Denmark normally vary between the Nord Pool and EPEX prices, reflecting the geographical situation between two different generation method systems and the mix of marginally cheaper wind generation and more expensive thermal production. In 2010 especially the spot price in DK1 saw higher prices than NPS system price, the day-ahead prices in Germany/Austria and the Netherlands. From April 2011 the prices returned to normal, and both DK1 and DK2 have been somewhere between NPS system price and the day-ahead prices in Germany/Austria and the Netherlands.

**Figure 1: Electricity spot prices, 2010 – 1th quarter 2012**



Source: Nord Pool Spot, EPEX GER/AUS, APX NL

### **3.2.1.2 Monitoring the level of transparency, including compliance with transparency obligations, and the level and effectiveness of market opening and competition**

In February 2012 Nord Pool Spot and regulators from Norway, Sweden, Finland, Estonia and Denmark held a meeting regarding Regulation no 1227/2011 on wholesale energy market integrity and transparency (REMIT). The main topics were the need for cooperation between NPS and national regulators regarding market surveillance and the need for coordination in the Nordic Region. It was

decided to let the NordREG Board discuss and make a decision on the organisation of the cooperation and coordination. The NordREG Board decided to form a working group under Nord Pool Spot Regulatory Council. This working group will primarily deal with issues in relation to REMIT. DERA will participate in this working group. The terms of reference for the working group are in the process of being drafted.

DERA has started a co-operation with the Danish Competition and Consumer Authority in 2012 with the purpose of sharing know-how between the two authorities. DERA needs to bring any relevant information and relevant cases to the Danish Competition and Consumer Authority if there has been any distortion or restriction of competition. At every meeting the two authorities will: 1) Update on projects, analysis and cases concerning complaints and regulation. 2) Share results from market surveillance. 3) Exchange know-how and experience within the different subject areas. 4) Update on development in the market and new legislation.

### **3.2.2 Retail Markets**

#### **3.2.2.1 Price monitoring**

Information on products and prices are available and comparable on Elpristavlen.dk, the consumer portal on the internet appointed by DERA, to which the suppliers are obliged to report prices and terms. Twice a year DERA monitors the suppliers' obligation to report prices to Elpristavlen.dk.

#### **3.2.2.2 Monitoring the level of transparency, including compliance with transparency obligations, and the level and effectiveness of market opening and competition**

The Danish electricity market is fully liberalised and all consumers have thereby access to free choice of supplier. There are no barriers for entry to the market and the suppliers do not need any permits or to be registered to participate in the market. At the moment there are 25-30 suppliers offering electricity products in the liberalised market.

In Denmark there are regulations of consumer prices via an obligation to supply product. The consumers are not tied to this product though, due to the liberalised market.

Consumers with a consumption of less than 100,000 kWh/year are "load profile consumers" and consumers with a consumption of more than 100,000 kWh/year must have hourly metering. Some distribution networks however introduce smart meters also for their consumers with less consumption, and now around 60 pct. of the metering points have or soon will have a smart meter.

Private consumers can only be tied by the suppliers for a 6 months period even if the contract period might be longer. For business consumers there are no such restrictions.

In October 2011 the Danish Minister of Climate, Energy and Building set rules on monitoring the electricity and natural gas markets. DERA monitors the market transparency through random sampling of network companies and compliance to the obligation to publish the approval of tariff meth-



odology and terms. Moreover, DERA does random sampling of the suppliers and their compliance to the obligation to report prices and terms to Elpristavlen.dk.

The data exchange in the electricity market takes place at non-discriminating terms, and all suppliers have access to relevant data. From March 2013 this is expected to be supported by a datahub, to which all network companies must report data. The datahub will also support the monitoring of the effectiveness of the market, since the hub will contain data on switching activity, which at present time is collected by the Association of the Danish Energy Companies on quarterly basis, and on disconnection rates. Switching of supplier will also in the future take place efficiently through the hub, although there already now are rules that state, that a switch of supplier shall be effectuated within three weeks of the notice of termination of the contract. The purpose of the datahub is to simplify the market processes. The datahub will be managed by the TSO.

Competition and market efficiency are also monitored by ad hoc analysis, and in the fall of 2011 DERA began performing an analysis of competition in the electricity retail market which will be published in the fall of 2012.

Finally the complaints by household consumers are monitored and handled in cooperation with the Energy Supplies Complaint Board.

### 3.2.3 Recommendations on supply prices

As mentioned in 3.2.2.2. Denmark has a regulation of consumer prices via an obligation to supply product. The regulation happens on a quarterly basis, and the regulation reflects a weighing consumer consideration and the consideration for the further development of competition in the market. It should be ensured that the current regulation is the best solution.

DERA continuously considers whether the current regulation is still up to date. Currently DERA is performing an analysis on progress on competition in the electricity retail market.

### 3.2.4 Carry out investigations and imposing measures to promote effective competition

In autumn 2011, DERA has started an investigation on the electricity retail market. In particular the obligation to supply companies and the price regulation are investigated. A report is planned to be published autumn 2012.

## 3.3 Consumer protection

### Compliance with Annex 1

DERA monitors the suppliers' and DSOs' compliance with the requirements for their billing. The obligations are implemented in executive order no. 486 of 2007.

The obligations and limitations of the right to modify contractual conditions are regulated by executive order no. 161 of 2011.

Every end-user has the right to change supplier free of charge (with respect of the contractual obligations between the parties). In spite of contractual obligations between the parties it is prohibited by law to bind consumers contractually longer than 6 month. This cannot be dispensed by an agreement between the parties.

Regarding access to data information, see below.

### **Ensuring access to consumption data**

Consumers are according to the Electricity Supply Act ensured the right to receive their consumer data free of charge. Further according to the Act the distribution companies are obliged to make these data available to the customers in a transparent, objective, fair and non-discriminating way.

According to the Act DERA approves the methodologies according to which the distribution companies set their procedure for suppliers and consumers to have access to the data.

The TSO, Energinet.dk, is responsible for establishing and handling a datahub at national level. The conditions for access to the datahub are set according to methodologies which again according to the Electricity Supply Act must be approved by DERA. Consumers have the right to access their data on the datahub, and no additional costs shall be charged to the consumer for that service. The datahub is expected to go into operation by March 2013.

### **Public service obligations**

Regarding the obligations of art. 3, these have been implemented in very different ways. In this paragraph some of the obligations implemented are mentioned.

The suppliers' access to the Danish electricity market is governed by different authorities. The Danish Energy Agency gives authorisation to act as an electricity supplier in non-discriminatory manners. The suppliers also have to be accepted as an actor in the datahub-system by the Danish TSO, Energinet.dk. The criteria for being accepted as an actor in the datahub-system are approved by DERA, when approving Energinet.dk's methods, and DERA has focus upon that the criteria are non-discriminatory.

With respect to the time taken to execute a supplier switch, Energinet.dk has obligated the actors on the electricity market to execute a supplier switch within 10 working days (app. two weeks). This obligation does not affect the parties' contractual obligations.

The specification requirements of art. 3 (9) are implemented in the executive order no. 1322 of 2010, which obligates the suppliers to inform the consumers of energy sources, environmental impact and so forth.

A single point of contact for the end-user is established by the Energy Supplies Complaint Board, see paragraph 3.1.6.

**Vulnerable customer definition**

Economically unfortunate citizens are handled through the social security system. The safeguards implemented in the energy regulation to protect the consumers apply for all consumers. This means that consumers are protected by general requirements for disconnection, price of connections, payment conditions as well as all customers are eligible to receive electricity with a regulated price. DERA continuously works with securing general safeguards for the customers, through approving the methods of the DSOs.

**3.4 Security of supply**

The Danish Energy Agency is responsible for regulatory tasks relating to security of supply, including monitoring planning and approving new grids of more than 100 kV. For further information see Energinet.dk's "*Systemplan 2011*", which is a part of their annual reporting to support the Danish Energy Authorities supervision of security of supply.

## 4 The gas market

### 4.1 Network regulation

#### 4.1.1 Unbundling

##### **Certification**

###### Certification of Energinet.dk as TSO for natural gas in Denmark

In July 2011 DERA received the first two notifications from Energinet.dk – one for electricity and one for natural gas. Energinet.dk applied for certification after the rules on ownership unbundling. In October 2011 DERA adopted its draft decision on the certification of Energinet.dk.

DERA found that Energinet.dk complies with the conditions on ownership unbundling in section 10 b in the Danish Natural Gas Supply Act. The decision had two conditions. Firstly that the minister for Climate, Energy and Building is prevented from exercising control and rights over Danish North Sea Fund/Nordsøfonden from the time the fund joins Dansk Underground Consortium (DUC). Secondly that it will be established that the minister for Climate, Energy and Building complies with the condition in section 10 b subsection 4 in the Danish Natural Gas Supply Act regarding persons entitled to appoint members of the legal bodies in Energinet.dk.

DERA received the Commission's opinion on the draft decision in January 2012. The Commission expressed agreement with the draft decision, and did not express any disagreements with the assessments and conclusions in DERA's draft decision.

On that basis DERA adopted its final decision on the certification of Energinet.dk in February 2012. This decision was identical with the draft decision.

##### **Unbundling of distribution system operators**

The Danish Energy Agency has implemented the obligations in art. 26 in the Danish Natural Gas Supply Act § 11 a, as well as in the executive order no. 797 of 2011. According to these legal acts the DSOs have to fulfil a number of obligations to ensure that they can act without being affected by commercial interests of other vertically integrated associated companies.

Amongst these obligations are requirements to the management of the DSO. The management must be free of incentives to discriminate between associated and independent companies. To ensure that the management of the DSO is not affected by the interest of the other companies within the group, it is decided that neither, the directors, the board members, nor other influential employees with significant decision powers can participate in the management of the group's electricity production or trading companies.

Regarding the restriction on the parent company's involvement in day-to-day operations, this is prohibited on a general level by the Danish company law, which regulate the division of powers between the directors, the board, and the shareholders.

With respect to the communication and branding of the DSOs, DERA monitors the communication surface toward the customers. Several decisions have been made regarding the DSOs' websites and

also on the use of a common group logo. The monitoring is executed to ensure that the branding of the DSO supports their own independent identity and thereby prevent that any associated company can benefit from the branding of the DSO (which otherwise would discriminate any independent competing company).

Furthermore, the DSOs are obliged to annually turn in a compliance programme as well as an annual report describing the measures carried out to ensure their fulfilment of the compliance program. DERA receives both the compliance program and the annual report and monitors the DSO's fulfilment of the requirements of art. 26.

The DSOs' surplus is regulated to prevent misuse of the DSOs' monopoly

#### 4.1.2 Technical functioning

##### **Balancing services, security and reliability standards and quality of service and supply**

41(6)(b): Energinet.dk provides balancing of the transmission system as cost efficient as possible – primarily through injecting/taking of gas to/from storage facilities. Energinet.dk is focused on giving shippers appropriate incentive to balance. Shippers' incentives and tolerances to balancing were adjusted in 2011 and will be adjusted again in 2013. In this process, Energinet.dk puts emphasis on being objective and non-discriminatory.

41(8): Gas transmission tariffs are set to recover costs. The transmission system operator is regulated without profit interests and the state-owner is not allowed returns on investments. Efficiency is justified through cost benefit analysis as a basis for investment decisions (including quantified effects on competition, market integration, environment and security of supply) and in budgets through benchmarking with operators in adjacent systems. Key performance indicators are applied in budgeting and monitoring. New PSO tariff aims to strengthen incentives for biogas entrants.

41(1)(h): Energinet.dk can indirectly assist the Danish Energy Regulatory Authority with Article 37 (h) by providing continuous information on Energinet.dk activities relating to:

- Performance of scheduled maintenance works
- Revision of maintenance systems or procedures
- Report of incidents on the transmission network due to third party interference
- Provision of data to the European Gas pipeline Incident data Group (EGIG)
- Monthly reports for operations and projects
- Provision of plant maintenance reports created in SAP, the ERP system used by Energinet.dk
- Future implementation of Asset Management system at Energinet.dk in accordance with the PAS55 standard

##### **Monitoring time taken to connect and repair**

41(1)(m): Energinet.dk is focused on minimizing costs to the market due to repairs. The method and timing of repairs is chosen to achieve a minimum of disturbance to the market.

**Monitoring access to storage, linepack and other ancillary services**

41(1)(n): Energinet.dk Gas Storage provides data on access to storage capacity on the website. All storage capacity is offered to the market in a transparent manner based on equal access to all. All existing and potential new customers are informed when a sale of storage capacity takes place and the conditions in connection to this sale (product, quantity, price, allocation method and other specific conditions) via both direct mail and on the website.

**Monitoring correct application of criteria that determine model of access to storage**

41(1)(s): In Denmark TPA to storage is based on a negotiated regime. On a current basis Energinet.dk Gas Storage enters into dialogue with the NRA about the results of the sale of storage capacity as well as other relevant market developments in order to ascertain that the storage market is competitive and supports an overall competitive and transparent gas market.

**Monitoring safeguard measures**

41(1)(t): A response to any supply crisis in the Danish gas system is provided within the overall crisis management system, which has been set up in Denmark to comply with the EU-Regulation No 994/2010 concerning measures to safeguard security of gas supply. A new network code will be introduced on the Danish gas market by 1st of October 2012 in order to meet the requirements in the EU-regulation in the detailed market regulation.

Supply crises may be caused by geopolitical incidents, interruption of physical infrastructures, technical failures on production and processing facilities, major market distortions and similar. Non-market based measures cannot be applied at any pre-emergency level in the new crisis management structure introduced by EU-regulation 994/2010. At the emergency crisis level non-market based instruments may be introduced only to the extent that purely market based instruments are not sufficient to effectively balance the gas system. The competent authority, the Danish Energy Agency, will under the new crisis management system in accordance with EU-regulation 994/2010, article 10, paragraph 5, inform the EU Commission when a supply crisis necessitates an escalation in the crisis management structure.

**4.1.3 Network and LNG tariffs for connection and access****Access and tariffs – Transmission**

According to national law, DERA approves the methodology for setting tariffs in the Danish transmission system, and the Danish TSO (Energinet.dk) sets the actual tariffs in accordance with the approved method and reports these to DERA.

Energinet.dk is a public company which cannot build up equity or pay dividends to its owner, the Danish Ministry of Climate, Energy and Building.

Energinet.dk is regulated under a strict cost plus regime which means that the company has to pay any surplus income back to the consumers through reduced tariffs – in principle in the year following the year which gave rise to the surplus income. In extraordinary cases, the payback period may

be longer in order to secure a stable price development. The same principle applies if Energinet.dk has an under-recovery, but of course with opposite effect for the consumers.

According to the Danish Natural Gas Supply Act, DERA has to approve the annual report/accounts of Energinet.dk, and the decision on over-recovery/under-recovery is part of the approval process as Energinet.dk is only allowed to recover “necessary costs”.

Today, Energinet.dk applies a tariff which is composed of a capacity element (75%) and a volume element (25 %), and the entry/exit tariff for the gas year 2012 is DKK 10,54/kWh/hour/year. However, Energinet.dk is currently working on a tariff project which may involve a re-definition of the relationship between capacity and volume payments – with higher emphasis on volume.

Today, tariffs are the same for all entry/exit points and for all points in the Danish exit zone, but as part of the on-going tariff project Energinet.dk is also considering introducing differentiated tariffs for the individual entry/exit points to/from the Danish transmission system. This is not least due to the fact that Energinet.dk is now reinforcing the Ellund interconnection point (with a doubling of the existing pipeline and a new compressor) which will bring additional costs to this specific point that should not necessarily be socialised. The Ellund expansion project is also backed by funds from the EU recovery programme.

DERA will have to approve the changes in methodology, and any future changes in tariff methodology will of course have to comply with future European framework guideline/network code for harmonised transmission tariff structures.

In 2011, the Danish market model introduced auctioning as a new allocation mechanism at the entry/exit points of Dragør (towards Sweden) and Ellund (towards Germany). The intention is to make an early implementation of the European Framework guideline (from August 2011) which establishes auctioning as the only future allocation mechanism for the sale of transport capacity at cross-border points which are subject to booking procedures. In 2012, the plan is to further develop the auctioning project and streamline it with the auctioning standards agreed at the European level – introducing e.g. annual yearly, annual quarterly and rolling day-ahead auctions at the interconnection points towards Germany (Ellund) and Sweden (Dragør).

Also, secondary legislation (executive order no. 1034 of 4/11/2011) on the application and future use of gas transmission capacity was implemented in the autumn of 2011. The executive order implements parts of the 3<sup>rd</sup> package and includes – inter alia – an obligation for national TSOs to submit information to TSOs in other countries to the necessary extent and an obligation for distribution and storage companies to submit all necessary information to the TSO in order for the TSO to be able to perform its duties in relation to network planning and the publication of network access rules.

**Access and tariffs - Distribution**

The Danish grid companies are subject to a revenue cap regulation.

The revenue cap is set for the grid companies (of which there are only 3) for a four year period, and the present period covers 2010-2013. The revenue cap is set to allow the grid companies to have their costs of operations (by efficient use of capital) covered and to allow them to cover the costs of historic debt, depreciations and return on new investments.

The revenue cap model is administered by DERA and includes an efficiency requirement. For the present period efficiency requirements of between 0.6 and 1.2 per cent per annum have been included in the revenue cap model.

In financial terms, this corresponds to overall efficiency requirements of more than DKK 12 million for the period in total.

The distribution tariffs are set as volume charges – independent of distance. The users with large volumes consumed will pay a lower unit price for distribution due to the “block tariff” system which means that tariffs decline with certain intervals of gas volumes consumed.

**Dispute settlement – access and tariffs**

The Directive rights for any party having a complaint against a transmission, storage, LNG or distribution system operator in relation to that operator’s obligations under the Directive to refer the complaint to the regulatory authority - and the obligation for the national regulator to make a decision within a period of two months (with possible extension) – has been transposed into national law through secondary legislation (executive order no.1216 of 15/12/2011) which took effect in December 2011.

**Allocation of interconnection capacity**

The Danish transmission system is an entry-exit model with:

- Three entry points: Nybro, Ellund and Dragør
- One BNG (bio natural gas) entry point for biogas (upgraded)
- One exit zone with six distribution areas
- Three transit exit points: Nybro, Ellund and Dragør
- Two virtual trading points: GTF (Gas Transfer Facility) and NPTF (Nord Pool Gas Transfer Facility)
- One virtual transfer point: L4H (Link4Hubs) supporting the cross-border reservation and nomination of capacity between Denmark, Germany and the Netherlands
- Two physical storage points covering the storage facilities at Stenlille and Lille Torup

Table 2 shows the total capacity at the entry/exit points of the transmission system and compares the capacity with the maximum daily winter flows during the period 2007-2011.



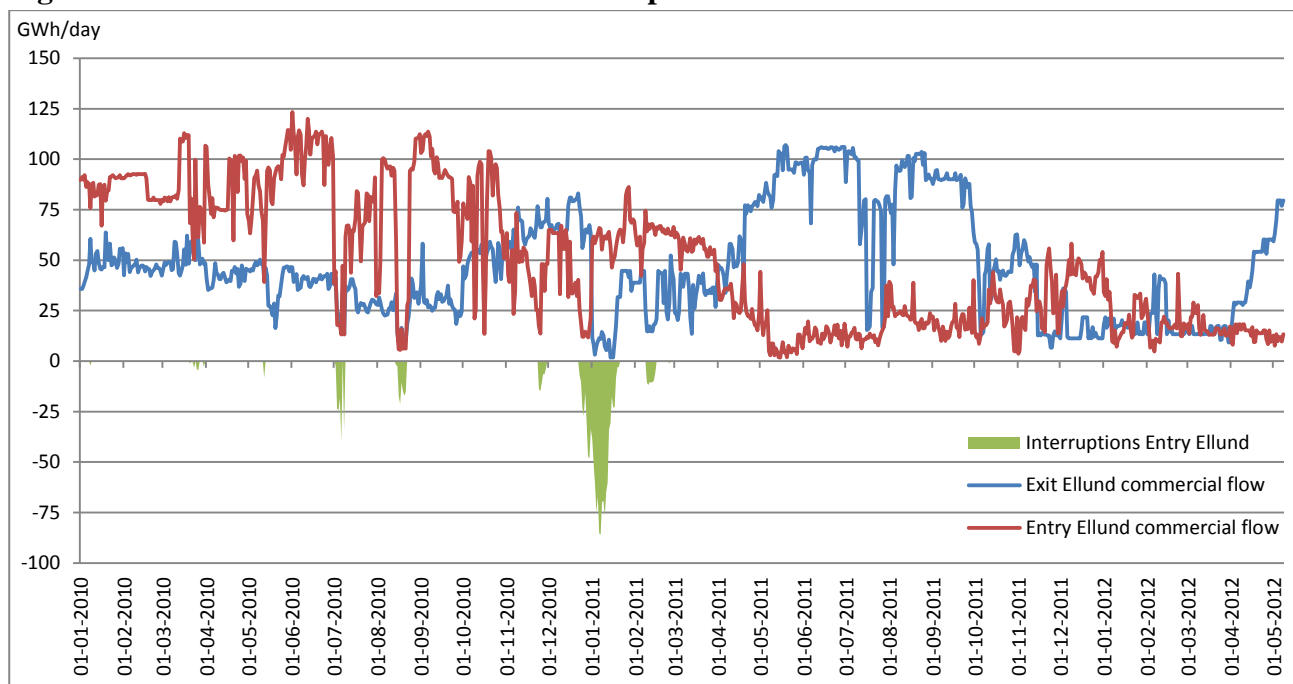
**Table 2: Capacity and flows at entry/exit points 2007-2011**

Point		Capacity mio. Nm <sup>3</sup> /day	Max. flow 2007/2008 mio. Nm <sup>3</sup> /day	Max. flow 2008/2009 mio. Nm <sup>3</sup> /day	Max. flow 2009/2010 mio. Nm <sup>3</sup> /day	Max. flow 2010/2011 mio. Nm <sup>3</sup> /day
Nybro	Entry/Exit	32.4/0	24.8/0	24.1/0	23.1/0	22.5/0
Ellund	Entry/exit	4.8/8.3	0/8.3	0/8.3	-/7.1	4.7/8.5
Dragør	Exit	0/8.6	0/5.6	0/5.0	0/7.2	7.8
Exit zone Denmark	Exit	25.5	19.5	19.1	21.5	22.2
Lille Torup storage facility	Withdrawal	8.0	5.5	4.0	4.5	7.3
Stenlille stor- age facility	Withdrawal	9.5	6.3	3.0	6.5	9.6

Source: Energinet.dk

With the exception of Ellund (Denmark/Germany interconnection point) there is no congestion in the Danish transmission system.

The below figure show the commercial flows and interruptions at Ellund for the period 1 January 2010 and until 8 May 2012.

**Figure 2: Ellund commercial flows and interruptions 2010-2011**

From 01.01.2010 – 08.05.2012

Source: Energinet.dk

With the approved expansion of the Danish transmission system towards Germany (new compressor station at Egtved and looping of pipeline from Egtved to Ellund), which should be ready for late 2013, the capacity in the Danish transmission system is expected to be 700,000 m<sup>3</sup> per hour which is regarded to avoid congestion. Also, security of supply in Denmark and Sweden will be strengthened substantially with the new capacity and flexibility in the system. In 2012-2013, however, the Danish and Swedish supply situation will continue to be under pressure.

On the German side of the border, Gasunie Deutschland has announced that the company will build new capacity. The company has called this a “step one” investment in what could, ideally, be an investment in two steps. However, Gasunie Deutschland has not decided whether they will be prepared to build the additional step two capacity which is required if the capacity on the German side of the border should in future match the Danish capacity.

### **Balancing**

There is only one balancing zone in the Danish transmission system, and Energinet.dk is responsible for the physical balancing of the Danish Natural Gas System.

In 2011, DERA approved a methodology change of the balancing rules in the Danish transmission system. The background for the proposed changes is to take early steps to implement the European network code on gas balancing that requires a market-based approach to balancing in Europe.

Energinet.dk has chosen a stepwise implementation of the market-based balancing, and more changes to the balancing regime can be expected in the future.

The changes which DERA approved in September 2011 are:

1. A reduction in the free balance margin from +/- 5 pct. of exit zone capacity to +/- 3 pct. of the exit zone capacity.
2. A change in the calculation of the imbalance charges: Before, imbalance charges were a function of the day-ahead prices on TTF, but as of 1st October 2011 the imbalance charges have become a function of the day-ahead prices on the Danish gas exchange, Nord Pool Gas.
3. A reduction of the incentive factor contained in the imbalance charges from 50/150 to 65/135.

In addition to the free balance margin, the shippers may conclude “balancing service agreements” with Energinet.dk. However, the aggregate amount of balance margin sold under such agreements cannot exceed the amount of balance margin physically available to Energinet.dk. In the event of a shortage of balance margin, Energinet.dk will use an auction for allocating the available balance margin. The auction is conducted by means of a so-called “Uniform-price auction algorithm”.

Daily balancing is foreseen as the new European standard balancing period, and the Danish market model (Rules for Gas Transport) already operates with daily balancing.

### **LNG**

LNG is included in the Danish Natural Gas Supply Act, but there are no actual or planned LNG facilities in Denmark. DERA has therefore not approved any methods/tariffs for LNG.

## Storage

Denmark has two gas storage facilities – Lille Torup (cavern storage facility owned by Energinet.dk) and Stenlille (aquifer storage facility owned by DONG Energy). The two storage facilities have a total capacity of around 1,000 million m<sup>3</sup> and primarily offer commercial and seasonal flexibility to storage customers. In addition, the two storage facilities offer emergency storage for the TSO (see below).

In Denmark, there is negotiated access to storage, and both Danish storage companies today sell their storage capacity by way of auctioning (ascending clock) where the storage customers can make bids for capacity with contracts of different length – going from 1 to 10 years.

The capacity is typically sold in standard capacity units called SBUs (Standard Bundled Units) which is a package with a capacity with certain injection and withdrawal rights included, but both storage companies also have separate auctions for high flexibility products and withdrawal and injection capacity.

For the storage year 2012-2013 not all Danish storage capacity was sold out in the primary auctions of the year, and the remaining capacities are typically sold as FCFS capacity.

Historically, all storage in Denmark was sold on standard 1-year contracts, and following the introduction of medium and long-term contracts in the Danish storage market, DERA has informed the storage companies that a reasonable quantity of capacity (20-30 %) should at all times be made available for short-term products. Overall, there is today a very even distribution between short-term contracts, medium length contracts and long-term contracts for 5 and 10 years.

It is foreseen in the Danish Natural Gas Supply Act that there should be fair, transparent and non-discriminatory third party access to storage in Denmark. It is also considered that the flexibility market is increasingly regional with several flexibility tools available to storage customers to supplement storage, and that the two Danish storage companies should be able to compete against each other – and against e.g. German storage companies – in an open and transparent way.

In 2010, a working group (with participation of relevant authorities, the TSO and the storage companies) delivered a report which analysed the storage market and their position in the gas market. It was the recommendation of the working group that the (then) existing price control should be removed and that the storage market was indeed part of an increasingly competitive storage market and a regional flexibility market which also supported the legal choice of negotiated access to storage.

For the above reasons which are also included in the law comments, regulated access has been ruled out as access regime.

Finally, the two storage facilities in Denmark play an important role in securing supplies of gas for the Danish (and Swedish) market in emergency situations and have a legal obligation to assist the national TSO if a national emergency situation is declared. The TSO therefore purchases a certain

amount of storage capacity (and gas) which is ear-marked for security of supply and which is not available for the commercial customers in the ordinary auctions.

#### 4.1.4 Cross-border issues

##### **Cross-border Cooperation**

DERA participates in cross-border cooperation with the national regulatory authorities of other European countries within the framework of ACER, CEER, and GRI NW.

DERA takes part in this work in order to influence the Nordic and European framework for energy markets in which Danish energy companies must also function. At the same time, participation in international work is an opportunity to gain more information that DERA can apply and share with Danish market participants, organisations and authorities.

In the cross-border cooperation under ACER, DERA is participating in the Gas Working Group and in the AMIT WG - and relevant task forces.

In the Gas Regional Initiative, DERA is part of the North West region and participates in the NW-cooperation on specific regional projects which can pave the way for - or inspire - projects and policies with a common European dimension. Traditionally, the NW region has had a strong position as it comprises some of the largest and most mature gas markets in Europe.

DERA will host the stakeholder group meeting of GRI NW in the autumn of 2012.

In total, the legal obligation (third package) for DERA as national regulator to engage in cross-border co-operation at EU level is embedded in Danish national law.

##### **Monitoring TSO Investment Plans**

It is a new European requirement that national regulatory authorities shall monitor national investment plans and assess their consistency with the community wide 10-year network development plan.

In Denmark, investment plans (transmission) have to be prepared by Energinet.dk as national TSO, and the national investment plans are submitted to the Danish Ministry of Climate, Energy and Building for approval.

Following the requirement of the third package, the Danish implementation law foresees that secondary law (an executive order) shall be passed which gives DERA the mandate and obligation to monitor national investment plans and their consistency with the European 10-year network development plan.

The executive order (order no.1034 of 11/11/2011) entered into force in December 2011, and according to the executive order the national TSO is responsible for assessing the need for new infrastructure and for planning possible network expansions. Every second year, Energinet.dk shall publish a 10-year network development plan and submit this plan to both the Ministry and DERA.

According to the executive order (section 10), DERA has to monitor the 10-year network development plans, and in its annual report DERA has to assess their consistency with the European 10-year network development plans. DERA may also recommend changes to the national development plans.

DERA is therefore now in the process of setting up a structure for this new regulatory task.

#### 4.1.5 Compliance

##### **Compliance of regulatory authorities with binding decisions of the Agency and the Commission and with the Guidelines**

According to the Danish Natural Gas Supply Act § 41 b, DERA is obliged to comply with any legally binding decision of the Agency.

##### **Power to carry out investigations and impose measures to promote competition etc.**

Regarding the obligation to carry out investigation into the functioning of the gas market, DERA shall ensure the transparency of prices, tariffs, and conditions by carrying out investigations of the market according to the Danish Natural Gas Supply Act § 42 a.

##### **Power to ask any information from natural gas undertakings**

According to the Danish Natural Gas Supply Act § 42 DERA has the competence to ask for any kind of information from natural gas undertakings.

##### **Compliance of transmission and distribution companies, system owners and natural gas undertakings with relevant Community legislation, including cross-border issues**

In the Danish Natural Gas Supply Act it is implemented that DERA has the competence to order compliance whenever a breach of Regulation No. 715/2009 is registered. Furthermore it is implemented that DERA has the power to carry out inspections, and the possibility to impose fines when an order to comply is not observed.

#### 4.1.6 Dispute settlement

The Energy Supplies Complaint Board handles all consumer complaint relating to energy. This means consumer complaint regarding electricity, heating and gas.

The Board has a mandate to handle disputes arising from the contractual relationship between energy consumers and an electricity supply undertaking, natural gas supply undertaking and district heating supply undertaking.

There are no thresholds as regards to the value of the dispute. The Board does not take up disputes settled by court judgement. On the other hand, a case which is being dealt with by a Court of Law must be postponed and transferred to the Board.

The Energy Supplies Complaint Board is established in co-operation between the Consumer Council and the Association of Danish Energy Companies, DONG (Danish Oil and Natural Gas), HMN Natural Gas, Natural Gas Funen and Danish District Heating Association.

The Board is composed of a neutral chairperson and four members. The chairperson is a city court judge. The Consumer Council appoints two members, and two members are appointed to represent the respective energy trade area.

The Danish Competition and Consumer Authority's Center for Consumer Regulation, Private Complaint Boards and International Consumer protection serves as secretariat to the Board.

Handling of cases costs a fee of DKK 160 (approximately EUR 21.5). The fee is to be paid back, if the Board upheld the consumers' contention. In this case, the energy company has to pay a fee to of DKK 7,000 (approximately EUR 941.6) to the board.

The further handling of the case is in writing. The secretariat shall secure that all relevant information is presented, and that the defendant is given the opportunity to comment upon the case. The secretariat shall take a neutral attitude. It may take an initiative to an amicable solution, or present an opinion based on previous decisions made by the Complaint Board.

In cases brought before the Complaint Board, the secretariat shall present a summary with an adequate overview of the case and the comments of the parties. The Complaint Board shall state the reasons for its decision, and whether the decision is unanimous. If the decision is split, it shall be indicated which representative(s) that dissent, and the reason for the dissent.

The average time of complaint handling is five month. When the Board has made a decision, either party can take the matter to court. Decisions are not binding or enforceable. However, if the Board's decision is not complied with, the secretariat can send the case to the Consumer Rights Division of the Danish Competition and Consumer Authority. The Division will then take the matter to the court, at the request and on behalf of the consumer.

If the consumer does not want to bring the decision to court, the Board shall publish the decision on its website with name and address of the energy company. Nevertheless all companies have so far complied with the decisions of the Board.

If a complaint does not fall within the competence of Complaint Board, DERA has the power to make decisions regarding the obligations of the DSO and TSO, whenever the complainant has an individual and significant interest in the matter. These complaints must be handled within two month, according to the executive order no. 1216 of 2011. The period can be extended with another two months if necessary. After four month the period can only be prolonged after agreement of the complainant.

The decisions of DERA have binding effect and can only be appealed to the Energy Board of Appeal.

Regarding art. 37 (4)(c) DERA has the power to ask for any kind of information from both DSOs, TSOs, suppliers with a license to supply, electricity production companies, electricity suppliers and their associated companies along with consumers and other buyers of electricity. The power to ask for information is provided when addressing an issue, monitoring the market, in connection with a case of DERA's own initiative or on the basis of an enquiry by an enterprise or consumer<sup>5</sup>. Furthermore the power to ask for information provides the users of the collective grid the information necessary for a secure and effective use of the grid.

Regarding art. 37(5)(c), DERA has the power to act as dispute settlement authority regarding TSOs.

In 2011, 12 complaints on gas were settled and 64 inquiries were answered. There are no statistics available on the nature of the complaint/inquiry.

## 4.2 Promoting Competition

### 4.2.1 Wholesale Markets

Danish production of natural gas from fields in the North Sea can be transported to Denmark at Nybro or exported to Netherlands through the Tyra West – F3 pipeline. From Denmark the gas can be exported to Sweden at Dragør or to Germany at Ellund. The production of gas in Denmark in 2011 was 6,060 million Nm<sup>3</sup>, which was lower than the previous year. Denmark is a net exporter of natural gas and exported 2,613 million Nm<sup>3</sup> and imported 349 million Nm<sup>3</sup> in 2011. Imports came from Germany, which became possible to receive in 2010. The export was lower in 2011 than in the previous year, and the reduction in exports was primarily caused by lower exports to Sweden.

**Table 3: Danish gas production, 2008 - 2011**

Year	Production	Consumption	Import		Export		
			Germany	Net export	Netherlands	Sweden	Germany
2008	8851	3637		5229	2032	866	2331
2009	7311	3503		3798	1560	1156	1082
2010	7130	4072	144	3206	715	1555	1081
2011	6060	3327	349	2613	648	1228	1087

All numbers are in million Nm<sup>3</sup>. Production is equals gas for sale. Consumption is exclusive own consumption and offshore.  
Source: Danish Energy Agency

<sup>5</sup> The Electricity Supply Act § 84.

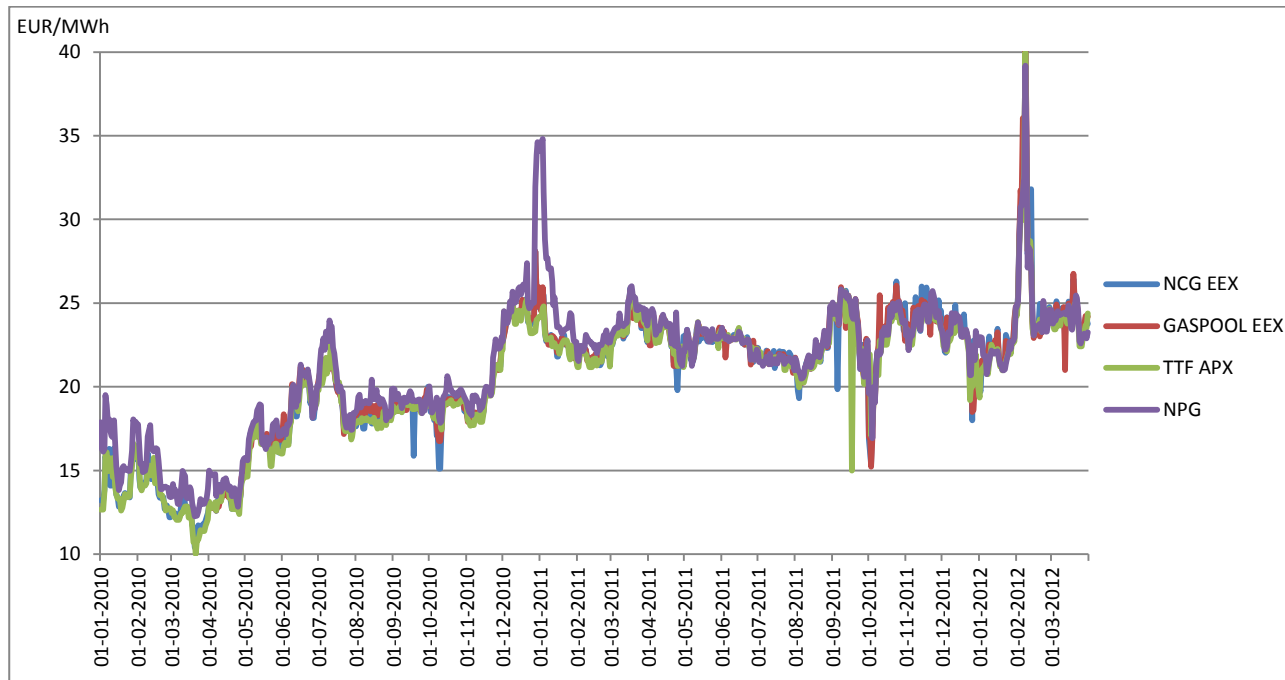
#### 4.2.1.1 Price monitoring

DERA has established a team of economists and lawyers to monitoring the wholesale market. The team will among other things monitor the daily development in the market and quarterly publish a market report concerning monitoring. Regarding price monitoring, the market report will focus on the national spot price at Nord Pool Gas and compare the price to the TTF APX day-ahead price for Netherlands, the NCG EEX and Gaspool EEX day-ahead prices for Germany. Besides the report, DERA have the intention to monitor the occurrence of restrictive contractual practices, including exclusivity clauses.

Figure 3 shows day-ahead prices for the Danish gas exchange NPG and the three gas hubs NCG EEX, Gaspool EEX and TTF APX. The figure shows a high correlation between the prices of the three gas hubs and the Danish gas exchange, and the spot prices are often similar. The large degree of correlation means that most of the variations in the spot price at Nord Pool Gas can be explained by the variations in the spot prices for the three gas hubs, and especially by the Dutch gas hub TTF.

In December 2010 the spot price at NPG was higher compared to the prices of the three gas hubs. The price difference is most likely caused by internal factors in Denmark, since neither the Dutch nor the German gas hubs were affected. The situation further shows that the Danish gas exchange is too small to affect the Dutch or the German gas hubs, since their prices seem not to be affected by the lower prices in Denmark.

**Figure 3: Gas spot prices, 2010 to first quarter of 2012**



Source: Nord Pool Gas, NetConnect Germany

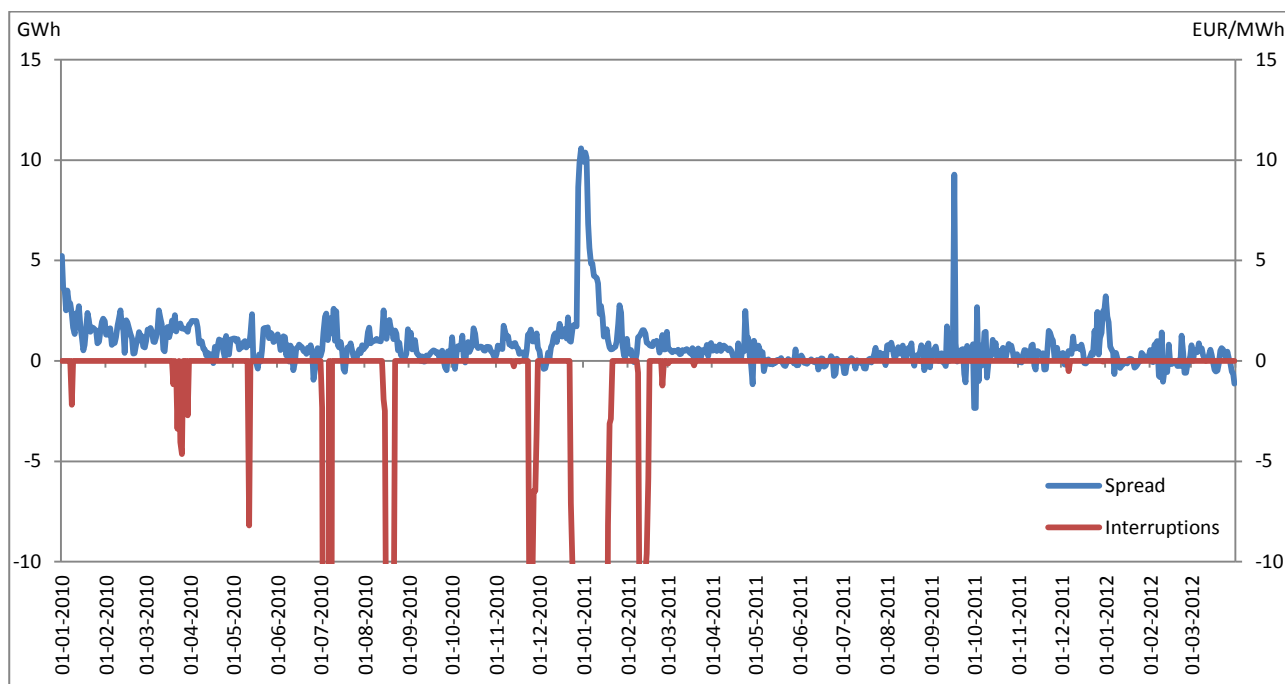
The trades conducted at Nord Pool Gas are marginal spot volumes and reflect the cost of gas at neighbouring gas hubs plus/minus the cost of transportation and other delivery costs. The price link between NPG and gas hubs in Continental Europe breaks down when interruptions due to physical



congestion at Entry Ellund isolates the Danish gas market from the rest of the European market. This creates a larger spread between the price in Denmark and at the gas hubs in Continental Europe. Figure 4 shows the proportion between interruptions at Entry Ellund and the spread between NPG and TTF.

Figure 4 shows that interruption in Entry Ellund in several situations leads to higher prices at Nord Pool Gas compared to the Dutch gas hub TTF owing to lack of import possibilities and thereby lower domestic supply. There were several interruptions in the first months of 2011 and the maximal spread between TTF and NPG was 10.38 EUR/MWh at 2 January 2011. The price at NPG rose in that period meanwhile TTF had an almost normal price level. From that date and until 17 September 2011 there was a low degree of spread. The spread on 17 September 2011 shall be seen in the light of a low price at TTF, which was 8 – 9 EUR/MWh below the normal price level. During the same period NPG gas had a normal and stable price level.

**Figure 4: Interruptions at Entry Ellund and price spread between NPG and TTF, 2010 to first quarter of 2012**



Source: Nord Pool Gas, NetConnect Germany, Energinet.dk

#### ***4.2.1.2 Monitoring the level of transparency, including compliance with transparency obligations, and the level and effectiveness of market opening and competition.***

In 2012 DERA and the Danish gas TSO, Energinet.dk, have started a project with the goal of establishing a transparency platform for the Danish Gas Market, in which market-relevant information with a potential price influencing character on the wholesale market can be disclosed in a timely manner. The kick-off meeting for phase I was held on 21 February 2012. Phase I involves owners

of production and grid facilities in the Danish North Sea and is expected to be finalised by August 2012. Afterwards phase II will begin, involving a broader span of market participants.

DERA has started cooperation with the Danish Competition and Consumer Authority in 2012 with the purpose of sharing know-how between the two authorities. DERA needs to bring any relevant information and relevant cases to the Danish Competition and Consumer Authority, if there has been any distortion or restriction of competition. At every meeting the two authorities will: 1) Update on projects, analysis and cases concerning complaints and regulation. 2) Share results from market surveillance. 3) Exchange know-how and experience within the different subject areas. 4) Update on development in the market and new legislation.

In 2012 DERA has started a closer cooperation with the Danish gas exchange Nord Pool Gas in order to strengthen market surveillance. The cooperation involves a meeting every month to ensure a closer dialogue and the enforcement of REMIT in the wholesale gas market. At the meetings DERA will inform about REMIT and the newest legislation, and Nord Pool Gas will explain the newest development in the market. NPG will inform DERA about suspicious behaviour at the gas exchange.

Nord Pool Gas was established in the end of 2007 and by 1 March 2012 the gas exchange has 19 participants registered for trading in the Nordic market and six different products, in which with-in-day contracts and weekend contracts were introduced in April 2011. The majority of volumes traded at NPG are the day-ahead contract.

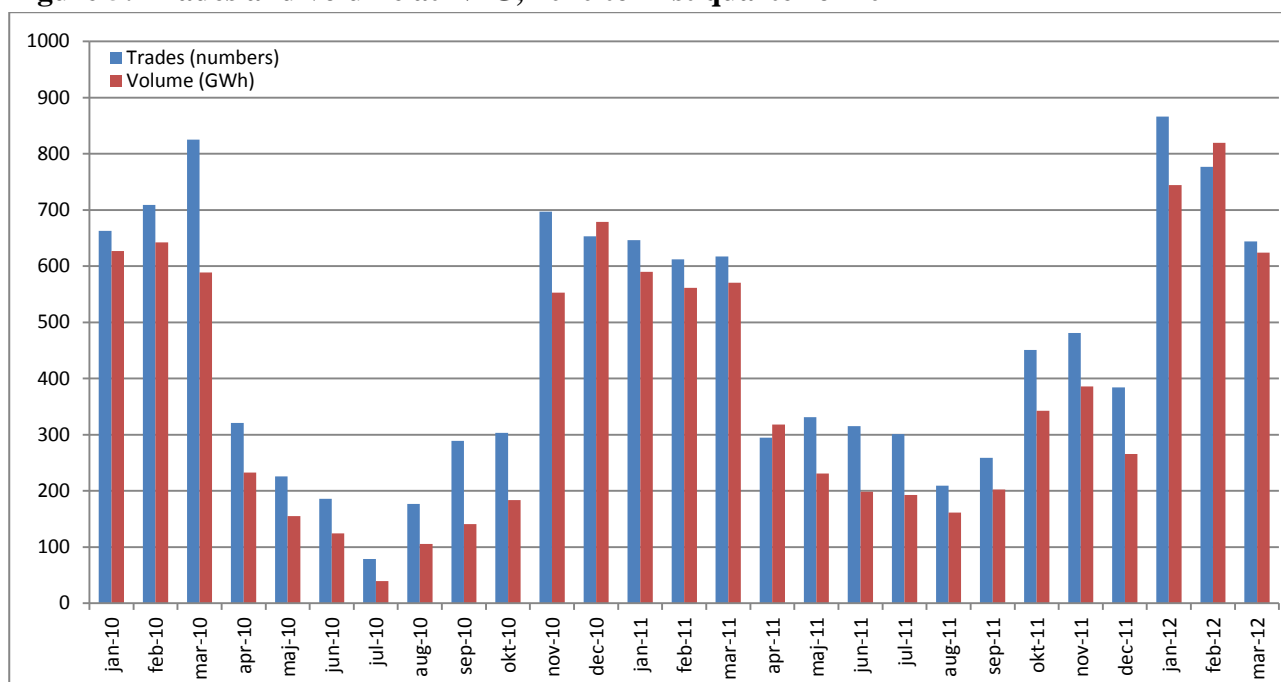
**Table 4: Products offered at Nord Pool Gas**

Products	Description
<b>Withinday</b>	Trade in gas with delivery on the same gas day
<b>Day-ahead</b>	Trade in gas with delivery on the following gas day
<b>Weekend</b>	Trade in gas with delivery Saturday and Sunday of each week in one contract
<b>Balance of month</b>	Trade in gas with physical deliveries on each gas day for the rest of the present month
<b>Month ahead</b>	Trade in gas with deliveries on each gas day for the entire month ahead
<b>Swap</b>	Trade in gas with physical delivery in Denmark (NPTF) and the opposite position in Germany (Gaspool)

Source: Nord Pool Gas

Figure 5 shows the development in trades and volume at Nord Pool Gas from January 2010 and until March 2012. There has been a general increase in trades and volume at NPG, which is a positive development for the market. The first months of 2011 had lower activity than the same months in 2010, but the activity in the summer of 2011 were higher than in the summer of 2010. January and February 2012 have been the months with the highest activity compared to earlier years. In March 2012 the numbers of trades were lower than in the same month the previous year, but the volume was higher.

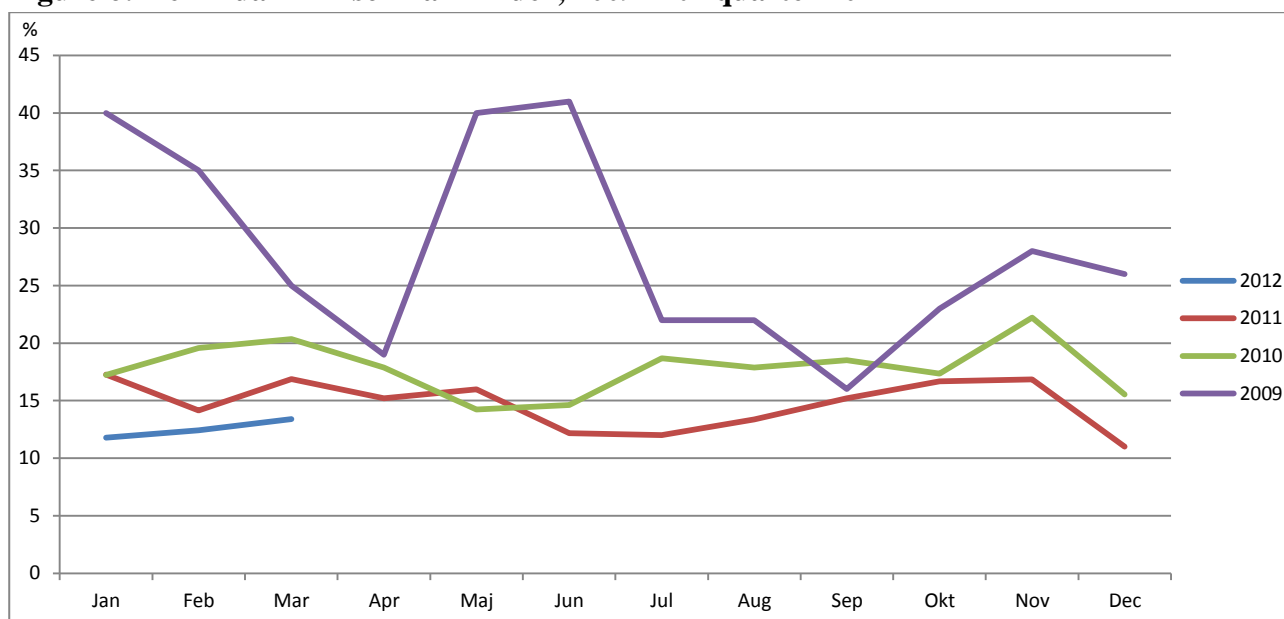
Figure 5: Trades and volume at NPG, 2010 to first quarter of 2012



Source: Nord Pool Gas

Figure 6 shows the Herfindahl-Hirschmann index, HHI, which is a measure of market concentration. The figure shows the development from 2009 and until March 2012. There was a large variation in the market concentration in 2009, because the market had a low degree of liquidity and the activity was carried out by a few participants, who traded the volume unevenly throughout the year.

In the following years the market concentration has shown less variation and the market concentration has been lower, indicating more participants in the market with more equal market shares. The trend continues in 2012, where the market concentration for the first three months is lower than in the previous years.

**Figure 6: Herfindahl-Hirschmann index, 2009 –1th quarter 2012**

Source: Nord Pool Gas

## 4.2.2 Retail Markets

### 4.2.2.1 Price monitoring

It is the dedicated task of DERA, in accordance with the Natural Gas Supply Act, to promote transparency in the retail market of natural gas.

The Danish gas market has been fully liberalized since 1 January 2004, and accordingly any gas consumer in Denmark thereby has access to a free choice of supplier. There are no barriers for suppliers to enter the market and the suppliers do not need any permits or registration to participate in the market. At the moment there are 15 suppliers offering natural gas products in the liberalised market.

In Denmark there is a product of “obligation to supply”, where the consumer prices are regulated. The consumers are not tied to this product due to the liberalised market. The regulation of “obligation to supply” is continued in 2011 – and is continuing in 2012.

15 companies are registered as gas suppliers in the Danish natural gas system; 3 of these suppliers have an obligation to supply (DONG Energy Gasforsyning, NGF Gasforsyning, HNG Midt-Nord Salg and Aalborg Forsyning Gas/Naturgas Salg), and 6 companies have affiliated connections to the DSOs (the 3 of the supply obligation companies and also DONG Naturgas, HNG Midt-Nord Handel and NGF Gazelle). This makes 11 suppliers on the liberated retail market of natural gas.

All suppliers are obliged to report prices and terms to the price comparison tool [www.gasprisguiden.dk](http://www.gasprisguiden.dk). The price comparison tool is operated by the Danish TSO and appointed by DERA, and DERA has thereby a regulatory oversight. When monitoring prices and the transparency of contractual obligations DERA makes use of the price comparison tool.

All supply companies (both suppliers and suppliers with obligation to supply) are represented at the price comparison tool [www.gasprisguiden.dk](http://www.gasprisguiden.dk). 8 out of 11 suppliers offer supply contracts to small scale consumers, aside from the respective supplier with “obligation to supply” in their area. Large scale consumers can choose from 6 different suppliers aside from the respective supplier with “obligation to supply” in their area.

#### ***4.2.2.2 Monitoring the level of transparency, including compliance with transparency obligations, and the level and effectiveness of market opening and competition***

It is the dedicated task of DERA, in accordance with the Natural Gas Supply Act, to promote transparency in the retail market of natural gas – through prices and transparent contractual obligations.

In October 2011 the Danish Minister of Climate and Energy set rules on monitoring the electricity and natural gas market, but already before that DERA begun monitoring the market.

The Data exchange in the natural gas market takes place at non-discriminating terms, and all suppliers have access to relevant data. At the moment there is no process of implementing smart meters on the natural gas market.

Complaints by household consumers due to inquiries resulting in a formal case are monitored and handled in cooperation with the Energy Supplies Complaint Board (ANE).

Each quarter DERA publishes a natural gas price statistic for a representative Danish household (19 MWh or 1700 m<sup>3</sup>). The statistic is a weighted average of private consumer prices where the weights correspond to suppliers’ market shares. The development in the prices in 2011 is shown below:

**Table 5: Gas retail prices for households in Denmark, 2011**

	1Q 2011	2Q 2011	3Q 2011	4Q 2011
Gas price	3,32	3,41	3,29	3,35
Distribution <sup>1</sup>	1,36	1,36	1,38	1,38
CO <sup>2</sup> -tax	0,36	0,36	0,36	0,36
Energy-tax	2,31	2,31	2,31	2,31
VAT	1,84	1,86	1,84	1,85
<b>Total price (DKK/m<sup>3</sup>)</b>	<b>9,20</b>	<b>9,30</b>	<b>9,18</b>	<b>9,25</b>
<b>Total price (EUR/MWh)</b>	<b>101,2</b>	<b>102,3</b>	<b>100,98</b>	<b>101,75</b>

<sup>1</sup>) Incl. standing charge

Source: DERA

### 4.2.3 Recommendations on supply prices

The Danish gas retail market is fully liberalized and accordingly, any gas consumer in Denmark has access to the competitive market – without any price regulation. However, the consumer must actively choose a commercial supplier and accept a supply contract to enter this market. As a consequence both a regulated market with regulated end-user prices and a competitive market without price control coexist in the Danish retail gas market.

About 80 pct. of the Danish gas customers are supplied at regulated prices, whereas only 20 pct. of the volumes consumed are supplied at regulated prices. From these figures it is evident that large scale customers are much more active in the competitive market than households.

The companies with an obligation to supply license are regulated in an ex post regime subject to a combination of income-cap and efficiency benchmarking. In particular, the performance on gas purchase agreements is being compared to similar gas agreements at the over-the-counter market in north-western Europe, whereas the performance on all other costs not covering expenses for gas purchase is being compared with the level on ‘other costs’ for related companies – that is companies on both the gas and electricity market with an obligation to supply.

The regulation of ‘obligation to supply’ prices for gas continued in 2011 and is continuing in 2012.

### 4.2.4 Carry out investigations and imposing measures to promote effective competition

In June 2011 DERA made a formal declaration concerning the tariffs in DONG Energy’s upstream system from the natural gas fields in the North Sea to the Danish shore. According to DERA, the tariffs should be lowered from a level around 0.13 DKK/m<sup>3</sup> to around 0.07 DKK/m<sup>3</sup> (approximately around 0.02 EUR /m<sup>3</sup> to around 0.01 EUR/m<sup>3</sup>)

In December 2011 DERA has started an investigation on the natural gas retail market. In particular the obligation to supply companies and the price regulation are investigated. The report is planned to be published late 2012.

## 4.3 Consumer protection

### Compliance with annex 1

The information requirements according to the annex are implemented in executive order no. 937 of 2006. The obligations and limitations of the right to modify contractual conditions are regulated by executive order no. 162 of 2011. Every end-user has the right to change supplier free of charge (with respect of the contractual obligations between the parties).

### Ensuring access to consumption data

Customers are according to the Natural Gas Supply Act ensured the right to receive their consumer data free of charge. Further, according to the Act the distribution companies are obliged make these data available to the customers in a transparent, objective and non-discriminating way.

According to the Act DERA approves the methodologies according to which the distribution companies set their procedure for suppliers and consumers to have access to the data.

**Public service obligations**

Regarding the obligations of art. 3, these have been implemented in very different ways, in this paragraph some of the obligations implemented are mentioned.

The Danish TSO, Energinet.dk, issues technical regulation for the actors in the market, and according to these requirements a change of supplier can be executed within 10 working days from 6 June 2012.

A single point of contact for the end-user is established by the Energy Supplies Complaint Board, see paragraph 3.1.6.

**Vulnerable customers definition**

Economically unfortunate citizens are handled through the social security system. The safeguards implemented in the energy regulation to protect the consumers apply for all consumers. This means that consumers are protected by general requirements for disconnection, price of connections, payment conditions as well as all customers are eligible to receive electricity with a regulated price. DERA continuously works with securing general safeguards for the customers through approving the methods of the DSOs.

**4.4 Security of supply**

The Danish Energy Agency is responsible for regulatory tasks relating to security of supply, including monitoring network planning and approving major pipe-line investments as well as gas storages etc.

In response to article 5 requirements on information, the Danish Energy Agency has submitted Energinet.dk's "*Gas in Denmark 2011 - Security of supply and development*" to the Commission. The plan gives a comprehensive overview for the security of short and long term supply aspects of the Danish gas system.