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1. Foreword

The Danish Energy Regulatory Authority (DERA) is committed to fulfilling its duties under the electricity and gas market directives. DERA produces the National Report as an overview of the development of the markets in Denmark. Parts of the report will contribute to a summary of all the national reports. The report follows the structure outlined by the Commission and CEER. Data and content refer to the period January 2015 to December 2015 unless otherwise stated.

The long term political goal of a fossil-free Denmark by 2050 sets the direction for changes to the Danish energy system in the coming years. To reach this goal, Denmark is, in the short term, to be among the three countries in the world to raise its renewable energy share most by 2020 and to be one of the three most energy-efficient countries in the OECD by 2020.

Over a number of years, Denmark has enjoyed high security of supply, high energy efficiency and an increasing share of renewable energy. In 2015, the share of wind energy in final energy consumption reached 42 percent and is expected to further increase.

Finn Dehlbæk
Director General
Danish Energy Regulatory Authority

2. Main developments in the gas and electricity market

2.1 The electricity market

2.1.1 Wholesale

The Danish wholesale spot prices (West Denmark (DK1) and East Denmark (DK2)) are usually higher than the Nordic system price but lower than the Continental European Prices, reflecting Denmark's geography between the Nordic hydro based system and thermal based continental production. In 2015, the average wholesale price in Denmark was 23.7 EUR/MWh, while the average prices from APX NL, EPEX and Nord Pool Spot's system prices respectively were 40.3, 31.7 and 21.0 EUR/MWh.

In 2015, the spot prices in Denmark have generally followed the development of the system price of Nord Pool – although the Danish prices have had a tendency to be slightly higher – except for June to October, where the Danish prices were markedly higher than the system price.

The share of wind energy in the past year's electricity consumption was 42 percent compared to 39 percent in 2014. Wind turbine's share in the total electricity supply has increased over the last years and is expected to increase even more during the coming years.

As in previous years, Denmark was a net importer of electricity in 2015. Denmark functions as a transit country between Germany and the two neighboring Nordic countries Sweden and Norway. Denmark's net import from Sweden and Norway was in 2015 respectively 3,649 and 4,954 GWh, while Denmark was a net exporter to Germany with 2,691 GWh.

In 2015, DERA approved the methodology for purchasing secondary reserve capacity in case the delivery of secondary reserves from Norway through the interconnector Skagerrak is unable to be delivered. In 2015, DERA also made the decision to designate Nord Pool AS as *Nominated Electricity Market Operator* (NEMO) in the Danish bidding zones for trading of electricity. The decision was made according to rules in Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (CACM) and constitutes the first designation of a NEMO in the Danish bidding zones.

In order to address and prepare for future challenges related to the energy transition and even higher RES share in Denmark, Energinet.dk commenced a process to develop an adjusted market design: the *Market Model 2.0*. In 2015, a report with 24 recommendations and initiatives was published. The report identified three action points: Capacity, flexibility and system supporting services.

On 1 January 2016, the Harmonised Allocation Rules for forward capacity allocation (EU HAR) was implemented in Denmark as an early implementation project. EU HAR is a single set of harmonised rules for trading across European bidding zone borders and has now been submitted to the European Parliament and Council for scrutiny, scheduled to finish in autumn 2016.

2.1.2 Retail

The average price of electricity for consumers including VAT, taxes and PSO (regulated product) has increased by 0.6 percent from 30.37 euro cent per kWh in 2014 to 30.55 euro cent per kWh in 2015, despite a fall in energy prices of 13.7 percent from 2014 to 2015. The drop in energy prices is counterbalanced by an increase in Taxes and PSO of 5.1 percent.

In June 2014, an amendment of the Danish Electricity Act (DES) was passed. Pursuant to this amendment, the supply obligation system including the specific supply obligation product is abolished from 1 April 2016. To secure all consumers' ability to get electricity, a new obligation of delivery will be introduced instead.

The amendment also abolished the basic product starting from 1 October 2014. This means that all inactive consumers were moved to a trade product without any price regulation. After this change, more than 90 percent of consumers now receive a non-regulated product.

New legislation from June 2015 has obliged DERA to manage a new online portal for electricity prices. The online portal is launched on 1 April 2016. The new price comparison tool (PCT) is named *elpris.dk* and is administered by DERA. The main purpose of *elpris.dk* is to simplify the consumers' comparison of various offers from the Danish electricity market.

The supplier centric model (SCM) is launched on 1 April 2016. Its focus is to increase competition and transparency through PCT and datahub in order to give incentives for consumers to become active. When SCM is launched, the bills merge into *one bill* sent from the supplier. Thus, the supplier will be responsible for the consumers' payment of taxes and levies. The supplier will allocate the payment of taxes and levies to the DSO. This also means the supplier will be responsible for all customer contact.

In relation to the introduction of the SCM in the Danish electricity market, the Danish TSO, Energinet.dk, which runs the datahub, launched an updated version of the datahub.

2.1.3 Transmission and distribution

In the past year, DERA has lowered the revenue cap with around EUR 12 million for the 61 Danish electricity grid companies which distribute electricity to the consumers. The intention is that a lower revenue cap for the companies which is based on a benchmark analysis on the companies' efficiency will give incentives to the companies to focus on efficiency.

Based on The Electricity Regulation Committee (Elreguleringsudvalget) recommendations from December 2014 concerning changes of the regulation of the DSOs, a new regulation of the DSOs is expected to be implemented from 1 January 2018. The new regulation will be based on a revenue cap, built on a cost cap with efficiency regulation, a cap for returns on historical investment and a return on future investment set as a market based WACC and finally a reduction of the revenue cap in case of inadequate quality of supply.

As part of the new regulation, the government appointed a Committee of experts to provide the Danish Minister of Energy, Utilities and Climate with recommendations for determining the electricity grid companies' future investments based on a WACC calculated for an average grid company. The purpose is to provide the grid companies with a reasonable, systematic risk-adjusted return, equal to the risk of operating in an efficient regulated monopoly business. An important part of the Committee of experts' assignment was that the WACC-level should neither give rise to under- or overinvestments in the development and maintenance of the distribution grid. Their recommendation was handed to the Minister of Energy, Utilities and Climate in April 2016.

As part of the new regulation, the government appointed as well a Committee of experts to provide the Danish Minister of Energy, Utilities and Climate with recommendations regarding a new benchmark model. The committee began its work in 2015. Their recommendations and the new benchmark model will be handed to the Minister of Energy, Utilities and Climate in February 2017. It is expected that the model will be used for the benchmarking of the DSOs in 2018, when the new regulation has been initiated.

In June 2015, DERA accepted a new tariff model developed by the Danish Energy Association on behalf of the DSOs. The DSOs can use the model to calculate tariffs based on their costs and their revenue cap. The model calculates tariffs based on the costs related to the each group of consumers, hence in a fair, objective and non-discriminating way. The model opens up for time-differentiated tariffs (time-of-use tariffs) for all groups of consumers and thereby creates a possibility for the DSOs to utilize smart meters which has been enrolled to 50 percent of consumers as of 2015.[1] The principles of the model are presented in section 3.1.3.

2.2 The gas market

2.2.1 Wholesale

The Danish Gas exchange, Gaspoint Nordic (GPN), is becoming increasingly more important every year, and the share of traded volume on GPN (delivered on ETF) has increased significantly during the last two years. In the last quarter of 2014, the volume on the ETF exceeded the volume on Gas Transfer Facility (GTF)[2] for the first time, and this trend has continued. In 2015, the traded volume on GPN reached 16.5 TWh, and thereby the volume delivered on ETF made up 60 percent of total volumes on ETF and GTF.

The spot price on GPN is highly correlated with the spot prices on the two German gas hubs NCG and Gaspool as well as the Dutch gas hub TTF. The average spot price of GPN was 19.9 EUR/MWh in 2015. In December 2015, GPN reached 13.8 EUR/MWh which is the lowest spot

[1] The largest DSO, DONG Energy Eldistribution A/S, has not yet enrolled smart meters. Their consumers account for ¾ of the 50 percent of consumers who do not have smart meters yet.
[2] GTF facilitates delivery of bilateral trades, and Exchange Transfer Facility (ETF) which is used as the delivery point for trades carried out on the Danish gas exchange Gas Point Nordic (GPN). GTF is owned by the Danish TSO, Energinet.dk.

price since 2009. The price level has continued to decrease in 2016, and the average spot price in GPN in March 2016 was 12.1 EUR/MWh.

In 2015, the Danish production of natural gas was 4,354 million Nm^3 which is a small reduction compared to 2014. The Danish gas production has been declining during the last 10 years. Danish gas exports amounted to 2,078 million Nm^3 in 2015. The export to Germany made up 42 pct. which is an increase from 36 pct. in 2014 and 1 pct. in 2013. The remaining export went to Sweden (37 pct.) and the Netherlands (21 pct.). In 2015, Denmark imported 624 million Nm^3 – 83 pct. from Norway and 17 pct. from Germany.

In 2015, gas was exported to Germany on 293 days of 2015. For half of the days, gas was exported to Germany without potential profit. This shows that during most of 2015, gas flowing across the Danish-German border was not in alignment with the price signals. DERA is paying special attention to this challenge and is regularly monitoring trends in the cross-border flow of gas and whether this moves contrary to price signals.

The European network code on balancing (NC BAL) required national implementation by 1 November 2015. The code was implemented in Denmark by 1 October 2014 (early implementation) introducing market based balancing. In 2015, DERA approved a few outstanding issues (e.g. the delivery of metering data for non-daily metered sites) for the new gas year starting on 1 October 2015, and by the end of 2015, the TSO submitted a comprehensive report on the functioning of the new balancing regime, inter alia on the price formation on the gas exchange for trades used for balancing settlements.

In 2015, the two Danish storage companies sold their storage capacities (and injection/withdrawal) in a combination of auctioning and FCFS (First Come First Serve) sales. However, increasingly, the Danish storage market is developing towards a situation, where capacity products are customized to the storage customers' individual requests.

In 2015, DERA analysed the competition in the wholesale market for natural gas in Denmark as part of its market monitoring tasks under the Danish Natural Gas Supply Act and European law. DERA concluded that structural developments in the gas market have made a positive contribution to market competition. However, the Danish gas market could still improve compared to the most efficient North-West European gas markets. DERA's assessment of the competition in the wholesale market is further presented in subsection 4.2.1.1.

2.2.2 Retail

The average gas retail prices including VAT, taxes and PSO have been within an interval of 74.91 to 80.36 EUR/MWh. The yearly costs in 2015 are the lowest of the nine years DERA has monitored consumer prices.

In the fall of 2014, DERA published an analysis of competition in the gas retail market. The analysis concluded that the consumers do not have a sufficient incentive to make an active choice of supplier as well as product. The analysis further concluded that the price of the supply obligation product is so low that it is difficult for independent suppliers to compete in the gas retail market.

2.2.3 Transmission and distribution

In 2013, DERA calculated that the 3 DSOs should reduce their operating costs annually with respectively 2.05 percent, 1.35 percent and 0.6 percent from 2014-2017. In both 2014 and 2015, the revenue caps for the three DSOs were cut by DKK 4.4 mil., and a similar level is expected in 2016 and 2017.

In September 2015, the Danish government announced its aim to list DONG Energy on the Copenhagen Stock Exchange. DONG Energy owns one of the Danish DSOs, and according to Danish law a change in ownership of vital Danish energy infrastructure may result in the execution of a right and duty for the Danish State to buy the infrastructure. In May 2016, the Danish TSO announced that they will buy and run the DSO.

In February 2016, the Danish Energy Agency presented the work of the Gas Regulation Committee "An efficient gas sector" (Gasreguleringsudvalget, *En Effektiv Gassektor*) – a report which describes and evaluates the challenges of the gas sector (TSO, DSO, retail), the economic regulation, structure of ownership of the DSOs, and an analysis of the detail market. The committee recommends adjustments to the economic regulation; that the work of the WACC expert group (on electricity) is implemented into gas regulation; more analysis of the industry; and elimination of price control on retail products.

2.3 REMIT

DERA is a national supervisory authority in relation to Regulation (EU) No 1227/2011 of the European Parliament and of the Council on wholesale energy market integrity and transparency (REMIT).

DERA has established cooperation with Nord Pool Market Surveillance which monitors trading activities and price formation within their market area. DERA also has a formalized cooperation with Gaspoint Nordic.

In spring 2015, DERA asked the Public Prosecutor for Serious Economic Crime to initiate a police investigation as to whether a company had violated the prohibition against market manipulation in connection with trade in an energy product on the Danish wholesale market for natural gas. The Public Prosecutor for Serious Economic Crime has closed the investigation. The Public Prosecutor for Serious Economic Crime based its decision on the fact that the investigation and collection of trading data carried out did not provide grounds for reasonable suspicion that a criminal act had been committed. DERA subsequently considered the case closed.

In 2015, DERA has prioritised providing assistance to market participants in connection with registration of market participants. Registration was a very comprehensive task for the market participants in the months preceding 7 October 2015, when the first phase of ACER's data reporting began. Trade in all standard contracts is now being reported to ACER.

3. The electricity market

3.1 Network regulation

3.1.1 Unbundling

Certification of Transmission System Operator (TSO)

In October 2011, DERA adopted its draft decision on the certification of the Danish system operator Energinet.dk for electricity and for natural gas following the rules for ownership unbundling. 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. Subsequently Energinet.dk bought/merged with 10 regional transmission grid companies. DERA made an investigation into all agreements concerning the operations. DERA did not find any reason for re-certification.

Energinet.dk is the sole TSO in Denmark. The transmission grid had a length of 6,007 km in 2015, cf. table 1.

Table 1 | Transmission system operator, 2015

Number of TSOs	Length of transmission grid
1	6,007 km

Source: The DERA secretariat

Unbundling of Distribution System Operator (DSO)

There are 61 DSOs in Denmark, and the length of the distribution grid – the voltage level under 60 kV – is 157,000 km. The distribution grid covers a total number of 3,300,000 consumers, cf. table 2.

Table 2 | Distributions system operators, 2015

Number of DSOs	Length of grid < 60 kV	Total number of consumer metering points
61	157,000 km	3,300,000

Source: The DERA secretariat

The Danish Parliament has passed the Danish Electricity Supply Act No. 1329/2013 (DES), where the obligations in directive 713/2009 art. 26 are integrated. Together with the executive order No. 980 of 2011, these legal acts define a number of obligations the DSOs have to fulfil to ensure that they will act without being affected by commercial interests of other vertically integrated associated companies. The executive order No. 980 of 2011 is substituted by the executive order No. 667 of 2015 by 1 April 2016, when the Danish supplier centric model is launched.

Amongst the above mentioned 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 any directors, board members, nor other influential employees with significant decision power can participate in the management of the group's electricity production or trading companies.

With respect to the communication and branding of the DSOs, DERA monitors the communication interface toward the customers in accordance with DES and the executive order No. 980 of 2011. The monitoring is executed with the goal to ensure that the branding of the DSO supports their own independent identity separated from the consolidated company and prevents 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 program 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.

In accordance with EC directive 2009/72, member states can decide not to apply the obligations of art. 26, if a DSO has less than 100.000 connected customers, cf. art. 26(4). A number of the provisions in art. 26(4) are applied in Denmark.

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

3.1.2 Technical functioning

Balancing services

The current method of recovery of balancing costs and the principles for settlement of imbalances used by the Danish TSO was approved by DERA in 2012.

Balancing costs are basically recovered by the market participant causing the cost/imbalance according to whether the market participant is *consumption balance responsible* or *production balance responsible*. Consumption balance settlement applies a one price settlement, and the production balance settlement applies a two price principle, reflecting whether the production imbalance support the system or not. The pricing principles incentivize the balance responsible to be in balance.

This method is the same in all four Nordic countries participating in the common Nordic balancing market *"The Nordic regulation Power Market"*.

Being a state owned non-profit company, the primary goal for the Danish TSO, Energinet.dk, is to maximize social welfare when deciding on market design etc.

Security and reliability standards and quality of service and supply
DERA's monitoring and reviewing duties are based on continuous information provided by Energinet.dk on 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
- Asset Management system at Energinet.dk in accordance with the PAS55 standard

Monitoring time taken to connect and repair
DERA monitors the time taken by the Danish TSO, Energinet.dk, to make connections and repairs. Annually Energinet.dk prepares a report for DERA regarding this topic.

DERA monitors the time taken by the DSOs' to make connections and repairs on the basis of annual reports from the Danish Energy Association. The yearly benchmarking of DSOs' includes the duration and frequency of interruptions.

Monitoring safeguard measures
In Denmark, all Danish authorities – municipalities, regions and central authorities – are required to have a plan for maintaining their most critical functions in event of major accidents and crises. This principle of sector responsibility is outlined in the Danish Emergency Management Act.

Energinet.dk, as transmission system operator, is responsible for emergency preparedness in the Danish electricity and gas sectors and for coordinating the emergency preparedness of the sectors before, during and after a crisis. Energinet.dk is not an authority; However, the Danish Energy Agency has granted Energinet.dk the authority to supervise and ensure emergency preparedness in the electricity and gas sectors.

All the companies in Denmark providing electricity production, transmission, and distribution pursuant to the Danish Electricity Supply Act, together with Energinet.dk, have therefore 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.

Renewable Energy Sources (RES) regulatory framework

Connection, access and dispatching regimes

New installations that produce electricity from renewable sources have the right to be connected to the grid. Energinet.dk and the network companies cooperate to ensure network access.

Electricity generation from decentralized co-generation plants and electricity generation installations that produce electricity from renewable energy or use waste products as fuel have priority access to the grid. Energinet.dk can only reduce or alleviate prioritized electricity generation if the reduction of electricity generation from other installations is not sufficient to maintain the technical quality and balance within the combined electricity supply system.

Prioritized access also applies to electricity from tendered offshore wind farms in accordance with the Danish RE Act as they can only be curtailed under special circumstances and against compensation for operational loss.

Energinet.dk establishes the criteria for reducing prioritized electricity generation. These criteria are approved by DERA.

Balance responsibility for RES-E

Electricity producers hold balance responsibility for the electricity produced at their own plants and are required to assign the balance responsibility to a Balance Responsible Party (BRP) if they do not want to hold the responsibility themselves.

RES-E is traded under the same conditions as other electricity generation.

Until 1 July 2015, Energinet.dk handled the balance responsibility for wind turbines and small-scale RE installations under purchase obligation.[3] From 1 July 2015 to 31 December 2018, this balance responsibility is being handled by two Danish BRPs following a tender process.

Wind turbines on market terms are required to assign the responsibility to a BRP. These wind turbines then receive a balancing subsidy of 2.3 øre (€ 0.003) per kWh because of the balancing costs they face. Off shore wind farms also hold balance responsibility but do not receive the 2.3 øre (€ 0.003) in balancing subsidy. In these cases the developers instead include this cost in the tender amount.

3.1.3 Network tariffs for connection and access

Transmission

According to national law (BEK nr. 965), DERA approves the tariff methodology for the Danish TSO, Energinet.dk, and the Danish TSO sets the actual tariffs in accordance with the approved methodology and submits the resulting tariffs to DERA.

Energinet.dk is a completely state owned company which is not allowed to build up equity or pay dividends to its owner, the Danish Ministry of Energy, Utilities and Climate. Energinet.dk is regulated under a strict cost plus regime which means that the company can in principle only recover "necessary costs" by efficient operations and a "necessary return on capital". The TSO has to transfer any surplus income (over coverage) back to the consumers through reduced tariffs – in principle in the calendar year following the calendar 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 coverage (deficit) but of course with opposite effect for the consumers.

According to the Danish Electricity Act (DES), DERA has to approve the annual report of Energinet.dk, and the decision on over coverage/under coverage is part of the approval process. The scrutiny of the annual report also involves regulatory scrutiny of the TSO's cost base. DERA and Energinet.dk have participated in the two European benchmark analyses of electricity TSOs, the latest being from 2013, and in the first European benchmark of TSOs which was concluded in 2016. The benchmarks play a role as background for DERA's economic regulation and assessment of Energinet.dk.

Distribution

In 2004, when the current regulation of the distribution companies (DSO) was adopted, there were 115 distribution companies. Today (May 2016) there are 61 distribution companies. The reduction in numbers of DSOs can mainly be attributed to mergers between DSOs (customer owned) and to municipals selling their distribution companies to other – consumer owned – DSOs.

[3] According to the Electricity Supply Act § 59 a, paragraphs 1-3, Energinet.dk has a purchase obligation for certain types of production. This means that Energinet.dk is obligated to purchase electricity from the producers and settle it to the prevailing market price and to handle the producers' balance responsibility.

DERA determines a revenue cap for each of the Danish DSOs annually. For a given distribution company, the revenue cap is fixed as a ”regulatory price” per kWh multiplied by the expected kWh transported in the coming year. The cap is set so tariffs in fixed prices on average do not rise compared to the level of tariffs in 2004. Furthermore, DERA determines the maximum allowed return on grid assets. In accordance with the DES, the maximum allowed return is fixed to the yield of a long term mortgage bond rate plus 1 percentage point. The allowed income of DSOs is restricted by either the revenue cap or the ‘maximum allowed return on grid assets’.

DSOs may apply to DERA for an increase of the revenue cap in order to cover ”necessary investments” due to public requirements, new supply areas etc. which are not included in the general obligation of distribution network companies to maintain and develop the network. Since 2007, DERA has made a benchmark of the economic efficiency of the distribution network companies for which a net volume model is used. Based on the results from this benchmark, DERA sets individual efficiency requirements for the network companies. Since 2008, the benchmarking has also contained an assessment of the quality of supply which in 2011 was extended to include the duration and frequency of interruptions.

DERA can set provisional individual efficiency requirements for the network companies if the companies fail to report the required information needed to assess the economic efficiency of the company. For the present period, the overall efficiency requirements involve a reduction in the companies’ 2015 revenue cap of approximately DKK 92 million, or 4.7 percent of the companies’ controllable costs.

This efficiency requirement has been disputed by the companies. The companies’ costs appear in the annual accounts which must be audited by a certified accountant and submitted to DERA every year.

DERA approves the companies’ tariff methodology and the methodology of terms of use, terms of connection and of access to national networks. The approvals are conditioned on the tariff and conditions being set in a fair, objective and non-discriminatory manner and based on necessary costs where every group of costumers pays the cost that they give rise to. The tariff methodology is set to prevent cross-subsidization between groups of costumers; hence uniform customers shall pay the same.

To prevent cross-subsidization between distribution and supply activities, the companies must comply with the rules regarding entity, accounting and management unbundling. DERA supervises the development of the retail market’s efficiency. To that end DERA on a regular basis produces a so-called competition analysis. Pursuant to relevant law, DERA is also required to inform the competition and Consumer Authority of circumstances that may be in violation with competition law.

Once the DSO tariff methodology is approved, the DSO accordingly sets its own tariffs. Further, according to the Danish regulation, the DSO reports when tariffs (set according to a methodology)

are adjusted. Larger DSOs' adjust several times each year – usually four times. For smaller DSOs, annual adjustments are more common. DERA does not approve the reported tariffs but does occasionally make investigations in order to ensure that the DSOs set their tariffs according to the approved methodology. Occasional investigations are mostly conducted after inquiries from costumers.

As the DSOs are free to set their own tariffs, based on their approved methodology, it is the DSOs' responsibility to adjust revenues in accordance with the revenue cap and/or maximum return.

Methodologies may be revised if necessary which i.e. was the case in 2014 concerning small solar panels (households). The amount of these installations grew rapidly, and the tariff structure was consequently updated in order to include payment for the operational availability of the grid.

In June 2015, DERA accepted a new, industry wide tariff model developed by the Danish Energy Association on behalf of the DSOs. The DSOs may, according to DERA's approval, use the model to calculate tariffs based on their costs and their revenue cap. The model calculates tariffs based on the costs related to each group of consumers, hence in a fair, objective and non-discriminating way and according to the necessary costs.

The model allocates the allowed revenue to the cost drivers. By doing this, it ensures that a consumer at a low voltage level, e.g. 0.4 kV, pays for the use of the entire grid. A consumer on a higher voltage level, e.g. 50 kV, does not pay for maintenance of the 10 kV and 0.4 kV grids. The model hence ensures that the DSO tariff is based on the specific DSO grid and the consumer category. The allocation of income to cost drivers creates consistency between revenue caps and actual costs of running the grid. If consumers on 0.4 kV level drive 50 percent of the costs, the group pays 50 percent of the revenue according to the model. The model allocates individual costs to consumers (e.g. metering) based on the average costs for that group of consumers.

The model opens up for time-differentiated tariffs (time-of-use tariffs) for all groups of consumers and thereby creates a possibility for the DSOs to utilize smart meters which has been enrolled to 50 percent of consumers as of 2015.[4] The time-differentiation is based on expected demand, not on the actual demand in the grid, as data is not yet available, and as the model calculates the tariffs based on a data-set – hence real-time tariff adjustment is not yet a possibility.

The model furthermore calculates a payment for "availability". As many households have become electricity producers with e.g. PV solar panels, DSOs experience lower consumption from the grid but not decreasing costs. As these households remain dependent on the grid when the panels do not produce, they pay a share of the costs. Therefore, in general terms, an availability tariff is calculated for larger producers and a fixed availability payment is set for smaller producers. Whether the tariff or the fixed payment applies depends on the installation.

[4] The largest DSO, DONG Energy Eldistribution A/S, has not yet enrolled smart meters. Their consumers account for ¾ of the 50 percent of consumers who do not have smart meters yet.

So far, 30 of the current 61 DSOs set their tariffs according to the new model, and the tariffs are as such set more homogeneous across the country.

In December 2014, the Electricity Regulation Committee published recommendations concerning changes of the regulation of the DSOs. The committee recommended higher transparency in the DSOs tariff setting. This has, to some degree, been met by the industry wide tariff model. The work on increasing transparency will continue throughout the year.

DERA has the authority to require DSOs to modify their terms and conditions, including tariffs, if these are inconsistent with the DES.

Prior to the final approval of a DSO's methodology or prior to decisions concerning the revenue cap or the individual efficiency requirements, the DSO will have the opportunity to comment on a version of the approval. After the approval, the DSO concerned may complain to the Energy Board of Appeal. A complaint must be in writing and must be submitted within 4 weeks after the decision.

3.1.4 Cross-border issues

Access to cross-border infrastructure

Allocation of capacity and congestion management

There has been no significant change in Capacity allocation and congestion management procedures in 2015. Day-ahead cross border capacity is allocated via the multi-regional coupling (MRC). All cross-border capacity is generally given to the day-ahead market coupling. 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.

On both bidding-zone borders to Germany as well as the internal border DK1-DK2, physical transmission rights (PTRs) are issued through monthly and yearly auctions. Data from recent years shows that the capacity is entirely used financially through the Use-It-Or-Sell-It (UIOSI) option, so that the capacity is given back to the (day-ahead) market.

Due to challenges in the German grid, cross-border capacity on DK1-DE has been heavily reduced in the southward direction as wells as partly in the northward direction. This leads to an average NTC of only 13 pct. available capacity in the direction towards Germany and around 54 pct. towards Western Denmark. Furthermore, no long term capacity in the form of PTR was auctioned in the southward direction in 2015. Monthly capacity was offered in the northward direction in a varying capacity.

Early implementation Project on the Harmonisation of Allocation Rules

On 1 January 2016, the Harmonised Allocation Rules for forward capacity allocation (EU HAR) was implemented in Denmark as an early implementation project.

EU HAR has its legal basis in the Forward Capacity Allocation Guideline (FCA GL) which received a positive vote by the Electricity Cross Border Committee in October 2015 and has now been submitted to the European Parliament and Council for scrutiny, scheduled to finish in autumn 2016. FCA GL will establish a framework for the calculation and allocation of interconnection capacity, and for cross-border capacity, in forward markets.

In coordination with regulators and interested stakeholders, ENTSO-E, the European network of transmission system operators for electricity, has decided to begin early implementation of a number of projects. EU HAR is one of the early implementation projects.

EU HAR is a single set of harmonised rules for trading across European bidding zone borders. The Danish TSO, Energinet.dk, submitted the first version of EU HAR to DERA during autumn 2015 to be applicable for the auctions of 2016. DERA approved the early implementation of EU HAR in November 2015.

ENTSO-E and regulators have decided to update the EU HAR to further align with the FCA GL even before it enters into force, i.a. due to requests from market participants. In July 2016, Energinet.dk submitted the second version of the EU HAR to DERA for approval to be applicable for the 2017 auctions.

Once the FCA GL enters into force, and the TSOs are legally required to develop the EU HAR, it is foreseen only to require minor changes compared to the setup under the second version of the EU HAR.

DERA organised a public consultation on the second version of the EU HAR which lasted 4 weeks (from 15 July to 15 August 2016). Through this public consultation each interested party was able to submit comments on the EU HAR. DERA did not receive any comments.

Monitoring technical cooperation between Community and third-country TSOs

Energinet.dk cooperates with Community TSOs and third-country TSOs (e.g. Statnett from Norway) within the TSO organization ENTSO-E (42 TSOs from 35 countries). On a European level, ENTSO-E cooperates within four main areas: System development, system operation, market and R&D.

Further to this, ENTSO-E has established several regional groups where Energinet.dk participates in those that are relevant for Denmark.

Energinet.dk also cooperates bilaterally with the Norwegian TSO (Statnett) and in addition to this the Nordic TSOs (Energinet.dk, Svenska Kraftnät, Fingrid and Statnett) cooperate on specific Nordic issues.

Energinet.dk can therefore provide the Danish Energy Regulatory Authority with information and reports from all relevant common projects relating to technical cooperation between Community and third-country TSOs.

Monitor TSO investment plans in view of TYNDP, PCI, also national development plans
Tasks of the regulatory authority regarding the Danish TSO's (Energinet.dk) investments are divided between DEA and DERA where DEA is responsible for the approval of Energinet.dk's investment plans etc. as well as for the approval of the actual investments.

DERA is responsible for the monitoring of Energinet.dk's investment plans and actual construction/building plans in the context of compatibility with the communitywide TYNDP which comprises projects of common interest as well as other cross-border investment projects.

The monitoring process has revealed no discrepancies between Energinet.dk's plans and the community wide TYNDP.

Energinet.dk is responsible for preparing investment plans (transmission) and submits these to the Danish Ministry of Energy, Utilities and Climate (owner of Energinet.dk) for approval and to DERA for monitoring compliance and compatibility with the European TYNDP.

Energinet.dk is responsible for assessing the need for new infrastructure and for planning possible (transmission) network expansions according to executive order No. 1034 of 11 November 2011. Every second year, Energinet.dk must publish a TYNDP and submit it to the Ministry and DERA.

Cooperation
DERA cooperates with ACER and other NRAs on cross-border issues as obliged to by Article 37(1)(c) of the Electricity Directive.

Furthermore, DERA cooperates with the other Nordic regulators within NordREG. A particular focus since late 2015 has been the increasing capacity restrictions on interconnectors between the Nordic countries and Germany, especially DK1-DE and the Baltic Cable.

3.1.5 Compliance

Compliance of regulatory authorities with binding decisions of the Agency of the Commission and the guidelines
According to DES § 79 a, DERA is obligated to comply with any legally binding decision of the Agency and of the Commission. There have been no compliance issues in 2015.

Compliance of transmission and distribution companies, system owners and electricity undertakings with the relevant Community legislation, including cross-border issues
Pursuant to DES, DERA has the competence to order compliance whenever a breach of Regulation No. 714/2009 is registered. Additionally, DERA has the power to carry out inspections and the possibility to impose fines, when an order to comply is not observed.

According to DES § 19 d, certified undertakings are obliged to report to DERA any planned transactions that could impact compliance with the conditions for certification.

The certified TSO must submit a yearly financial report to DERA for approval of species revenues and costs related to system operation on electricity and gas, including revenues resulting from allocation of interconnection capacity.

3.2 Promoting competition

3.2.1 Wholesale markets

Denmark is part of the Nordic electricity market, and interconnectors to neighboring countries are an important part of the Danish electricity system, especially in ensuring cost-effective integration of increasing wind power in the system. So far, Denmark has interconnectors to Sweden, Norway and Germany. A new interconnector between Denmark and The Netherlands are under construction and is expected to be operational in spring 2019. Furthermore, a new interconnector to U.K. as well as extension of existing interconnectors is being investigated.

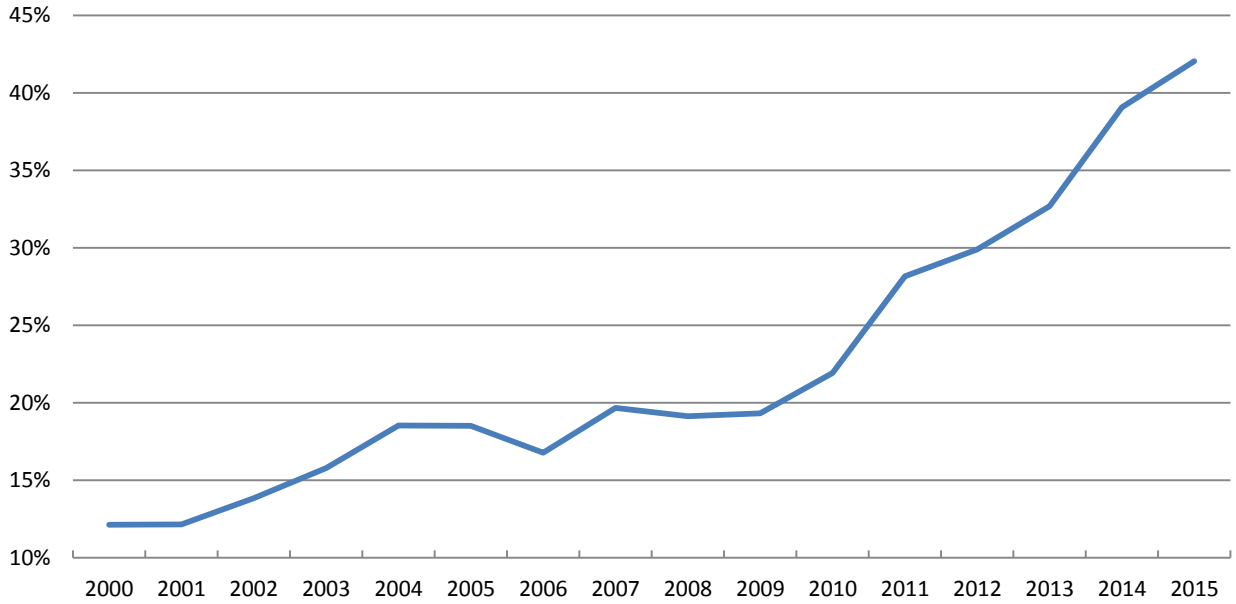
Table 3 | Danish electricity production, 2010-2015

Year	Net production, GWh	Net export, GWh			
		Total	Sweden	Norway	Germany
2010	36.763	1.135	2.238	2.597	-3.700
2011	33.382	-1.318	-2.446	-1.187	2.315
2012	29.139	-5.214	-7.514	-4.781	7.082
2013	32.956	-1.081	1.001	287	-2.369
2014	30.615	-2.855	-1.011	-2.667	823
2015	27.704	-5.912	-3.649	-4.954	2.691

Source: The DERA secretariat based on data from DEA
Note: Net production is gross production minus use of electricity in electricity generation. Negative value means import of electricity.

In 2015, the net production in Denmark was 27,704 GWh, which is lower than in 2014, cf. table 3. DEA numbers show that Denmark's wind turbines reached a share of 42 percent of the total electricity supply in 2015, cf. figure 1. Wind turbine's share in the total electricity supply has increased over the last years and is expected to increase even more during the coming years.

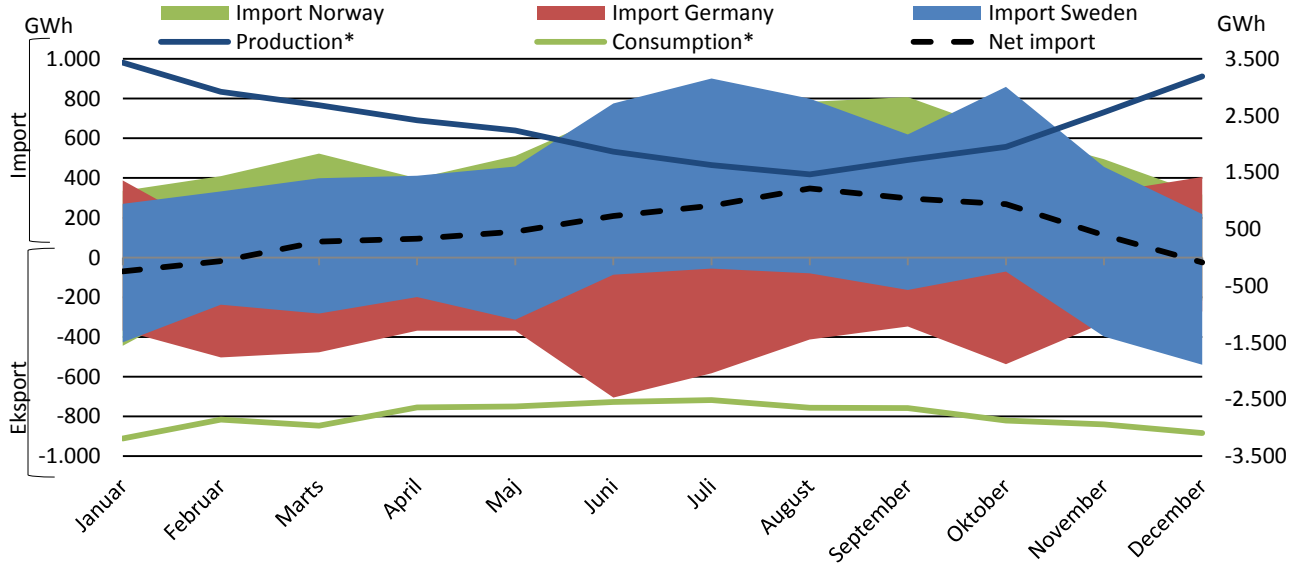
Figure 1 | Wind turbines' percentage share of total electricity supply, 2000-2015



Source: DEA

Denmark functions as a transit country between Germany and the two neighboring Nordic countries, Sweden and Norway. In 2015, Denmark's net import from Sweden and Norway was respectively 3,649 and 4,954 GWh, while Denmark was a net exporter to Germany with 2,691 GWh. In total, Denmark was a net importer of electricity with 5,912 GWh in 2015, cf. table 3 and figure 2.

Figure 2 | Danish electricity consumption, production and net export, 2015



Source*:* The DERA secretariat based on data from Energinet.dk and DEA

Note*:* *Must be read on the secondary vertical axis

Production and import are positive numbers while consumption and export are negative numbers. The net export is positive when the export is greater than the import and vice versa. Consumption is gross which means that it includes transmission loss.

3.2.1.1 Monitoring the level of prices, the level of transparency, the level of effectiveness of market opening and competition

In the Danish wholesale market, most of the trading takes place at the common Nordic power exchange, Nord Pool, which is owned by the Nordic and Baltic TSOs. In 2015, more than 93.7[5] percent of the total consumption of power in the Nordic market was traded at Nord Pool, and the exchange has one of Europe's most liquid day-ahead power markets. The prices for both day-ahead trading and intraday trading are made available at the homepage of Nord Pool.[6]

Market opening is generally high, as most of the interconnection capacity in 2015 is given to the market, cf. table 4. However, on the DK1-DE border, there has been a negative development in recent years. The level of net transfer capacity (NTC) that can be provided to the market has been constantly reduced over the last few years. Loadflows conditions and wind infeed in the north of Germany have led to decreased NTC levels. The situation is expected to improve significantly, when planned and necessary grid infrastructure investments are realized within Germany.

Table 4 | Nominal transmission capacity for the Danish interconnectors, 2015

Connection	Direction	Nominal capacity	NTC/Nominal capacity
The Electrical Great Belt connection (West Denmark – East Denmark)	DK1 → DK2 DK2 → DK1	590 MW 600 MW	97.3 % 97.2 %
Skagerrak-connection (West Denmark – Norway)	DK1 → NO2 NO2 → DK1	1,632 MW 1,632 MW	86.2 % 81.7 %
Kontiskan-connection (West Denmark - Sweden)	DK1 → SE3 SE3 → DK1	740 MW 680 MW	72.4 % 77.6 %
Oresund-connection (East Denmark – Sweden)	DK2 → SE4 SE4 → DK2	1,700 MW 1,300 MW	90.5 % 95.8 %
West Denmark – Germany	DK1 → DE DE → DK1	1,780 MW 1,500 MW	13.2 % 57.6 %
Kontek-connection (East Denmark –Germany)	DK2 → DE DE → DK2	585 MW 600 MW	92.7 % 94.7 %

Source: Nord Pool and Energinet.dk

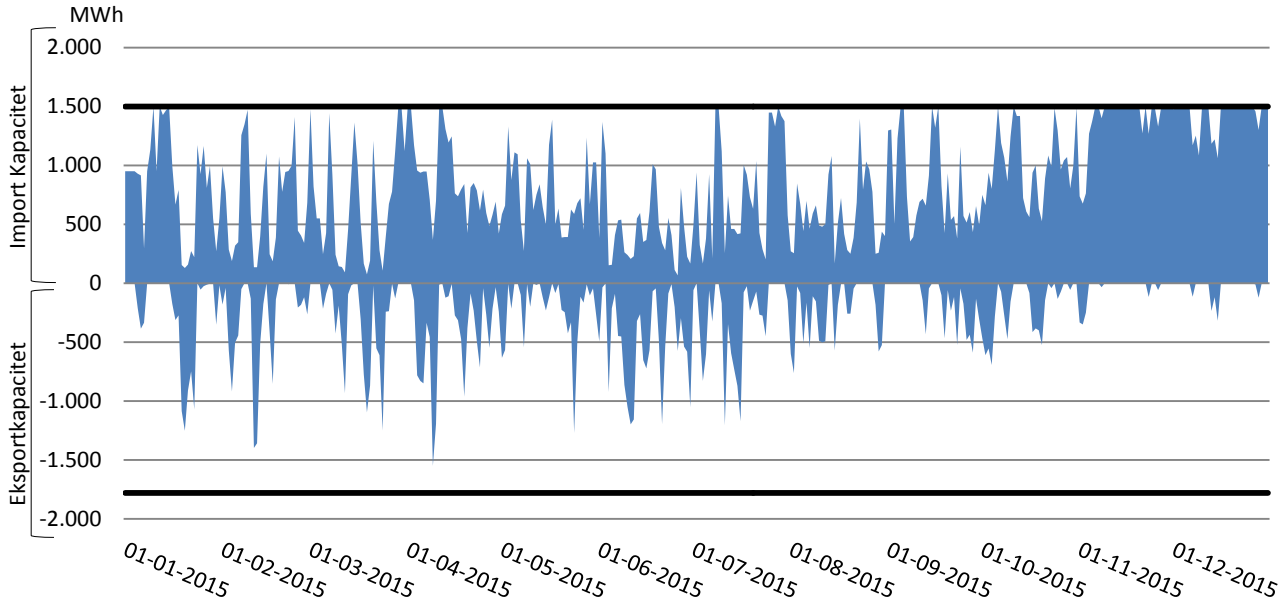
Note: The nominal transmission capacity is the maximal capacity that can be exchanged

In 2015, 57.6 pct. of the nominal maximum transmission capacity was available to the market in the import direction and 13.2 pct. in the export direction from Denmark's perspective. A development of the NTC for the Western Danish-German border is outlined in figure 3.

[5] This calculation does not take into account Lithuania's consumption and trading – data: Nord Pool.

[6] http://nordpoolgroup.com/

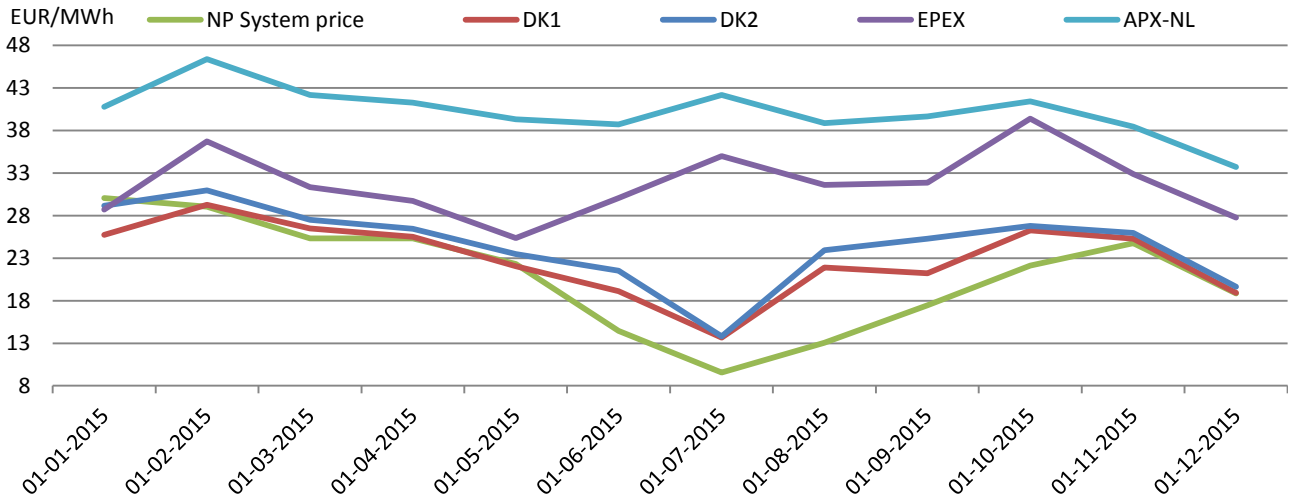
Figure 3 | NTC level for the interconnector between West Denmark and Germany, 2015



Source: The DERA secretariat based on data from Energinet.dk
Note: Average monthly development in the NTC between West Denmark and Germany. The horizontal black striped line represents the nominal maximum transmission capacity for the interconnector. The transfer capacities for import and export – from Denmark's perspective – are respectively given as positive and negative numbers.

The Nordic market is divided into bidding areas with Denmark being divided into two areas separated by the Great Belt. Figure 4 shows day-ahead prices in the two Danish bidding areas, Western (DK1) and Eastern (DK2) Denmark, as well as the system price of Nord Pool, the EPEX day-ahead price for Germany and the APX NL day-ahead price for the Netherlands. The system price of Nord Pool denotes an unconstrained market clearing price, since the trading capacities between the bidding areas have not been taken into account in the calculation of this price. The system price is used as a reference price in Denmark.

Figure 4 | Day-ahead spot prices, 2015



Source: The DERA Secretariat based on data from Energinet.dk and APX NL

Whenever there are grid congestions, the Nordic area is divided into several price areas. The Danish spot prices are frequently higher than the Nordic system price, but lower than the Continental European prices, reflecting Denmark's geography between the Nordic hydro based system and the thermal based continental production, cf. figure 4.

Electricity wholesale prices primarily depend on the electricity prices on Nord Pool which are influenced by precipitation in the Nordic countries, fuel prices for the thermal power plants, customer demand and outages in the transmission grid.

The Spot prices in Denmark for the year 2015 have in general followed the development of the system price of Nord Pool – although the Danish prices have had a tendency to be slightly higher – except for June to October where the Danish prices were markedly higher than the system price. The prices in DK1 and DK2 are often different (the average wholesale prices are respectively 23.0 and 24.5 EUR/MWh) and most of the time the prices in DK1 are lower because of high wind production and import of hydro electricity from Norway.

As a result of the geographic location, the average wholesale price in Demark in 2015 was 23.7 EUR/MWh, while the average prices from APX NL, EPEX and Nord Pool's system price respectively were 40.3, 31.7 and 21.0 EUR/MWh.

DERA monitors the wholesale market in Denmark. A market monitoring report, which focuses on price development, competition, market development, structural problems etc., is published twice a year. DERA has not observed any exceptional challenges to the wholesale prices in Denmark for the year 2015 for the two Danish bidding areas; i.e. the wholesale prices have been far from the defined price caps (minimum -500 EUR/MWh and maximum 3,000 EUR/MWh).

Total traded volume (i.e. intraday and day-ahead volume) for both of the Danish bidding areas has increased by 3.7 percent from 56.1 to 58.2 TWh from 2014 to 2015, cf. table 5. This increase in total traded volume can be contributed to the fact that both the intraday and the day-ahead volume has increased in 2015. The intraday volume has increased with 11.1 percent (from 1.8 TWh in 2014 to 2.0 TWh in 2015), while the day-ahead volume has increased with 3,5 percent (from 54.3 TWh in 2014 to 56.2 TWh in 2015).

Table 5 | Yearly traded volume for both of the Danish bidding areas, 2014-2015

	2014	2015	Percentage change
Day-ahead volume	54.3 TWh	56.2 TWh	3.5 %
Intraday volume	1.8 TWh	2.0 TWh	11.1 %
Total traded volume	56.1 TWh	58.2 TWh	3.7 %

Source: The DERA secretariat based on data from Nord Pool

A small score on the index (Herfindahl–Hirschman Index (HHI)) indicates a competitive market with no dominant players. The HHI for the year 2013 indicates a more competitive market in West Denmark compared to the HHI in East Denmark, cf. table 6.

Table 6 | Concentration index (HHI) for the Danish wholesale markets per bidding area, 2013[7]

DK1	DK2
893	3552

Source: Nordic Market Report 2014
Note: The market concentration index (HHI) is calculated as sum of squared market shares based on installed capacity and give an indication of the likelihood of market power being used.

In 2015, DERA has received and approved the following highlighted market design applications and decisions:

- On 27 January 2015, DERA approved the methodology behind Energinet.dk's tender of strategic reserves for the period 2016-2018[8] in eastern Denmark (DK2). The tender was, however, not completed and is temporarily on hold.
- On 19 May 2015, DERA approved the methodology for purchasing secondary reserve capacity[9] in case the delivery of secondary reserves from Norway through the interconnector Skagerrak is unable to be delivered.
- On 27 October 2015, DERA made a decision to designate Nord Pool Spot AS as Nominated Electricity Market Operator (NEMO) in the Danish bidding zones for trading of electricity.[10] The designation is decided according to rules in Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (CACM). CACM sets out minimum harmonised rules for the ultimately single day-ahead and intraday coupling, and establishes that certain harmonised conditions or methodologies must be developed by TSOs and NEMOs and approved by the regulatory authorities. The designation of NEMOs is the first step in this process. The decision constitutes the first designation of a NEMO in the Danish bidding zones. Applicants for designation in the Danish bidding zones must submit an application to DERA. DERA accepts applications on a continuous basis.

New market model

In order to address and prepare for the challenges related to the energy transition and even higher RES share in Denmark in the future, Energinet.dk has initiated a process to develop an adjusted market design. The project – called Market Model 2.0 (*Markedsmodel 2.0*) – started in 2014 and is

[7] Numbers from 2013 are the latest available to DERA.
[8] To this date only in Danish:
http://energitilsynet.dk/el/afgoerelser/tilsynsafgoerelser/2015/energinetdks-anmeldelse-af-metode-til-indkoeb-af-strategiske-reserver-i-oestdanmark-for-perioderne-2016-18-og-2019-20/
[9] The approval is only available in Danish:
http://energitilsynet.dk/el/afgoerelser/tilsynsafgoerelser/2015/metodeanmeldelse-udbud-af-leveringsevnekontrakter-for-sekundaere-reserver-energinetdk/
[10] http://energitilsynet.dk/fileadmin/Filer/0_-_Nyt_site/EL/Tilsynsafgoerelser/2015/NEMO15-06195__Off._version.pdf

ongoing. In the process, Energinet.dk has involved national and European market participants, TSOs, regulators, consumer organisations and member states representatives.

In 2015, a report with 24 recommendations and initiatives was published. Three main areas were identified where action is needed:

1) *Capacity*. Calculations show that system adequacy for Eastern Denmark will be challenged from 2025, and new mechanisms are necessary in order to sustain the currently high security of supply in Denmark.
2) *Flexibility*. There is a need for increased incentives for flexible demand and supply.
3) *System supporting services*.[11] There is a need for alternative supply of system supporting services in a market with less and less thermal plants that historically deliver.

The identified initiatives are expected to be implemented in 2017.[12]

3.2.2 Retail markets

Brief illustration of the state of competition of the retail market and the main changes in the recent year

The Danish retail electricity market has been fully liberalized since 2003. This means that Danish electricity consumers can freely choose between electricity suppliers. However, barriers for obtaining an effective competition in the retail market for electricity still exist. The government has taken important steps towards eliminating these barriers, e.g. the introduction of the so called wholesale model, also known as the supplier centric model.

A competitive market is characterised by price competition among suppliers and consumers that are willing to and actually do react on price differentials. In Denmark, there is a low mobility of consumers, indicating a low attention by the consumers to electricity prices.

In June 2014, an amendment of the DES obligation regulation was passed by the Danish Parliament following up on the initial recommendations of the Electricity Regulation Committee from May 2013. According to the amendment, the supply obligation system is abolished from 1 April 2016. To secure that all consumers are able to get electricity, a new supply obligation is introduced instead. Now, all suppliers are obliged to supply household customers.

The amendment means that all inactive consumers were moved to a trade product without any regulations. After this change, more than 90 percent of the consumers receive a non-regulated product.

However, 9 license holders,[13] who have been awarded supply obligation licenses prior to 1 January 2013 for a period of 5 years, will still be operating under the previous regulatory regime with prices

[11] Reactive power, circuit control and voltage control.
[12] More information can be found on Energinet.dk's homepage:
http://www.energinet.dk/EN/El/Engrosmarked/Ny%20markedsmodel/Sider/default.aspx
[13] 8 as of 1 April 2016.

regulated by DERA, until their licenses expire in 2017. These constitute the remaining 10 pct. of the consumers.

3.2.2.1 Monitoring the level of prices, the level of transparency, the level of effectiveness of market opening and competition

The electricity consumers have a wide diversity of electricity products to choose from. These can be divided into fixed price, variable/spot price and products from renewable sources. In a few areas the consumers can still opt to receive products where prices are supervised by DERA, i.e. the supply obligation product. Furthermore, DERA also approves the distribution companies' methods of setting prices, i.e. net tariffs.

The average price of electricity for the regulated supply obligation product consumer has increased by 0.6 percent from 30.37 eurocent/kWh in 2014 to 30.55 eurocent/kWh in 2015, despite a fall in energy prices of 13.7 percent from 2014 to 2015, cf. table 7. The drop in energy prices is counterbalanced by an increase in taxes and public service obligations (PSO) of 5.1 percent.

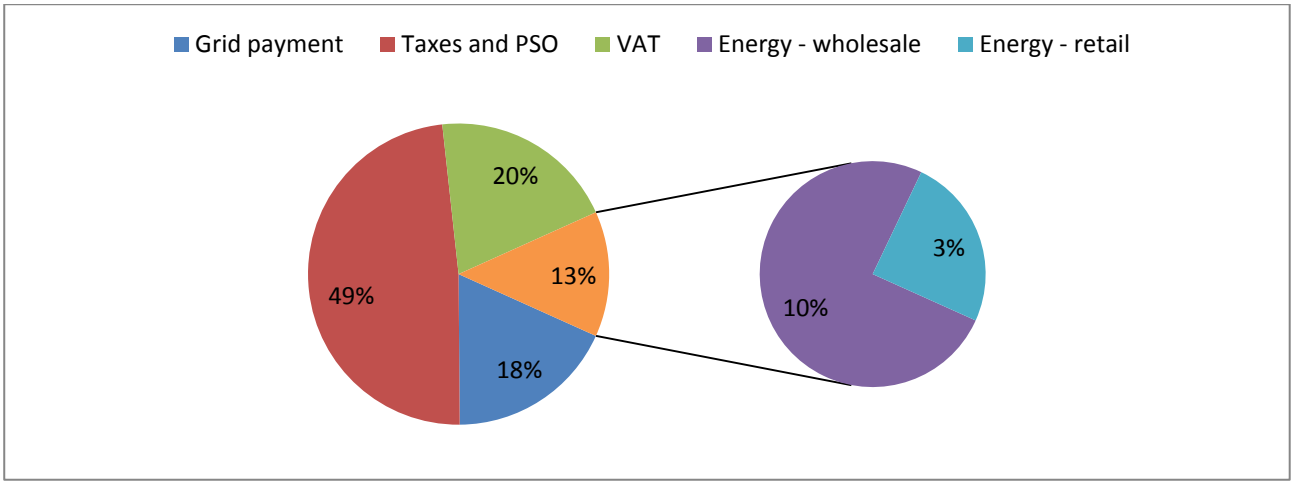
Table 7 |Average retail electricity prices, euro cent per kWh, 2008 – 2015

Euros/KWh	2008	2009	2010	2011	2012	2013	2014	2015
Energy	7.33	5.42	5.71	6.63	5.54	5.03	4.76	4.11
Grid payment	4.60	4.95	4.95	5.22	5.39	5.39	5.47	5.54
Taxes and PSO	9.74	10.61	10.81	11.66	12.89	13.32	14.06	14.78
VAT	5.42	5.24	5.37	5.88	5.95	5.93	6.07	6.11
Total price	27.09	26.21	26.85	29.39	29.77	29.67	30.37	30.55

Source: The DERA secretariat
Note: Electricity price statistics for supply obligation electricity.
PSO (Public Service Obligations) are taxes to finance subsidies for renewable energy and energy research.
Subscription fees are included in the energy and grid components respectively.
An annual consumption of 4.000 kWh is the base for the above numbers.

The electricity price is composed of several elements, cf. figure 5. The energy price (which can be divided into retail and wholesale energy prices) is the price of electricity excluding taxes, transmission and distribution. The pure energy price, excluding subscription, constitutes about 13 pct. of the total energy price, while taxes and VAT constitutes about 69 pct. The remaining 18 pct. is from grid payment, cf. figure 5.

Figure 5 | Composition of the price of electricity 2015



Source: The DERA secretariat
Note: Electricity price statistics for supply obligation electricity.
PSO (Public Service Obligations) are taxes to finance subsidies for renewable energy and energy research.

Transparency

Pursuant to new legislation from June 2015, DERA is obligated to manage a new online portal for electricity prices. The online portal was launched on 1 April 2016. The updated price comparison tool (PCT) is developed in association with the IT-company Atkins. The new PCT is named elpris.dk and is administered by DERA. The main purpose of elpris.dk is to make it easier for consumers to compare the various offers from the Danish electricity market. Elpris.dk covers the national market, and the homepage enhances the consumers' insight of electricity prices. It thereby makes the market more transparent for consumers.

DERA also publishes two types of price statistics. The first depicts the prices of regulated products. The second depicts prices of products that are not price regulated. In addition to the legislation enacted in 2015, DERA is obliged to publish an annual report on retail prices from 2016. The report will illustrate the development in retail prices. Further, it will make it easier for customers to navigate and understand the Danish electricity market.

Effectiveness of competition

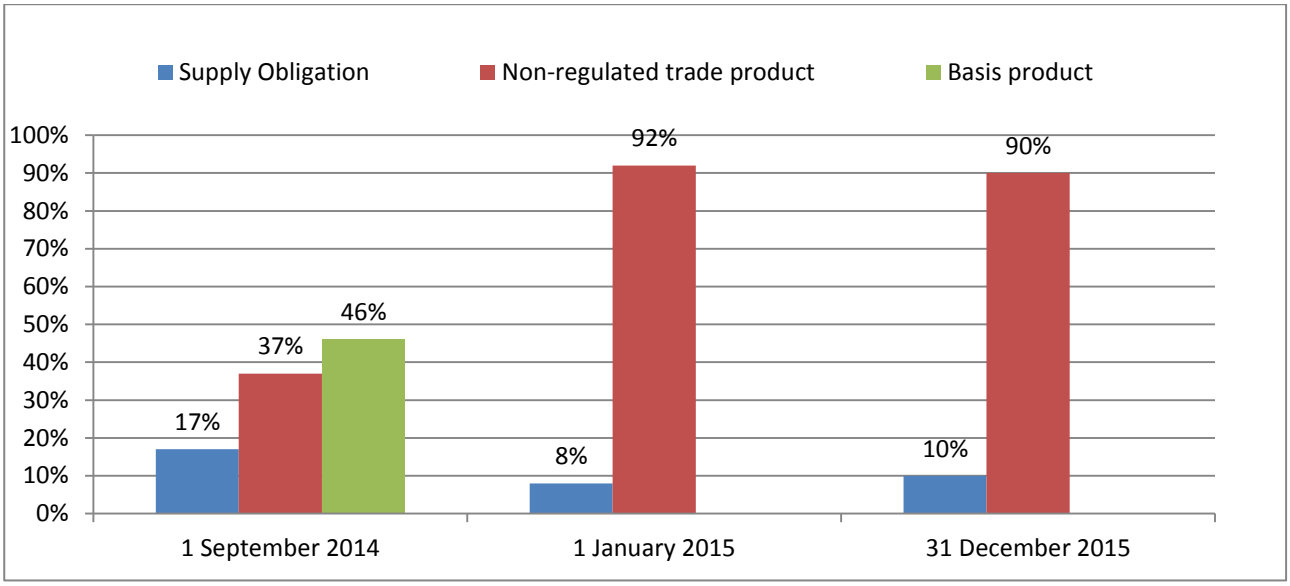
As previously stated, one of the main persistent barriers for effective competition in the retail electricity market is a relatively low attention by the consumers to price differences in the electricity energy price (price exclusive taxes).

3.2.3 Recommendations on supply prices, investigations and measures to promote effective competition

Recommendations on supply prices

The Danish electricity retail market is fully liberalized. In 2015, most Danish consumers received a non-regulated product.

Figure 6 | Distribution of customers among different product types, 2014-2015



Source: The DERA secretariat

In 2015, about 10 percent of the Danish electricity customers were supplied at prices regulated by DERA.

This small share of customers left in the regulated market does not, however, show the full picture of the competition. Around half the customers in the competitive market have been moved there as a result of passivity. This is due to the fact that the obligation to offer the basic product to inactive customers expired on 1 October 2014. Accordingly, all the customers were moved to a product from the competitive market by their former supplier (given passivity from the customer's side).

A DERA analysis from 2012 on competition in the retail market of electricity presented a number of recommendations related to both competition and regulation of consumer prices. The recommendations are listed below:

- The primary challenge is to induce consumers in the retail market for electricity to make an active choice of supplier as well as product. In 2015, 7.2 percent of the Danish consumers switched supplier.
- Also, it is of importance to induce suppliers to compete and seek to gain market shares in other geographical areas of the national market. In 2015, the market saw an increase in companies selling their products outside their original supply obligation area.
- The analysis finds that the regulation of prices – which covered approximately 85 percent of the market in 2012 – did not in a sufficient way induce consumers to make an active choice. Regulation of prices and the supply obligation is therefore in the process of abolishment.
- An adjustment of the price regulation system will not likely lead to significant changes in consumer mobility in the segment of consumers with relatively small electricity consumption because the economic incentives of this group is very limited.

Box 1 | The old and new supply obligation product and the basic product

Old supply obligation product (9 of 39 areas): If the area where the customer resides has not been under a tendering process, the inactive customer receives the old supply obligation product which sets its prices according to a mark-up method. The remaining areas with this product will switch to full competition in 2017.

New supply obligation product (30 of 39 areas): If the area where the customer resides has been under a tendering process and the customer either actively choses the new supply obligation product; move there or the former commercial contract has expired without a renewal, the customer will be moved to the new supply obligation product. The new supply obligation product sets its prices according to a bidding from the companies on an adjustment to the wholesale price; the adjustment covers both costs and profits. The areas with this product will switch to full competition 1 April 2016.

Basic product (not used after 1 October 2014): If an area had been through a tendering process, the customers who received the old supply obligation product were moved to a basic product by their existing electricity supplier. The price and conditions for the basic product corresponded to the price and conditions of the supply obligation product, but without the actual supply obligation.

Investigations and measure to promote effective competition

In 2015, there have not been any major investigations and measures to promote the competition as these were postponed to 1 April 2016.

Datahub

In relation to the introduction of the supplier centric model in the Danish electricity market on 1 April 2016, the Danish TSO, Energinet.dk, which runs the datahub, launched an updated version of the datahub.

All actors in the electricity market need to enter the datahub to reach specific data. All consumers can get access to the datahub through their supplier and have access to their own metering data. Electricity suppliers are free to choose how to visualize consumption data to their consumers. The standardization of third party access has been improved. Energy advisors, service providers and other third parties should be able to access the data of a specific consumer in a controlled and secure way. When a third party applies for access to the data of a consumer, the consumer will verify the third party's identity by using NEM-ID.[14] The consumer will then decide and control:

- Who can receive the data
- How much data can be received
- For how long data can be accessed

[14] NEM-ID is a Danish secure electronic identification and access system which is used for many kinds of electronic access, for example all online banking.

Supplier centric model

The supplier centric model (SCM) was launched on 1 April 2016. Its focus is to increase competition and transparency through PCT and datahub in order to make incentives for consumers to become active. The consumers' awareness of the electricity market is fundamental to increase competition.

To involve consumers in the electricity market – and thereby increasing the competition – a legal Order of billing was drafted. When SCM is launched, the bills merge into one bill sent from the supplier. Thus, the supplier will be responsible for the consumers' payment of taxes and levies. The supplier will allocate the payment of taxes and levies to the DSO. This also means the supplier will be responsible for all customer contact. Previously, this responsibility was split between the supplier and the DSO.

3.3 Security of supply

DEA 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 2015"* which is part of DEA's annual reporting.[15]

[15] To this date only in Danish:
http://www.energinet.dk/SiteCollectionDocuments/Danske%20dokumenter/Om%20os/Systemplan%202015.pdf

4. The gas market[16]

4.1 Network regulation

4.1.1 Unbundling

Certification of TSO

In October 2011, DERA adopted its draft decision on the certification of the Danish system operator, Energinet.dk, for electricity and for natural gas following the rules for ownership unbundling.

DERA adopted its final decision on the certification of Energinet.dk in February 2012.

The legal status of the Danish TSO has not changed in 2015 or since the original certification, and it continues to be ownership unbundled. The structure of the TSO has, however, changed, as Energinet.dk now owns both storage facilities in Denmark, cf. section 4.1.2 in subsection *Monitoring access to storage, linepack and other ancillary services*.

In 2015, it was decided in a political agreement that Energinet.dk (gas) should purchase the gas distribution grid and upstream pipelines of DONG Energy, the major Danish gas company of which the Danish State is a majority shareholder.

In May 2016, Energinet.dk purchased DONG's distribution grid for DKK 2.3 billion. Sales negotiations for DONG's upstream pipeline business have been postponed but are still expected to be completed at a later date.

The new activities of Energinet.dk are not expected to rise to any concerns in respect of the certification of Energinet.dk as a TSO.

Energinet.dk is the sole TSO in Denmark, and the gas transmission grid has a length of 924 km, cf. table 8.

Table 8 | Transmission system operator, 2015

Number of TSOs	Length of transmission grid
1	924 km

Source: The DERA secretariat

Unbundling of DSO

In Denmark, there are 3 DSOs and in 2015 the length of the distribution grid was approx. 18,875 km. In 2015, the distribution grid covered approx. 411,500 consumers, cf. table 9.

[16] The structure of the gas market chapter is identical to the structure of the chapter on the electricity market.

Table 9 | Distributions system operators, 2015

Number of DSOs	Length of grid	Total number of consumer metering points
3	18.875 km*	411.500*

Source: The DERA secretariat
Note: *Numbers from Energinet.dk.

The Danish Parliament has implemented a number of obligations in the Danish Natural Gas Supply Act § 11 a. Together with the executive order No 979 of 2011, these legal acts define a number of obligations the DSOs have to fulfil to ensure that they 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 other companies within the group, it is decided that the directors, the board members, nor other influential employees with significant decision power can participate in the management of the group's gas production or trading companies.

Regarding the restriction on the parent company's involvement in day-to-day operations, it is prohibited on a general level by the Danish company law, which regulates 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 interface toward the customers in accordance with the Natural Gas Supply Act § 11 b and executive order 979 of 2011. The monitoring is executed to ensure that the branding of the DSO supports their own independent identity separated from the consolidated company and prevents 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 submit their compliance program as well as a report describing the measures carried out to ensure their fulfilment of the compliance program. DERA receives both the DSO's compliance program and the annual report and monitors the DSO's fulfilment of the requirements set out in art. 26.

The abovementioned obligations apply to all DSOs with more than 100,000 connected customers, cf. art. 26(4). In Denmark, 2 out of 3 DSOs meet the requirements of art. 26.

The license to distribute gas provides some limitations for the DSOs regarding activities, which the company can engage in when having a DSO license. The DSOs are restricted to act only within an independent company and exclusively to participate in license related activities. These requirements also contribute to ensure that the resources within the DSO companies are kept in the regulat-

ed company. Further, the DSOs' surpluses are regulated to prevent abuse of the DSOs' monopoly.

4.1.2 Technical functioning

Balancing services

The European network code on balancing (NC BAL) required national implementation by 1 November 2015.

The code was implemented in Denmark by 1 October 2014 (early implementation) introducing market based balancing. The Danish gas exchange, Gaspoint Nordic, now serves as a trading platform for market trading for the within-day product (title product) for balancing. The exchange has extended its opening hours (to 24/7) to service the new balancing model, and the DSOs now deliver metering data for daily metered sites five times throughout the gas day. The model has full end-of-day cash-out and incentive-based balancing based on a helper/causer model.

In 2015, DERA approved a few outstanding issues (e.g. the delivery of metering data for non-daily metered sites) for the new gas year starting on 1 October 2015, and by the end of 2015, the TSO submitted a comprehensive report on the functioning of the new balancing regime, inter alia on the price formation on the gas exchange for trades used for balancing settlements. This reporting requirement was a condition in the 2014 approval from DERA.

The report from Energinet.dk concludes that the new balancing regime has in general been well received by the market and is working well. However, liquidity in the short-term balancing product (within-day) remains fragile, and the report also highlighted that it would be helpful to have a market maker to support and boost short-term trading at the exchange.

In February 2016, the gas exchange announced that it has managed to sign a market maker agreement with a major Danish gas company to support short-term trading at the exchange. The company is committed to place within-day orders of 30 MW with a maximum spread of 0.25 EUR/MW.

Security and reliability standards, quality of service and supply

DERA's monitoring and reviewing duties are based on continuous information provided by Energinet.dk on activities relating to:

- Performance of scheduled maintenance works
- Revision of maintenance systems or procedures
- Reporting 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
- Ongoing implementation of Asset Management system at Energinet.dk in accordance with the ISO55001 standard

Monitoring time taken to connect and repair
DERA monitors the time taken by the Danish TSO, Energinet.dk, to make connections and repairs. Every year, Energinet.dk prepares a report for DERA regarding this topic.

DERA does not monitor the time for the DSOs to make connections and repairs.

Monitoring access to storage, linepack and other ancillary services
According to the Danish Natural Gas Act, there is negotiated access to storage and linepack in Denmark. Today, there is no price regulation under the Natural Gas Act, though DERA still has to make sure that third party access to storage is provided in a manner that is transparent, non-discriminatory and objective.

In 2015, the two Danish storage companies sold their storage capacities (and injection/withdrawal) in a combination of auctioning and FCFS (First Come First Serve) sales. However, increasingly, the Danish storage market is developing towards a situation where capacity products are customized to storage customers' individual requests. This is also the result of a difficult market where storage companies have to act proactively in the market. On the one hand, this is positive since market needs are met and innovative products are offered. On the other hand, it makes market access less transparent and the monitoring task more difficult.

The total Danish storage capacity is approx. 1 billion m^3.

As part of DERA's market monitoring pursuant to the Third Package market monitoring requirements, DERA monitors the storage market and its interaction with the overall Danish gas market.

In late 2014, it was announced that the Stenlille storage (owned by DONG Energy) would be sold to Energinet.dk (which already owns the storage facility at Lille Torup) subject to the approval of the Danish Competition and Consumer Authority. This approval was issued in December 2014, and from 1 January 2015 Stenlille storage facility was included in the Energinet.dk Group. From 1 May 2015, Energinet.dk Gas Storage introduced a new virtual storage point which means that the two physical storage facilities are operated as one storage in relation to the market and in the way storage customers nominate gas in and out of storage.

DERA will monitor the flexibility market closely, and if storage competition and storage pricing seem to divert from the market, DERA will be ready to approach the legislator to discuss whether the present negotiated access regime can be sustained in the new monopoly situation with only one storage owner. For the time being, there is no indication that the monopoly situation can be misused as the Danish flexibility market continues to develop with a high degree of competition.

Monitoring correct application of criteria that determine model of access to storage
In Denmark, there is negotiated access to storage. This is politically decided and supported by national law – based on the fact that storage is a competitive activity that also competes in a growing

regional market and with other flexibility tools; e.g. new transmission infrastructure and more flexible contract structures.

DERA monitors the criteria supporting the choice of negotiated access. As mentioned, DERA will monitor access to storage. If competition, access conditions or product choices/prices would seem to suffer from the new storage situation in Denmark, DERA will approach the legislator to discuss if the access regime should continue to be negotiated or should in fact be changed to a regulated access regime.

Monitoring safeguard measures

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 994/2010 concerning measures to safeguard security of gas supply.

A new network code was introduced in the Danish gas market on 1 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/or similar events.

Non-market based measures cannot be applied at any pre-emergency level in the crisis management structure introduced by EU Regulation 994/2010 (Security of Supply).

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, DEA, will under the new crisis management system in accordance with EU-regulation 994/2010, article 10(5), inform the EU Commission when a supply crisis necessitates an escalation in the crisis management structure.

In Denmark, the level of protection is the maximum level allowed under the Security of Supply regulation, and market based instruments like commercial interruptibility are used to avoid having to declare emergency where the non-protected customers may ultimately be disrupted. Under the Danish commercial interruptibility regime, consumers above a certain consumption threshold may opt to participate in an auction where they place bids at what price they are willing to voluntarily cut off or reduce their consumption in case of a threatening supply situation. Thus, the TSO purchases the right to cut off consumers already in the alert phase. The products are called Hyper72 and Hyper3 and they indicate at what time (72 or 3 hours after an alert declaration) the successful auction bidders (consumers) have to cut off or reduce their gas consumption in a crisis situation.

Energinet.dk is responsible for providing information to the market whenever a critical situation may arise. Energinet.dk has the following three steps in its emergency supply preparedness; “early warning”, “alert” and “emergency”. The three steps make up the European gas market scale of

warnings which were introduced on 1 October 2012 with the EU regulation concerning measures to safeguard security of gas supply. Depending on the consumers' gas consumption, the Danish gas consumers are divided into protected and non-protected consumers.

In 2015, there were no national declarations of early warning, alert or emergency.

4.1.3 Network and LNG tariffs for connection and access

Transmission

There are no LNG (Liquefied Natural Gas) terminals in Denmark. Consequently, the following information applies only to gas transmission.

According to national law, DERA approves the tariff methodology for the Danish TSO, Energinet.dk. Energinet.dk sets the actual tariffs in accordance with the approved methodology and submits the resulting tariffs to DERA.

Energinet.dk is a completely state owned company which is not allowed to build up equity or pay dividends to its owner, the Danish Ministry of Energy, Utilities and Climate. Energinet.dk is regulated under a strict cost plus regime which means that the company can in principle recover only "necessary costs" by efficient operations and a "necessary return on capital". The TSO has to transfer any surplus income (over coverage) back to the consumers through reduced tariffs – in principle in the calendar year following the calendar 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 coverage (deficit), but naturally with opposite effect for the consumers.

According to the Danish Natural Gas Supply Act, DERA has to approve the annual report of Energinet.dk. The decision on over coverage/under coverage is part of this approval process. The regulatory scrutiny of the annual report also includes a review of the TSO's cost and asset base.

In 2013, a new methodology was approved and has been in effect throughout 2014 and 2015. With the new regime, Denmark has moved away from uniform tariffs and has introduced differentiated tariffs for the different entry/exit points in the Danish transmission system. The new regime introduced a new relationship between capacity and volume payments based on the actual annual split between variable and fixed costs. The capacity/volume split used to be fixed in the ratio 75/25 but is now adjusted on a yearly basis.

DERA will, however, require further data from Energinet.dk on the cross-border effect of the new capacity/volume split. The approval of the differentiated tariffs was made temporary (a pilot period). The TSO was asked to produce a new methodology submission in 2014 in which the TSO should account in more detail for the actual use of the new pipeline from Egtved to Ellund, the new compressor station in Egtved and the remaining system, in order for DERA to be able to approve a

method for the following gas year 2015/2016 (and possibly for more years depending also on the outcome of the European process on a new network code on harmonized tariff structures).

The new infrastructure has been used less than expected also in 2015 (because of the market situation with a net export flow), and the data on use have been insufficient as to genuinely assess the cost distribution. Therefore, the pilot period has been extended. In 2016, DERA will review the tariff regime in view of getting a more even cost allocation across the system points.

Distribution

The Danish DSOs are subject to a revenue cap regulation. The revenue cap is set for the 3 DSOs for a four year period (currently 2014-2017). 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.

Before a new regulation period, DERA informs the DSOs about their expected revenue caps for each of the four years. The regulation is retrospective, and the expected revenue caps are revised, based on regulatory accounts.

DERA approves the companies' tariff methodology, the methodology of use, of terms and of connection and access to national networks. The approvals are conditioned on the methodology being set in a fair, objective and non-discriminatory manner. Further, the tariff methodology is set to prevent cross-subsidization, i.e. according to the costs that the different grid users induce. Once the methodology is approved, a distribution network can set its tariffs as long as the company does not violate its revenue cap.

The distribution tariffs are set as volume charges, based on a methodology approved by DERA. DERA does not approve tariffs, but the DSOs have to report the tariffs to DERA when they change. The methodology was approved in 2005 and has developed on a continuous basis, sometimes independently for each DSO. For example, an adjustment to the methodology was approved in 2013, and new customers with large expected consumption can pay a lower unit price for distribution if they pay the full cost of the grid connection.

Tariffs for gas distribution are independent of distance and set to reflect the cost of delivery. According to the methodology, the tariffs decrease when consumption increase. The methodology ensures that all costumers pay a high tariff for the first cubic meters delivered and a lover tariff for volumes that exceeds certain intervals.

To prevent cross-subsidization between transmission, distribution and supply activities, the companies must comply with the rules regarding entity, accounting and management unbundling, see section 4.1.1.

4.1.4 Cross-border issues

Cooperation

The Danish TSO was one of the initiators and now shareholder of the new European capacity allocation platform, PRISMA, which now has more than 30 participating TSOs. DERA participates in the cross-border cooperation between involved NRAs and participating TSOs.

DERA is also involved in cross-border activities with Sweden. Sweden has no indigenous gas production and no gas storage or LNG facilities. Sweden therefore depends entirely on continuous Danish gas supplies for its consumption (approx. 1 billion m^3 per year). Security of supply is therefore a major issue for the Danish/Swedish cooperation. Further meetings are under way to pave the way for deeper market integration between the Swedish-Danish markets.

In 2015, DERA was actively involved in a dialogue on optimizing the capacity situation at Ellund – the Danish cross-border point with Germany. At Ellund, all firm capacity into Denmark (Ellund exit, German side) is sold on long-term contracts running until at least 2023 (open season contracts), and firm capacity is only available on a day-to-day basis through the German day-ahead lose-it-or-use-it regime. However, a new model is being discussed between the relevant DK/D TSOs and national regulators where network users at the Ellund interconnection can waive the renomination rights attached to their capacity holdings for southbound flows (to Germany) on a longer-term basis under certain circumstances. This would enable GUD to increase the amount of technical capacity available for counter-flow transports on a monthly basis and thus improving the capacity situation for northbound flows (to Denmark), thereby releasing additional capacity and providing further flexibility to the Danish gas market.

The model called SNA was e.g. discussed at a physical meeting in Bonn (Bundesnetazagentur) between regulators and TSOs in November 2015, and the SNA model has since been in a public hearing.

Access to cross-border infrastructure, including allocation and congestion management

On 1 October 2013, a new 94 km gas pipeline in southern Jutland, from Ellund to Egtved, and a new compressor station in Egtved started operation. Together with the compressor station in Egtved, the new pipeline significantly increased the capacity of the gas transmission network and will allow Denmark to import sufficient natural gas quantities from Germany to cover both the Danish and Swedish consumption in the future – when gas production in the Danish part of the North Sea starts to decline.

The German TSO, Gasunie Deutschland, is also expanding the capacity on the German side of the Ellnd interconnection point. Until October 2014, the northbound capacity had only been offered as interruptible capacity, but stage one in a new two-stage expansion plan has made the German Ellund entry interruptible capacity of 310,000 Nm3/hour firm. Gasunie Deutschland has worked on completing stage two of the expansion to increase the firm capacity and flexibility of the North

German system even further – bringing the amount of firm northbound capacity to approx. 450,000 Nm3/hours by the end of 2015.

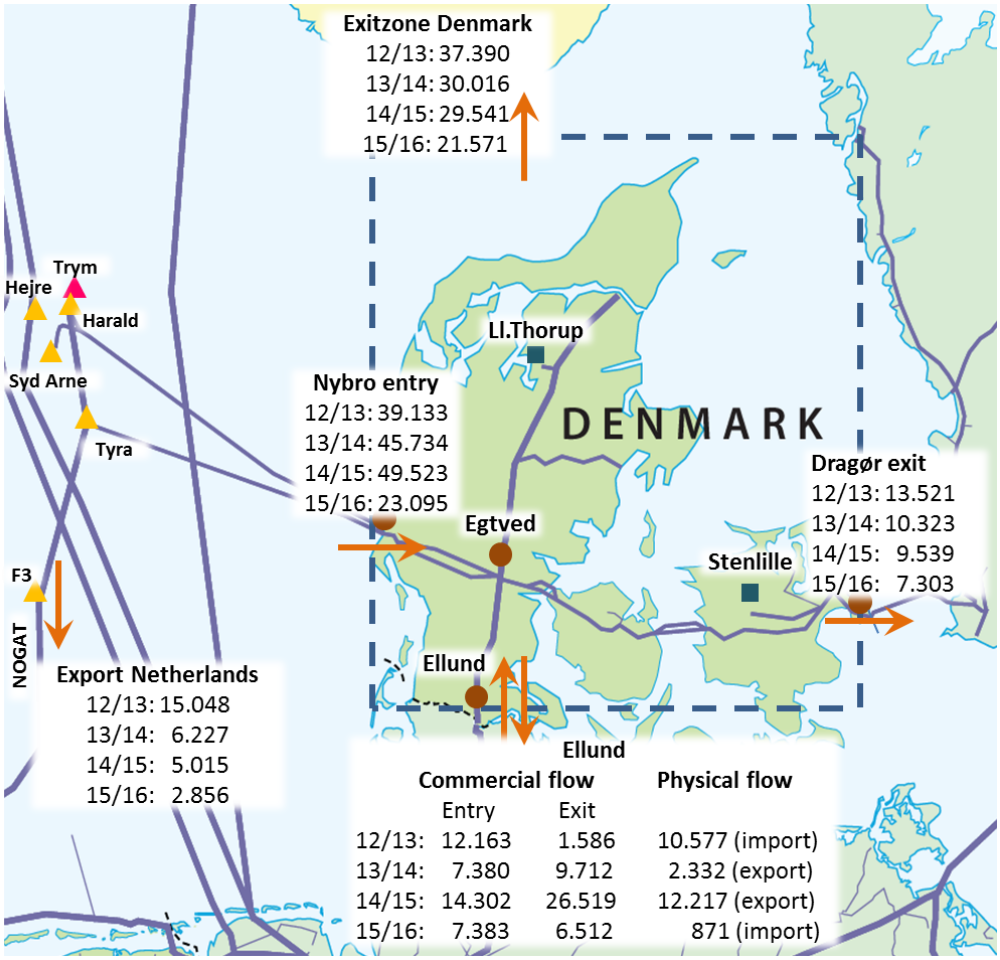
Germany has implemented a short-term use-it-or-lose-it mechanism (capacity management procedure (CMP) measure) that creates additional firm capacity on a day-to-day basis at Ellund (exit Gasunie – entry Energinet.dk). However, it does not solve the challenge that (new) shippers may still face when trying to secure medium and long-term transport capacity into Denmark.

The expansion of the Danish (and German) gas transmission network will improve security of supply for Denmark and Sweden and facilitate (increased) competition in the gas market to the benefit of the consumers. Additionally, the Danish grid expansion provides a foundation for a better market integration between the Danish and German wholesale markets. It is already clear that the infrastructure expansion (from 2013) has contributed significantly to reducing the price spread between the Danish gas exchange and the German hubs.

The Danish gas system consists of an exit-zone and two cross-border connection points Ellund (towards Germany) and Dragør (towards Sweden). Dragør is one-directional with no gas flow from Sweden to Denmark, cf. figure 7 for an illustration of the Danish entry/exits points – with flow figures for the gas years 12/13 to 15/16.

Until 1 October 2013, it was only possible to import 2,303 MWh/h on an interruptible basis. However, today it is possible to import 7,700 MWh/h on a non-interruptible basis. The reserved capacity is much lower than the technical capacity for the import from Germany. Thus, there has not been taken full advantage of the new capacity level so far.

Figure 7 | Entry/exit points and transport flow of the Danish transmission system (Gwh) 2012-2016



Source: The DERA secretariat based on figures from Energinet.dk
Note: The tarif year 2015/2016 contains data from 1 October 2015 to 15 April 2016. In the period from December 2015 to mid-February 2016, Tyra (the main Danish North Sea gas field) has undergone maintenance which has reduced the North Sea flow (via Nybro) by approx. 40-50 percent. This has led to increased imports via Ellund and the transition at Ellund (from net export to net import) does not represent a general change in the transport flow pattern.

Denmark has been a net exporter of gas for large parts of 2015, despite the fact that the average Danish spot price has been marginally higher than German and Dutch spot prices – i.e. gas flows have been contrary to price signals. This may be due to the fact that markets in Germany and Netherland and more liquid and offer more flexible trading opportunities compared to the Danish gas exchange (Gas Point Nordic) where only short-term spot contracts are offered.

DERA will focus on prices in the Danish, German and Dutch markets. If necessary, DERA will ask market players to account for their commercial considerations on flow direction. The new infrastructure has made the Danish transmission system more robust which has had a positive impact on the capacity situation at Dragør. Dragør is Sweden's only gas import source, and thus there is no flow for Dragør border entry.

In general, there is no congestion in the Danish transmission system, and in view of the expected future fall in consumption and the improved capacity situation it is very unlikely that any congestion will occur in any foreseeable future.

As reported in the National Report 2015, DERA was hesitant to insist on full implementation of the European CMP Guidelines which supposedly should be implemented in the event of contractual congestion. However, in 2014, the Commission issued an interpretative guideline on the CMP guidelines where the Commission (which DERA had approached on the issue in 2013) maintained that the CMP tools should be implemented at all interconnection points regardless of the capacity situation. The CMP model could, however, be a light one if capacity booking levels in a system, as in the Danish case, are low.

In view of the Commission's note, DERA asked the national TSO to submit a new CMP methodology proposal for regulatory approval. DERA approved the new Danish CMP scheme in September 2015, and the scheme came into effect on 1 October 2015. The CMP instruments are oversubscription-and-buy-back, surrender of capacity and long-term-use-it-or-lose-it – implemented in line with the Commission's guidelines for implementation.

Up to now, the new CMP instruments have not been actively used.

The Polish gas TSO (GAZ-SYSTEM S.A) and the Danish gas TSO (Energinet.dk) are investigating the possibility of establishing a connection between the Polish and the Danish gas transmission systems – the Baltic Pipe project. With the assistance of a number of consultants, the two TSOs intend to perform the feasibility study – *"Feasibility Study regarding the PCI Poland-Denmark interconnection Baltic Pipe"* – for the project by the end of 2016.

In 2015, both TSOs have been granted EU aid under the Connecting Europe Facility Programme (CEF) to perform the study. The overall objective of the feasibility study is to recommend the optimal scenario of the possible connection, to determine the efficient definition of the project from the commercial and technical point of view and providing a solid basis for next steps of the implementation of the project.

The main objectives of the PCI project Baltic Pipe are to further strengthen supply diversification, market integration and security of supply in primarily Poland and in Denmark – and secondly in the Central and Eastern Europe (CEE) and Baltic region.

The Baltic Pipe project is included in the European list of PCI projects (Projects of Common Interest), adopted on 18 November 2015.

Monitoring investment plans and assessment of consistency with Community-wide network development plan

The regulatory authorities regarding the Danish TSO's (Energinet.dk) investments are divided between DEA and DERA. In this arrangement, DEA is responsible for the approval of Energinet.dk's investment plans etc. as well as approval of the actual investments.

DERA is responsible for the monitoring of Energinet.dk's investment plans and actual construction/building plans in the context of compliance with the community-wide TYNDP comprises projects of common interest as well as other cross-border investment projects by Energinet.dk.

Energinet.dk is responsible for preparing investment plans (transmission) which they submit to the Danish Ministry of Energy, Utilities and Climate (owner of Energinet.dk) for approval – and to DERA for monitoring compliance and compatibility with the European TYNDP.

Energinet.dk is responsible for assessing the need for new infrastructure and for planning possible (transmission) network expansions according to executive order No. 1034 of 11 November 2011. Every second year, Energinet.dk must publish a TYNDP and submit it to the Ministry and DERA.

Energinet.dk published the present network development plan in 2013, covering the long-term (2032) structure of the transmission network as well as the network structure on short- (2017) and middle-term (2022). Regulatory scrutiny of the network development plan did not reveal discrepancies between the national plan and projects, and the community-wide projects of common European interest and DERA made no recommendations for changes in the network development plan or individual investment projects.

4.1.5 Compliance

Compliance of regulatory authorities with binding decisions of the Agency of 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 and the Commission.

There have been no compliance issues in 2015.

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

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

According to Danish Natural Gas Supply Act § 10 c, certified undertakings are under an obligation to report to DERA any planned transactions that could impact compliance with the conditions for certification.

The certified TSO must submit a yearly financial report to DERA for approval of species revenues and costs related to system operation on electricity and gas.

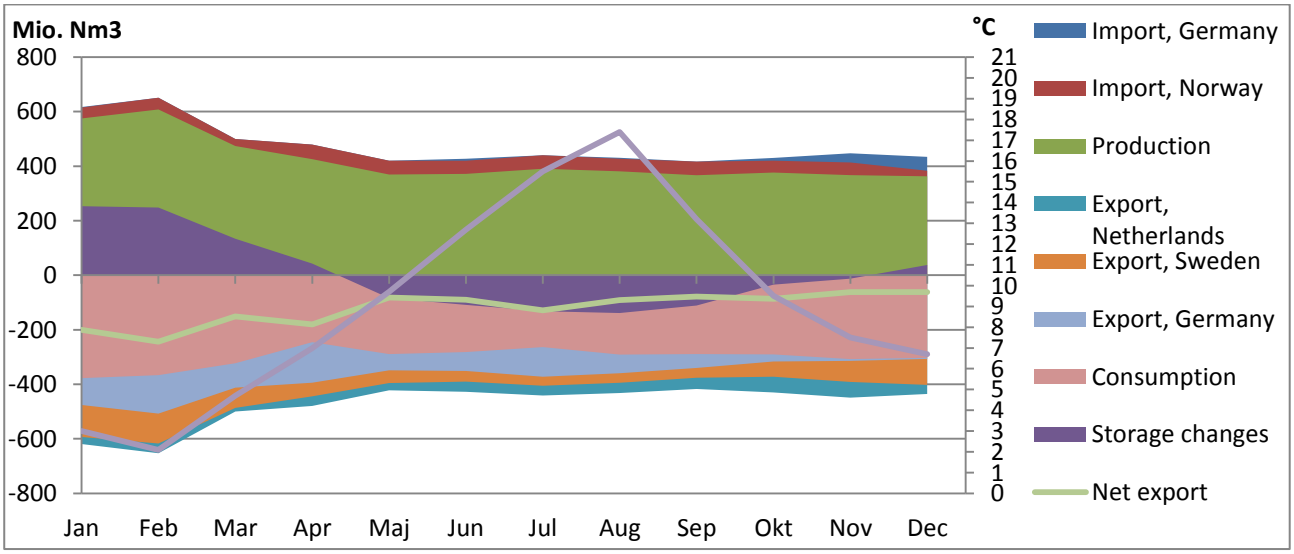
4.2 Promoting Competition

4.2.1 Wholesale markets

In 2015, the Danish production of natural gas was 4,354 million Nm^3 which is a small reduction compared to 2014. The Danish gas production has been declining during the last 10 years. Danish gas exports amounted to 2,078 million Nm^3 in 2015. The export to Germany made up 42 pct. which is an increase from 36 pct. in 2014 and 1 pct. in 2013. The remaining export went to Sweden (37 pct.) and the Netherlands (21 pct.). In 2015, Denmark imported 624 million Nm^3 – 83 pct. from Norway and 17 pct. from Germany.

The Danish natural gas fields are located in the North Sea, and production from the gas fields is transmitted to Denmark through Nybro or exported to the Netherlands. Furthermore, Denmark exports natural gas to Sweden via Dragør and to Germany via Ellund. Denmark imports natural gas from Germany via Ellund and from Norway via Nybro. Denmark was a net exporter in 2015, cf. figure 8, and has been a net exporter for more than 10 years.

Figure 8 | Danish gas consumption, export, import, production and storage, 2015



Source: The DERA secretariat based on data from DEA and Danish Meteorological Institute
Note: Export and consumption are represented with negative values in the figure.

4.2.1.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

DERA monitors the wholesale market for natural gas in Denmark through semi-annual market monitoring reports and thorough analyses.

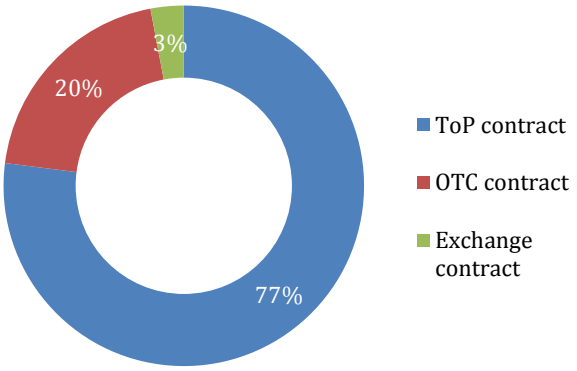
Analysis of contracts and price formation on the Danish wholesale gas market

In 2015, DERA analysed the contracts and price formation in the Danish wholesale market for natural gas for the period 2010-2014. The results were published in February 2015 and the main takeaways are:

- The share of natural gas traded via Take-or-Pay contracts has decreased, but Take-or-Pay contracts still make up the largest share of the total bought volumes (77 percent in 2010-2014), cf. figure 9.

- The delivery periods in the new Take-or-Pay contracts have become shorter and the prices follow the spot prices of natural gas to a higher degree than before 2010.

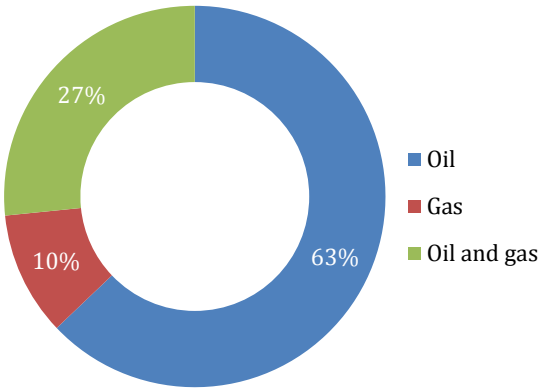
Figure 9 | Distribution of types of contracts on the Danish wholesale market for natural gas, 2010-2014



Source: The DERA secretariat

- Oil indexation makes up the largest share of the variables underlying the price formation of natural gas in the Take-or-Pay contracts in Denmark, cf. figure 10. 90 percent of the Take-or-Pay contracts are fully or partially based on the oil indexation – 63 percent fully based on oil and 27 percent based on oil/gas. This is a decrease compared to 99 percent in 2008-2010.

Figure 10 | Variables underlying the price formation of natural gas in the ToP contracts



Source: The DERA secretariat

- The price on the Danish wholesale market for natural gas mainly follows the spot prices of natural gas on gas hubs and gas exchanges in Northwest Europe: 23 pct. of gas volumes are traded on exchanges or OTC and 28 pct. of volumes traded via ToP contracts are fully or partly gas indexed. This trend was particularly pronounced after 2012, indicating a development towards a decoupling of the wholesale price of natural gas from oil prices.

- The spot prices of gas in Northwest Europe can be used as price references for the Danish wholesale market for natural gas.

Analysis of competition in the Danish wholesale market for natural gas

In 2015, DERA analysed competition in the wholesale market for natural gas in Denmark as part of its market monitoring tasks under the Danish Natural Gas Supply Act and European law. The results were published in December 2015 where DERA concluded that structural developments in the gas market have made a positive contribution to market competition. However, there are still only a few companies bringing gas onto the gas market and in general there are only a few active players and limited amounts of gas available in the market. The Danish gas market could still improve compared to the most efficient North-West European gas markets.

DERA's assessment of the different parts of the gas market is as follows:

- **Access to gas in the Danish gas wholesale market:** DERA considers that third-party gas has been, and will for some time continue to be, crucial for competition on the Danish wholesale market, as third-party gas means that more market players can bring gas to the gas market.

- **Access to transport gas to the Danish gas wholesale market:** DERA considers that the uncertainty regarding conditions and prices for transporting gas through the upstream pipelines is undesirable for the market. Furthermore, DERA considers that, up to 2023, contractual bottlenecks could arise at the German side of Ellund, if import needs increase. In dialogue with Bundesnetzagentur, DERA will monitor contractual bottlenecks at Ellund, and DERA will monitor how the common European rules for managing bottlenecks (congestion management procedures, CMP) are being applied.

- **Transmission tariffs and competition:** DERA considers that too high tariff differences between Entry/Exit points in the Danish system could restrict competition in the Danish gas market. There is a limit to how much tariff differentiation can be tolerated and how much higher the tariff at Ellund (entry) can be compared to other points before it will reduce continental gas imports via Germany.

- **Analysis of gas prices and gas flows at Ellund:** DERA has observed gas flows contrary to price signals for most of the period from 1 January 2014 to 30 June 2015. DERA considers that, for a period, it will be necessary to focus on prices in the Danish, German and Dutch markets. If

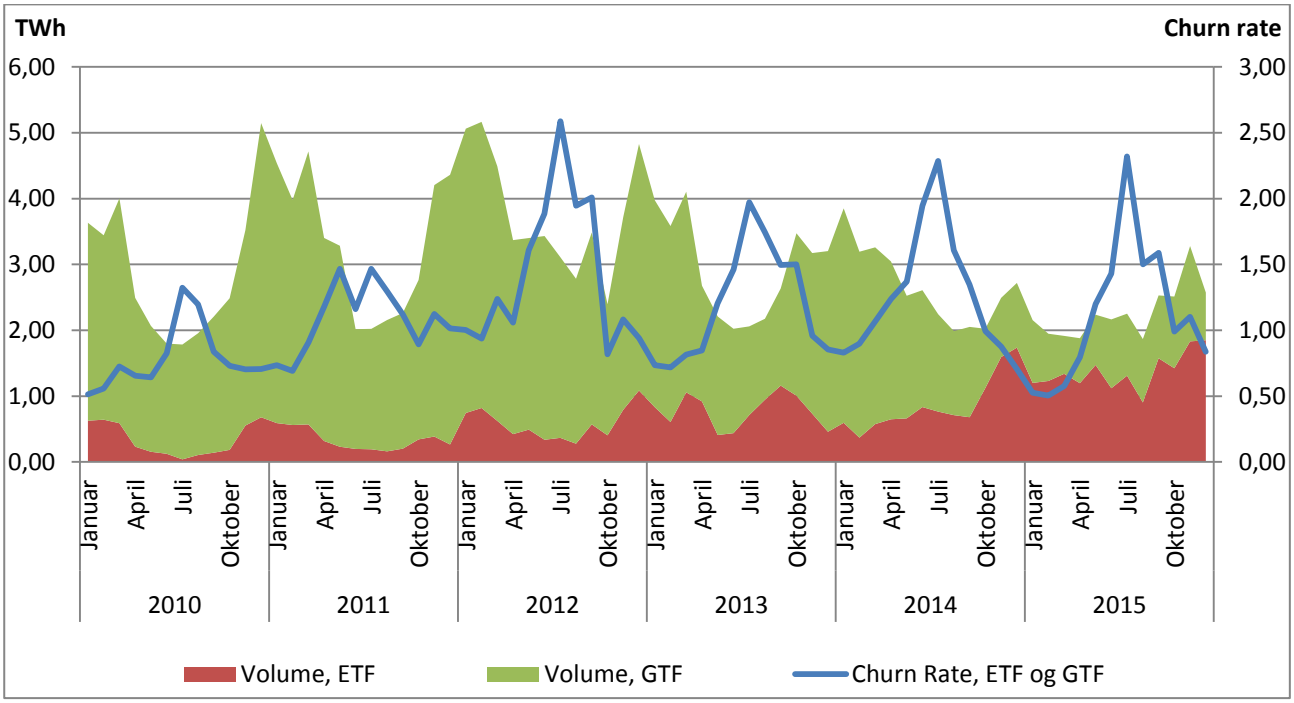
necessary, market players will be asked to account for their commercial considerations on flow direction.

Semi-annual market monitoring reports

The semi-annual market monitoring reports focus on topics such as price development, competition, market development and structural problems.

The Danish gas market has two virtual trading facilities: Gas Transfer Facility (GTF), which facilitates delivery of bilateral trades, and Exchange Transfer Facility (ETF), which is used as the delivery point for trades carried out on the Danish gas exchange Gas Point Nordic (GPN). GTF is owned by the Danish TSO Energinet.dk. In 2008, Gaspoint Nordic was established by Energinet.dk and Nord Pool Spot with the aim of creating a transparent and competitive market place. As of January 2015, Energinet.dk and the European Energy Exchange (EEX) each own 50 percent of Gaspoint Nordic.

Figure 11 | Volumes and churn rate on ETF and GTF, 2010 – 2015



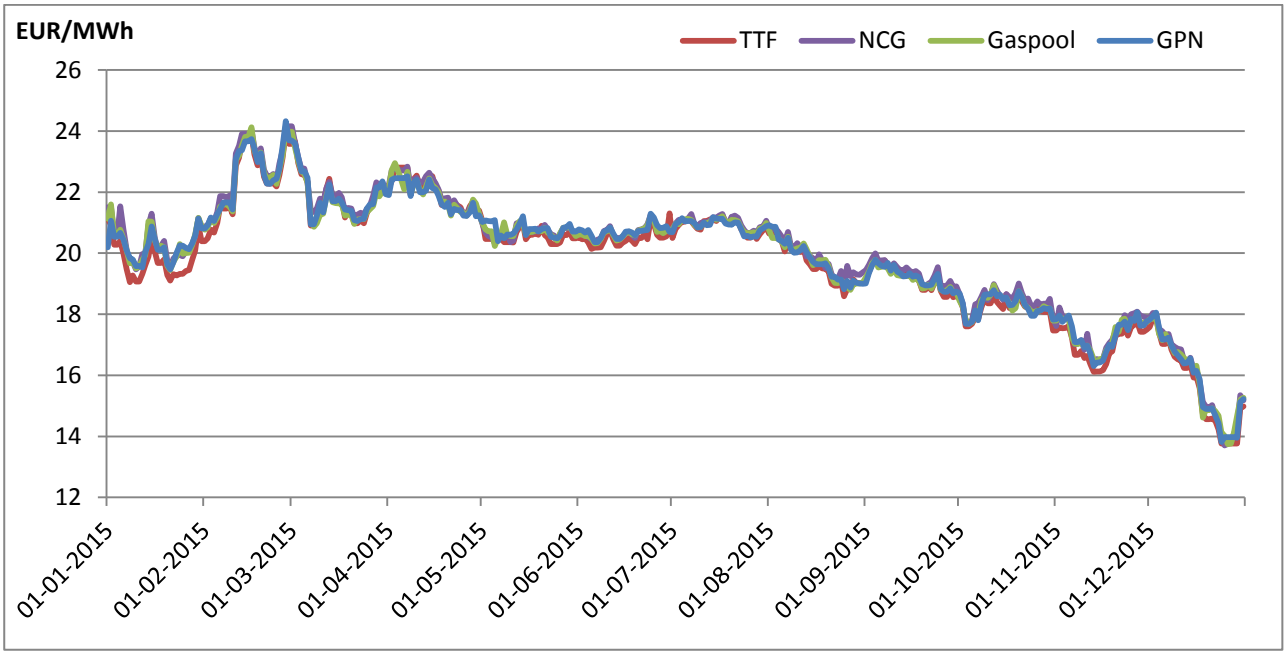
Source: The DERA secretariat based on data from Gaspoint Nordic and Energinet.dk
Note: Exchange Transfer Facility (ETF) is the delivery point (a virtual trading point) of all contracts at the Danish gas exchange Gaspoint Nordic. Gas Transfer Facility (GTF) is the delivery point (a virtual trading point) of all OTC- contracts.

GPN is becoming increasingly more important every year, and the share of traded volume on GPN (delivered on ETF) has increased significantly during the last two years, cf. figure 11. In the last quarter of 2014, the volume on the ETF exceeded the volume on GTF for the first time and this trend has continued. In 2015, the traded volume on GPN reached 16.5 TWh. Thereby, the volume

delivered on ETF made up 60 percent of total volumes on ETF and GTF. This development indicates increased confidence in the Danish gas exchange GPN. While volumes on ETF have increased, volumes on GTF have decreased from 21.7 TWh in 2014 to 10.8 TWh in 2015.

The spot price on GPN is highly correlated with the spot prices on the two German gas hubs NCG and Gaspool as well as the Dutch gas hub TTF, cf. figure 12. The average spot price of GPN was 19.9 EUR/MWh in 2015. In December 2015, GPN reached 13.8 EUR/MWh which is the lowest spot price since 2009. The price level has continued to decrease in 2016 and the average spot price in GPN in March 2016 was 12.1 EUR/MWh.

Figure 12 | Spot prices on Northern European gas hubs, 2015



Source: The DERA secretariat based on data from Gaspoint Nordic and Gaspool

4.2.2 Retail market

The Danish gas market was fully liberalised 1 January 2004, resulting in Danish gas consumers being able to freely choose between gas suppliers. Furthermore, there are no barriers for suppliers to enter the retail market for natural gas as no permits or registrations are required to enter the market.

Currently, there are 18 suppliers offering natural gas products to Danish end consumers. Two of the suppliers are obliged to supply gas to consumers who do not have an agreement with a gas supplier. 16 of the suppliers offer supply contracts to private consumers, while 15 offer supply contracts to industrial consumers.

4.2.2.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

In October 2011, the Danish Ministry of Energy, Utilities and Climate implemented new rules on monitoring of the electricity and natural gas markets. However, DERA had already begun monitoring the market prior to this date.

The Natural Gas Supply Act assigns the task of promoting transparency in the retail market of natural gas to DERA. DERA has appointed (cf. § 8 paragraph 3 in BEK 771 from 8 August 2015) the consumer homepage www.gasprisguiden.dk to Energinet.dk where information on products and prices are available and comparable – and to which all suppliers are obliged to report prices and terms. DERA has the regulatory oversight of the price comparison tool which is operated by Energinet.dk. When monitoring prices and the transparency of contractual obligations, DERA makes use of the price comparison tool. All gas suppliers are represented at the price comparison tool www.gasprisguiden.dk.

Competition and market efficiency are monitored by ad hoc analysis. In September 2014, DERA published an analysis of the competition in the Danish gas retail market. The results and conclusions from the analysis are presented in subsection 4.2.3 on page 51.

DERA publishes quarterly statistics for retail gas prices for Danish households. The statistics include prices for a representative Danish household (with a yearly consumption of 19 MWh equivalent to 1,700 m^3). The statistics are composed of private consumer prices, where the weights corresponding to the suppliers' market shares are applied. The quarterly average is a consumption volume-weighted average. Consumer prices decreased during 2015, cf. table 10. The quarterly retail prices for 2015 ranged from 80.4 to 74.9 EUR/MWh.

Table 10 | Gas retail prices for households in Denmark, in euros, 2015

EUR/m^3	Q1 2015	Q2 2015	Q3 2015	Q4 2015
Gas price	0.30	0.30	0.28	0.25
Distribution	0.13	0.13	0.13	0.13
Taxes	0.35	0.35	0.35	0.35
PSO	0.00	0.00	0.00	0.00
VAT	0.20	0.19	0.19	0.18
Total price (EUR/m^3)	**0.98**	**0.97**	**0.95**	**0.91**
Total price (EUR/MWh)	**80.36**	**80.14**	**77.93**	**74.91**

Source: The DERA secretariat

Supervision of prices

The amendment of the Natural Gas Supply Act in 2011 changed DERA's supervision of the regulated default prices for gas customers who do not actively choose a gas supplier. Since May 2013, DERA has supervised the price of the regulated default products (also known as *supply obligation products*), which are decided through tenders of supply obligation licenses. The amendment of the

Natural Gas Supply Act also introduced a *basic product* which acts as gradual phase-out of regulated gas products. At the end of the supply obligation license period, customers who have received a supply obligation product and who have not actively chosen a new supplier are automatically transferred to a basic product. The price and conditions of the basic product must correspond to those of the previously delivered supply obligation product. Furthermore, the basic product must be available to the customers during the following period of supply obligation licenses, however, not more than three years. DERA oversees prices and conditions of the basic product. In general, DERA's supervision has found that suppliers of both supply obligation products and basic products comply with the rules.

18 companies are registered as gas suppliers in the Danish natural gas system, and two suppliers have affiliated connections to the DSOs (NGF Gasforsyning and HMN Gassalg). Until May 2016, a third supplier had an affiliated connection to a DSO (DONG Salg & Service) before DONG Energy's gas distribution was sold to the Danish TSO Energinet.dk.

Box 2 | The supply obligation product and the basic product

Supply obligation product: *The supply obligation product is a default product which is supplied to gas customers who have not actively chosen a gas supplier. The price of the supply obligation product must not exceed the wholesale price of natural gas with an additional charge to cover a number of costs (storage and other flexibility costs, costs of transmission outside Denmark, contribution margin and subscription) plus transmission costs within Denmark. The price is determined on a monthly basis.*

Suppliers of supply obligation products are found through tenders of supply obligation licenses. The current license period started 1 May 2016 and ends 31 March 2019.

Basic product: *Customers, who have previously received a supply obligation product customer and have not chosen a new supplier before 1 May 2016, will receive a basic product from their existing supplier. The price and conditions for the basic product must correspond to the price and conditions of the now abolished regulated supply obligation product. The basic product must be available to the customers during the following period of supply obligation licenses, however, not more than three years. The price is determined on a monthly basis.*

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.

4.2.3 Recommendations on supply prices, investigations and measures to promote effective competition

Recommendations on supply prices

The Danish gas retail market is fully liberalised. Accordingly, all gas customers in Denmark have access to a competitive gas market without any price regulation. However, the customer must actively choose a commercial supplier and accept a supply contract to enter this market. As a consequence, both a regulated market with regulated, price capped end-user prices and a competitive market without price control coexist in the Danish retail gas market.

As of May 2016, the majority (more than 90 percent) of Danish gas customers are supplied at unregulated prices which are not supervised by DERA. The supply obligation products and the basic products are currently supplied by two gas suppliers, and DERA is currently supervising the prices of these products.

Investigations and measure to promote effective competition

Analysis of the competition in the gas retail market

In the fall of 2014, DERA published an analysis about the competition in the gas retail market. The analysis concluded:

- Gas consumers do not have sufficient incentive to make an active choice of suppliers or products.
- The price of the supply obligation product (and some of the basic products) is so low that it is difficult for independent suppliers to compete in the gas retail market.
- The low prices reinforce the lack of consumer activity in the retail market in relation to choice of supplier and product.

The low price levels could pose as a risk to the incentive to be a gas supplier in the retail market for gas. If suppliers choose to exit the market, this could increase market concentration and result in higher prices in the long run. The market concentration in the Danish gas retail market, measured using the Herfindahl-Hirschmann Index (HHI), is high, but has slightly decreased compared to 2014, cf. table 11. Table 11 shows the current market situation as well as scenarios where small suppliers exit the market.

Table 11 | Market concentration index (HHI) for the retail gas market

	2015	2015, excl. the 5 smallest suppliers	2015, excl. the 7 smallest suppliers	2014
HHI, volume	3,484	3,492	3,502	3,648
HHI, number of customer	3,782	3,796	3,819	4,161

Source: The DERA secretariat
Note: A market with a Herfindahl-Hirschmann Index (HHI) above 1,800 is considered a concentrated market.

The analysis pointed to a number of challenges in the Danish retail gas market related to the DSOs and the relationship with the suppliers:

- Billing: Two bills if the consumers choose a supplier not connected to the DSO
- Data exchange: Different data setup amongst the DSOs
- Vertical integration of suppliers and DSOs: Consumers have difficulties identifying whether they communicate with the supplier or the DSO

Finally, the analysis resulted in a number of recommendations related to competition and regulation of consumer prices, which have been included in the work of a Governmental Committee investigating the regulation of the gas market:

- The regulation of prices (i.e. the prices of the supply obligation and the basic products) should be abolished
- The introduction of a supplier centric model
- The introduction of standardised demands concerning data exchange between DSOs and suppliers
- Rebranding of the Danish DSOs

Upstream

In January 2014, DERA decided on the tariff to be paid to DONG Naturgas A/S for transporting natural gas in DONG's pipeline from the Tyra production field in the North Sea to the gas processing plant in Nybro on the west coast of Denmark, the so-called upstream system. DERA ordered DONG Naturgas A/S to reduce the tariff to DKK 0.0575/m3 in transport agreements concluded by the company with Maersk Energy Marketing A/S in the period July 2011-October 2012.

The case derives from a complaint from Maersk Energy Marketing A/S to DERA about the tariff determined at DKK 0.10/m3 by DONG Naturgas A/S in 2011. DERA's decision was confirmed by the Energy Board of Appeal in June 2014. DONG Naturgas A/S has subsequently brought the case before the courts, and the case is now pending at the Western Division of the Danish High Court.

In November 2014, DERA received a new complaint from Maersk Energy Marketing A/S about prices and terms for transport of natural gas in the upstream system. This case is ongoing.

Flow in Ellund not in alignment with the price signals in 2015

The spot price in the Danish gas exchange GPN was higher than the prices on the two German gas hubs NCG and Gaspool 23 pct. of the days in 2015. In the remaining time, the prices were either at par or they have been higher on the German hubs. For comparison, gas was exported to Germany on 293 days in 2015, equivalent to 80 pct. of the days.

Table 12 | Share of days with net export without potential profit, 2014-2015

	Net export	Net export without potential profit Volume tariff	Net export without potential profit Volume- and capacity tariff
2014	**71 pct.**	**49 pct.**	**68 pct.**
H1 2015	98 pct.	75 pct.	97 pct.
H2 2015	63 pct.	23 pct.	63 pct.
2015	**80 pct.**	**49 pct.**	**80 pct.**

Source: The DERA secretariat based on data from Gaspoint Nordic, Gaspool, Gasunie and Energinet.dk
Note: Each number in the table should be read as the share of days during the period. Rows and columns do not sum to 100 pct. as the columns show different scenarios.

For half the days in 2015, gas was exported to Germany without potential profit, when the differences between Danish and German spot prices as well as the volume tariff are considered, cf. table 12. This shows that during most of 2015, gas flowing across the Danish-German border was not in alignment with the price signals.

The northwest-European gas market is the most well-functioning gas region in Europe, with its relatively liquid trading hubs, i.e. trading hubs with a high supply of gas and many traders. The trading hubs are closely situated, which makes it easy to exploit potential arbitrage opportunities as a consequence of price differences in the various trading hubs. In a "perfect market", the arbitrage opportunities will be exploited in connection with trade, and any price differences between the markets can be explained by various trading and transporting costs.

There may be different reasons for the observed flow across the border against the price signals in 2014 and 2015. Part of the natural gas is traded through long-term contracts. This means that different market participants may have obligations to supply natural gas south of the border. One of the alternatives to exporting gas to Germany is to sell the gas on GPN. However, different market participants emphasise that restrictions, such as low sales volumes and few transactions (lower liquidity) on the Danish gas exchange, make Germany a more attractive market, regardless of the lower price.

DERA is paying special attention to this challenge and is regularly monitoring trends in the cross-border flow of gas and whether this moves contrary to price signals.

4.3 Security of supply

The Danish Energy Agency (DEA) is the competent authority for security of supply, including the monitoring of national network and planning and approval of major infrastructure investments etc.

In response to the EU publication requirement (Article 5 of Regulation No 994/2010), DEA has submitted a national report ("*Gas in Denmark 2015"*) to the Commission. The report gives a com-

prehensive overview of the security of supply situation (short- and long-term supply) of the Danish gas market.

In 2015, there have been no disruptions in the physical supply of natural gas to the Danish (and Swedish) gas market and therefore no national declarations of early warning, alert or emergency.

However, the major Danish production platform for gas (Tyra) will have to close down for maintenance, and the production situation from 2018 onwards (at least for two full years) is uncertain. Under normal conditions, the capacity at Ellund (see above) will be sufficient to cover the combined Danish and Swedish consumption, and the import capacity together with the total Danish storage capacity (withdrawal rate of approx. 16 million m3/day and total capacity of 1 bcm) will be sufficient to cover also shorter periods of extremely high demand or extreme temperatures. So only in case of prolonged cold winter spells should the Danish and Swedish supply situation be endangered.

In recent years, the costs in Denmark for ensuring security of supply have continued to fall which is a positive development not least in light of the fact that security of supply costs are paid by all Danish end consumers.

5. REMIT

DERA is a national supervisory authority in relation to Regulation (EU) No 1227/2011 of the European Parliament and of the Council on wholesale energy market integrity and transparency (REMIT). REMIT establishes rules prohibiting abusive practices affecting wholesale energy markets. It provides for the monitoring of wholesale energy markets by the Agency for the Cooperation of Energy Regulators (ACER) in close collaboration with national regulatory authorities, hereunder DERA.

DERA contributes to this collaboration by participating in the ACER Market Integrity and Transparency Working Group, ACER's REMIT Coordination Group, ACER's Market Monitoring Standing Committee and the REMIT IT Security and Implementation Group. DERA has, moreover, participated on an ad hoc basis in the REMIT related task force work.

Regional cooperation

Regionally, DERA has focused on collaboration with the Nordic and Baltic regulators to ensure a coordinated and consistent regional approach to enforcement of REMIT and regional monitoring.

DERA also participates in a working group under Nord Pool Regulatory Council, which primarily deals with issues in relation to REMIT and cooperation between regulators and the power exchange. DERA has established cooperation with Nord Pool Market Surveillance, which monitors trading activities and price formation within their market area.

DERA also has a formalized cooperation with Gaspoint Nordic. Gaspoint Nordic refers all cases concerning possible breaches of Article 3 and 5 of REMIT to DERA for further investigation.
Nord Pool and Gaspoint Nordic are obligated under Article 15 REMIT to hand over any case where there is a reasonable suspicion that a breach of Article 3 (insider trading) or 5 (market manipulation) of REMIT has occurred. DERA will then conduct an investigation.

Table 13 | Statistics for DERA's REMIT investigations

Cases investigated by DERA	2012	2013	2014	2015
Electricity	1	2	2	2
Natural Gas	2		1	

Source: The DERA secretariat

DERA has investigated suspected breaches both of REMIT's article 3 which prohibits insider trading, and article 5, prohibiting market manipulation, which both are criminal offences in Denmark, cf. table 13.

Actions in 2015

In spring 2015, DERA asked the Public Prosecutor for Serious Economic Crime to initiate a police investigation as to whether a company had violated the prohibition against market manipulation in connection with trade in an energy product on the Danish wholesale market for natural gas. The Public Prosecutor for Serious Economic Crime has closed the investigation. The Public Prosecutor for Serious Economic Crime based its decision on the fact that the investigation and collection of trading data carried out did not provide grounds for reasonable suspicion that a criminal act had been committed. DERA subsequently considered the case closed.

In 2015, DERA has prioritised providing assistance to market participants in connection with registration of market participants. All market participants included in transactions on the wholesale energy markets for electricity and natural gas in Denmark must be registered in the national register. Registration must be completed before a market participant enters into transactions which are to be data reported. Registration was therefore a very comprehensive task for the market participants in the months preceding 7 October 2015 when the first phase of ACER's data reporting began. Trade in all standard contracts is now being reported to ACER.

Furthermore, in 2015, DERA placed high priority on collaboration with ACER on IT security. All regulators are to meet ACER IT requirements in order to gain access to the information reported to ACER.

6. Consumer protection and dispute settlement in electricity and gas

6.1 Consumer protection

Consumer Protection

The consumer protection is implemented in executive order No. 1353 of 2014 regarding consumer protection on electricity and executive order No. 1354 of 2014 regarding consumer protection on gas.

The executive orders on consumer protection also contain rules regarding the obligations and limitations of the right to modify contractual conditions. Every end-user has the right to change supplier free of charge (with respect to the contractual obligations between the parties). Moreover, the supplier is prohibited by law to bind consumers contractually for longer than 6 months.

Companies with universal service

Currently, some electricity companies are licensed as default suppliers. Consumers availing themselves of the right to choose supplier may resume supply from the default supplier services within a reasonable period and at regulated prices.

From 1 April 2016, a new electricity market design, the supplier centric model, was launched. Following the introduction of the supplier centric model, the universal service obligation is substituted with a *supply obligation*. The supply obligation commits all electricity trading companies on the Danish market to provide electricity for household consumers requesting this.

Companies with a supply obligation

Introducing the new supply obligation means that all electricity trading companies on the Danish market are obliged, when paid by the household consumers, to provide electricity.

The supply obligation also affects the consumers. Consumers must now actively choose their electricity supplier company. Previously, the consumers were protected by the default supplier service concept. The default supplier service concept automatically provided consumers with electricity from an electricity supplier company at regulated prices.

The new supply obligation applies only for household consumers. Companies will no longer be guaranteed a legal right to electricity.

Vulnerable customers

Vulnerable consumers are handled in the social security system.

Through approval of methods applied by the DSOs, DERA continuously works with securing general safeguards for the consumers.

Access to information – consumer data

Consumers are ensured the right to receive their consumer data free of charge. Further, the distribu-

tion companies are obliged to make these data available to the consumers in a transparent, objective, fair and non-discriminating way.

DERA approves the general rules 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 establishment and handling of a datahub at national level. The conditions for accessing the datahub are set according to general rules which must be approved by DERA. Consumers have the right to access own data on the datahub, and no additional costs shall be charged for that service.

Billing information
The requirements regarding billing information are implemented in executive order No. 486 of 2007 on electricity billing and executive order No. 937 of 2006 on gas billing.

DERA has prepared a new executive order for the electricity market; the supplier centric model which is implemented in Danish law by 1 April 2016. The new executive order provides the consumers with only *one* simplified bill – free of charge. The simplified bill is created to give each consumer a better overview of the different price elements of the bill – including price elements that vary depending on the consumer's consumption, which elements are fixed and also what price elements are subject to competition.

Hence, there is only one bill which will encompass net tariffs, supplier service etc. The focus of the design of the actual bill is to make consumers more flexible, provide a better overview of the price elements and produce an incentive for consumers to be active on the energy market.

Energy sources, environments impact etc.
The specific requirements concerning consumers' right to receive information on energy sources, environmental impact and comparison of consumption have been implemented in the executive orders No. 1452 of 2013 and No. 1322 of 2010. The orders give consumers the right to receive information in clear and understandable terms once a year.

6.2 Dispute settlement

Complaint handling
The Energy Supplies Complaint Board handles all consumer complaints relating to energy. These include consumer complaints regarding trade and delivery of electricity, heating and gas.

The Board has a mandate to handle disputes arising from the contractual relationship between an energy consumer and an electricity supplier, a natural gas supplier or a district heating supplier. It is expected that the Danish Government will notify the Energy Supplies Complaint Board as an official ADR-body according to Directive 2013/11/EU of the European Parliament and of the Council of 21 May 2013 on alternative dispute resolution for consumer disputes and amending Regulation

(EC) No 2006/2004 and Directive 2009/22/EC (Directive on consumer ADR).

There are no thresholds as regards the value of the dispute. The Board does not handle disputes settled by court judgment. 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 cooperation with the Consumer Council and the Association of Danish Energy Companies, DONG (Danish Oil and Natural Gas), HMN Natural Gas, Nature Energy Funen and the Danish District Heating Association.

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

A fee of DKK 160 (approximately EUR 22) is charged for handling of cases. The fee is reimbursed if the Board upholds the consumers' contention. The energy company has to pay a fee of DKK 8,500 (approximately EUR 1,140) to the board if the case is decided in favor of the consumer. However, if the case ends in a settlement conducted by the Secretariat of the Energy Complaint Board, the company shall pay DKK 3,800 (EUR 509).

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

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

The average time of complaint handling is five months. When the Board has made a decision, it will be possible for either party to bring the matter to the court. Decisions are neither binding nor enforceable. However, if the Board's decision is not complied, the Board secretariat can forward the case to the Consumer Rights Division of the Danish Competition and Consumer Authority. The Division will then bring the matter to court, at the request and on behalf of the consumer.

If the case is not brought to court by the consumer, the Board will publish its decision on its website with name and address of the energy company. However, so far, all companies have complied with decisions of the Board.

If a complaint does not fall within the competence of the Complaint Board, DERA has the power to make decisions regarding the obligations of the DSO and TSO in situations where the complainant

has an individual and significant interest in the matter.

These complaints must be handled by DERA within two months, according to the executive order No. 1216 of 2011. If necessary, the period can be extended with another two months. After 4 months, the period can only be prolonged after agreement with the complainant.

The decisions of DERA are binding and can only be appealed to the Energy Board of Appeal which is an independent appeal board under the Danish Ministry of Energy, Utilities and Climate.

Investigation and information

DERA has the authority to request any kind of information from both DSOs, TSOs, suppliers with a license to supply, electricity production companies, suppliers and their associated companies along with consumers and other buyers of electricity or natural gas. The authority to request information is provided when addressing an issue, monitoring the market, in connection with a case initiated by DERA or on the basis of an enquiry made by an enterprise or a consumer.

Additionally, the authority request for information provides the users of the collective grid with the information necessary for a secure and effective use of the grid. As part of an investigation or a monitoring exercise, DERA also has the power to perform dawn-raids if needed.