RESULTS AND CHALLENGES

2013
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The Danish Energy Regulatory Authority (DERA) is independent of the government. The tasks of DERA are stipulated in the supply acts for electricity, natural gas and heat, and pursuant to these acts DERA must:

**INTERPRET THE ENERGY ACTS**
The Energy Acts are to a large extent framework legislation, meaning that in many cases DERA has wide powers to interpret implementation of the Energy Acts in cases where DERA is the authority.

**DECIDE/STIPULATE**
DERA sets specific levels for a number of areas, e.g. efficiency requirements for grid companies within electricity and natural gas, price caps for waste incineration plants, interest rates on subscribed capital in district heating plants, etc.

**APPROVE**
DERA approves methods applied by grid companies in the electricity and natural gas markets to set prices and terms of access for customers, and DERA ensures that a specific price for heat from a district heating plant is reasonable and that reports from municipalities on receipts of charges from energy enterprises are correct.

**MONITOR**
DERA monitors a number of areas such as the wholesale market for electricity and natural gas, management of storage capacity on the natural gas market, certain prices of electricity and natural gas, sector guidelines and various reports from energy enterprises to DERA. DERA also makes analyses of the performance of the regulated enterprises etc.

**ENSURE TRANSPARENCY**
DERA works to ensure transparency for customers on the energy markets, for example by publishing prices of energy, taking part in work groups on operation of the electricity price indicator and gas price guide, etc.

**DERA’S MISSION**
The purpose of DERA is to secure well-functioning sectors within electricity, gas and heating.

This includes securing:
- reasonable terms and conditions for customers and businesses
- efficient solutions within the energy infrastructure
- the best possible framework conditions.

**DERA’S VISION**
To be known and recognised for its expertise, efficiency, drive and courage to travel down new paths.
The Danish Energy Regulatory Authority (DERA) is independent of the government. The tasks of DERA are stipulated in the supply acts for electricity, natural gas and heat.
FOREWORD

The 2020 goals for energy policy and the long-term political goal of a Denmark independent of fossil energy in 2050 entail developments in which parts of energy legislation are being revised and in which parts of the energy system are being changed. The goal of independence from fossil energy has determined the direction for changes to the energy system, but the specific tools and pathways to meet this goal have been, and are being, set in new legislation in a number of areas.

This has also been the basis for the government’s initiative to set up a number of committees that are to analyse the situation. The government will draw on the results of the committees’ work when drawing up new legislation. One of the committees is the Energy Regulation Committee, which is to conduct a thorough review of regulation of the Danish electricity supply sector. The Energy Resolution Committee will be submitting its recommendations to the Minister in 2014. In addition, analyses have been initiated of the gas infrastructure and of regulation of the district heating sector, of the role of district heating in the energy system of the future, and of the subsidy and tax system for the energy area.

DERA is looking forward to the reports from the committee and analysis work, many of which have direct relevance for areas regulated by DERA. With regard to political follow-up of the committee and analysis work, DERA considers that there should be a sharp focus on simplifying legislation and on minimising the costs of administering the regulations. Regulation of the revenue cap for the electricity grid companies is an example of an area which could benefit from simplification.

DERA’s tasks include implementing parts of the Energy Acts in practice, monitoring parts of the market, and analysing areas in which there is a need for mapping and innovation. This is also apparent from this edition of “Results and Challenges.” Therefore,
DERA not only works on cases involving determining specific practice pursuant to legislation; it also monitors and analyses parts of the electricity, natural gas and district heating markets.

The number of cases dealt with by DERA has stabilised at a relatively high level in recent years. The complexity and economic consequences of the individual cases change from year to year, but three decisions illustrate how DERA works in practice to secure well-functioning sectors within electricity, gas and heating.

In the electricity area, DERA has again conducted a benchmark analysis of the financial efficiency of the electricity grid companies. The analysis showed that, overall, the companies could be more efficient, and that there was a basis for reducing the cap on the total revenues of the companies by more than DKK 95 mill., or 5.1% of the companies’ expenditure on, among other things, salaries, administration and maintenance. This is the seventh time that DERA has made this type of requirement for the electricity grid companies, i.e. reduce the cap on the revenues which the companies can demand from customers via their electricity bills. The DERA requirement means that Danish electricity grid companies have been ordered to reduce the revenue cap by almost DKK 700 mill. since 2007.

In the gas area, DERA has made a new decision in a principle case on the permissible cost of transporting natural gas in offshore pipelines owned by DONG in the North Sea. DERA has imposed a reduced price on DONG and has set a specific price on this transport. Prior to this was a long process of analyses to determine a reasonable price, an appeal to the Energy Board of Appeal against a previous decision by DERA from the commercial parties in the case, a decision by the Energy Board of Appeal, and a new decision by DERA at the end of 2013 setting the specific price of transport. The order is expected to have a general impact on prices in new transport agreements and it involves hundreds of millions of DKK every year. In March 2014, DONG appealed the decision by DERA.

With regard to district heating, a decision from DERA has established a new principle and may pave the way for conversion to biomass of the coal-fired CHP plants in large Danish cities. The principle decision is to accept an agreement between DONG Energy (the electricity and heat producer) and the two heat transmission companies in Greater Copenhagen, CTR and VEKS, on how the parties divide a tax benefit between themselves. The tax benefit comes from changing from coal to biomass in district heating production.

Supervision of the energy sector – case processing and monitoring the electricity, natural gas and district heating sectors – often means the DERA Secretariat has to seek information from enterprises, and it is DERA’s goal that case processing and monitoring are based on good dialogue, and in full understanding of roles of each of the parties.

Uffe Bundgaard-Jørgensen
Chairman of DERA
SUMMARY

ENERGY PRICES
Average prices of electricity, natural gas and district heating have developed moderately in 2013. Electricity fell in price, while district heating and natural gas rose by slightly more than general consumer prices. Average expenditure on natural gas, district heating and electricity for a typical family has increased over the past six years.

REQUIREMENT FOR EFFICIENCY IN THE NATURAL GAS SECTOR
In 2013, DERA reduced the revenue cap for the three Danish grid companies which distribute natural gas to customers. The grid companies are natural monopolies, and in the absence of competition DERA has conducted a benchmark analysis of the financial efficiency of the companies and on the basis of this DERA has reduced the cap on the maximum revenues the companies can demand from their customers. The aim is to make the companies more efficient every year.

REQUIREMENT FOR EFFICIENCY IN THE ELECTRICITY SECTOR
In 2013 DERA reduced the revenue cap for the 75 Danish electricity grid companies which distribute electricity to customers. The grid companies are natural monopolies, and in the absence of competition DERA has conducted a benchmark analysis of the financial efficiency of the companies and on the basis of this DERA has reduced the cap on the maximum revenues the companies can demand from their customers. The aim is to make the companies more efficient every year.

FEW CONSUMERS RECEIVE DISTRICT HEATING FROM VERY EXPENSIVE SUPPLIERS
When DERA publishes new statistics on heating prices, it is
often the most expensive district heating suppliers who receive the most media attention. However, new statistics show that the ten most expensive heating suppliers only account for 0.1% of heating sales, and that the 50 most expensive suppliers account for just 1% of heating sales in Denmark. A total of 97% of heat is supplied at less than half the price of the most expensive heating.

NEW SUPERVISION OF PRICES OF ELECTRICITY

The Electricity Supply Act has been amended, entailing a fundamental change in supervision by DERA of the prices of products for customers who are not active in the market. Since May 2013, DERA has supervised the price of supply obligation products and the new basic product. This supervision has showed that, in general, prices comply with the rules, although, in Q4, DERA asked for an account of the prices charged by a small number of companies.

NEW SUPERVISION OF PRICES OF NATURAL GAS

The Natural Gas Supply Act has been amended, entailing a fundamental change in supervision by DERA of the prices of products for customers who are not active. Since May 2013, DERA has supervised the price of supply obligation products and the new basic product. This supervision has showed that up to now prices have complied with the rules.

INTEREST CHARGES FOR ELECTRICITY GRID COMPANIES DIFFER CONSIDERABLY

The owners of the electricity grid companies have charged interest on their investments at a par with industrial enterprises, after adjusting for risk. This is indicated in an analysis of the largest electricity grid companies carried out by DERA. The analysis also shows that interest rates are very different from enterprise to enterprise and that several enterprises seem to choose a low interest rate, probably in order to pay dividends to their owners through lower prices. The analysis of grid companies’ interest rates was made at a general level and is a snapshot insight into the rates.

MUNICIPALITIES EARN LARGE REVENUES FROM ENERGY COMPANIES

Danish municipalities are obliged to submit reports to DERA on whether they have received some form of economic value from their supply enterprises. A new statement from DERA shows that Danish municipalities received more than DKK 29 bn. from 2003 to 2012.

MARKET DEVELOPMENTS FOR NATURAL GAS

Approval by DERA of a new charges structure in the transmission system; a decision on the price of transport of natural gas in transmission pipelines in the North Sea; and development of a web-based platform to increase transparency on the natural gas market, have all improved the framework for players and paved the way for a more efficient market.
Average electricity, natural gas and district heating prices have developed moderately in 2013. Electricity fell in price, while district heating and natural gas rose by slightly more than general consumer prices.

Average consumer prices of electricity, natural gas, and district heating in 2013 have generally followed the same moderate trends as in 2012. The average consumer price of electricity fell slightly, while prices of district heating and natural gas rose modestly in 2013 compared with 2012 (figure 1).

Average prices of energy delivered to customers from 2012 to 2013:
- Electricity fell by 0.3% (supply obligation price)
- Natural gas rose by 2.7% (supply obligation price)
- District heating rose by 1.4%

In comparison, the index of consumer prices rose by 0.8% in 2013 compared with 2012.

Developments in average prices of energy delivered to customers from 2007 to 2013 (figure 1):
- Electricity has increased by approx. 21%
- Natural gas has increased by approx. 16%
- District heating has increased by approx. 16%

In the same period, the index of consumer prices has increased by approx. 14%.
FIGURE 1 | CONSUMER PRICES FOR ELECTRICITY, NATURAL GAS AND DISTRICT HEATING, AND THE INDEX OF CONSUMER PRICES, INDEX 2007-2013 (2007=100)

Sources: DERA price statistics, the Danish District Heating Association and Statistics Denmark.
FIGURE 2 | COSTS OF ELECTRICITY AND DISTRICT HEATING FOR AN AVERAGE FAMILY*, DKK IN CURRENT PRICES

Source: DERA’s electricity price statistics and the Danish District Heating Association’s report on district heating prices in Denmark.

* An average family consists of 4 persons, who live in a standard 130m² house, with electricity consumption of 4000 kWh and heating consumption of 18.1 MWh.

FIGURE 3 | COSTS OF ELECTRICITY AND NATURAL GAS FOR AN AVERAGE FAMILY*, DKK IN CURRENT PRICES

Source: DERA’s price statistics on electricity and natural gas.

* An average family consists of 4 persons, who live in a standard 130m² house, with electricity consumption of 4000 kWh and heating consumption of 18.1 MWh.
HOUSEHOLD SPENDING ON ELECTRICITY AND DISTRICT HEATING
Calculated in DKK, average costs of electricity and district heating went up from around DKK 24,600 to approx. DKK 24,800 from 2012 to 2013 for an average family. This corresponds to an increase of 0.7% (figure 2).

HOUSEHOLD SPENDING ON ELECTRICITY AND NATURAL GAS
Calculated in DKK, average costs of electricity and natural gas heating went up from around DKK 23,700 to approx. DKK 24,000 from 2012 to 2013 for an average family. This corresponds to an increase of 1.5% (figure 3).
The average consumer price of natural gas in terms of the supply obligation product supervised by DERA rose by 2.7% in DKK from 2012 to 2013; primarily because of increases in taxes. From 2007 to 2013, the average consumer price rose by about 16% (figure 4).

The average distribution cost – shown by the price of the supply obligation products and the cost of distribution in the local grid, two areas DERA supervises – has fallen in the past years (figure 5).

Despite moderate price developments in 2013, average expenditure on natural gas, district heating and electricity for an average family has increased over the past six years.
DERA AND NATURAL GAS PRICES

DERA supervises the prices of supply obligation and basic products for natural gas. The other prices on the free commercial retail market are not subject to supervision by DERA.

**FIGURE 4**
AVERAGE CONSUMER PRICE OF NATURAL GAS
(SUPPLY OBLIGATION PRICES) DKK PER M³

Source: DERA’s price statistics for natural gas and own calculations
FIGURE 5 | DISTRIBUTION COSTS RELATING TO SUPPLY OBLIGATION PRODUCTS AND COSTS FOR DISTRIBUTION FROM THE LOCAL GRID COMPANIES, EXCLUDING TAXES, DKK PER M³

Source: DERA
FACTS | HOW THE NATURAL GAS MARKET WORKS

THE NATURAL GAS MARKET: Has been fully liberalised since 2004. This means that gas customers can freely choose supplier. There are about 14 natural gas suppliers on the Danish end-customer market.

THE WHOLESALE MARKET: Natural gas is traded on the wholesale market via the Danish gas exchange, Gaspoint Nordic, and via bilateral agreements. These agreements cover transport of natural gas from gas fields in the North Sea or from gas exchanges and gas hubs in Germany and Holland to the Danish market.

PRODUCTS ON THE NATURAL GAS MARKET: Customers have several options when buying natural gas. Around 50 different natural gas products are available to customers. They can either choose to buy their gas at a fixed price for a fixed period from their regular supplier, or they can choose to buy at a variable price that follows the price of natural gas on the market.

Customers can receive natural gas products at prices supervised by DERA. These are supply obligation products and basic products.

WHAT SHOULD CUSTOMERS CHOOSE? Because the market prices for natural gas vary from day to day, it is impossible to determine in advance the price difference between fixed and variable prices. What to choose depends on expectations for price developments.

OVERVIEW: The website, gasprisguiden.dk, provides customers with a daily update of gas prices and what options and products are available on the retail market.
DISTRICT HEATING PRICE TRENDS
The average price of district heating for customers rose by 1.4% in DKK from 2011/2012 to 2012/2013 (figure 6).

There are large differences in the costs of the individual district heating plants, and as a consequence there are also large differences in the prices charged by the individual plants (figure 7). However, there are three clear trends:

- natural-gas-fired district heating plants have the highest average prices of heating
- the large-scale CHP plants have the lowest average prices of heating
- the largest span between district heating plants with the lowest and highest prices is for the natural-gas-fired district heating plants (figure 7).

The highest prices of heating are for the natural-gas-fired district heating plants. A comparison between the prices charged by these district heating plants and the cost of heating a standard home using oil shows that there are five natural-gas-fired district heating plants (almost 3%) with higher prices than individual oil heating (prices calculated as average prices, see figure 7).
FIGURE 7 | LOWEST, HIGHEST AND AVERAGE PRICE OF HEATING ANALYSED BY TYPE OF PLANT, TOTAL PRICE INCL. VAT

Source: Danish District Heating Association and DERAs own calculations

Note: Prices are calculated for a standard 130 m² home. Several conditions affect prices, e.g. differences in initial construction costs, type, size, number of consumers, etc. District heating plants are also subject to different framework conditions, e.g. choice of fuel and different connection rules for customers.

Source: Danish District Heating Association and DERAs own calculations

FIGURE 6 | AVERAGE CONSUMER PRICE OF DISTRICT HEATING, 2006/07-2012/13, DKK

Source: Danish District Heating Association and DERAs own calculations

Note: The price has been calculated on the basis of the actual settlement prices during the heating season, incl. VAT, for a standard home of 130 m² and heating consumption of 18.1 MWh. The actual price of district heating includes taxes on the fuels used in district heating production. The statistic does not make it possible to break down the price of heating into subcomponents such as grid payment, subscription, etc.
FIGURE 8 | PRICE SPREAD AMONG NATURAL-GAS-FIRED DISTRICT HEATING PLANTS (2012/2013), DKK

Source: Danish District Heating Association
A comparison between the prices charged by natural-gas-fired district heating plants and the costs of heating a standard home using natural gas shows that there are 70 district heating plants (about 40%) with higher prices than individual natural gas heating (prices calculated as average prices, see figure 8).

The most expensive natural-gas-fired district heating plants are the open-field plants. The high prices charged by open-field plants are primarily due to:
- large investments in installations which have to be paid by relatively few consumers;
- a distribution grid with long transmission distances which has to be paid for by the same, few consumers;
- long transmission distances lead to substantial transmission losses.

In addition to the framework conditions, the prices of district heating charged to customers are primarily determined by the fuel costs and financial efficiency of the individual district heating plant. Therefore, it is crucial that the boards and management of the individual district heating plants operate their plants as efficiently as possible.
ELECTRICITY PRICE TRENDS
The average price of electricity for consumers, in terms of the supply obligation product supervised by DERA, fell by 0.3% in DKK from 2012 to 2013 (figure 9). The drop in electricity prices in recent years is to some extent counterbalanced by increases in taxes and support to environmentally friendly electricity production and research (PSO).

The average distribution costs – shown by the price of the supply obligation products and the cost of distribution in the local grid, two areas DERA supervises – has fallen in the past years (figure 10).

FACTS | HOW THE ELECTRICITY MARKET WORKS

THE ELECTRICITY MARKET: Has been fully liberalised since 2003. This means that electricity customers can freely choose between electricity suppliers.

The wholesale market: The Danish electricity market is an integrated part of the Nordic electricity market. Trading on the wholesale market is via the common Nordic electricity exchange NordPool. Here producers and electricity traders/suppliers trade with one another with a view to onward sale to retail customers.

ELECTRICITY PRICES: Electricity prices depend primarily on the electricity prices on the Nordic electricity exchange, Nord Pool Spot. The exchange price is set hour by hour and is influenced by the amounts of precipitation in the Nordic countries, fuel prices for the thermal power plants, customer demand and outages in the transmission grid.

PRODUCTS ON THE ELECTRICITY MARKET: Electricity customers have several different channels through which to purchase electricity. Just as the financial sector sells a number of different financial products, electricity companies also sell several different electricity products. Suppliers of electricity offer 100 different electricity products.

PRICES FOR CUSTOMERS: Electricity customers can choose between many different electricity products. The main product groups are products that have a fixed price (customers agree on a fixed price for electricity with their supplier for a shorter or longer period), variable/spot price (the electricity price follows the fluctuations on the market, typically on NordPool, and prices may vary from day to day or at longer intervals, depending on what the customer has agreed with the supplier).

Customers can opt to receive products at prices supervised by DERA. These are supply obligation products and default products (basic products).

WHAT SHOULD CUSTOMERS CHOOSE? As market prices can vary from hour to hour, it is impossible to calculate in advance the price difference for products with variable and fixed prices. What to choose depends on several factors, e.g. the customer’s expectations for how electricity prices will develop.

OVERVIEW: The elpristavlen.dk website provides customers with an overview of electricity prices and the various products available on the retail market.
FIGURE 9 | AVERAGE CONSUMER PRICE OF ELECTRICITY, DKK PER KWH

Source: DERA electricity price statistics for supply obligation electricity

FIGURE 10 | DISTRIBUTION COSTS RELATING TO SUPPLY OBLIGATION PRODUCTS AND DISTRIBUTION IN THE LOCAL GRID COMPANIES EXCLUDING TAXES, DKK PER KWH

Source: DERA
FIGURE 11 | COMPOSITION OF THE PRICE OF ELECTRICITY

Source: DERA electricity price statistics for supply obligation electricity

Note: Public Service Obligations (PSO) are taxes to finance subsidies for renewable energy and energy research.

FIGURE 12 | COMPOSITION OF THE PRICE OF ELECTRICITY WHOLESALE, RETAIL 2013

Source: DERA/own calculations
COMPOSITION OF THE PRICE OF ELECTRICITY
The price of electricity for consumers is composed of several elements (figure 11). The energy price, that is the price of electricity excluding taxes, transmission, delivery and subscription, constitutes about DKK 0.348/kWh or 16% of the price of electricity. Taxes and VAT constitute approx. DKK 1.436/kWh or about 65% of the price. The remaining 20% goes toward grid payments and subscription, which together amount to DKK 0.429/kWh or about 19% of the electricity price.

The price of electricity – the energy price – is made up of a wholesale and a retail element (figure 12).

Approx. 90% of the energy price goes to companies at the wholesale stage, the is set on the Nordic Electricity Exchange. The final 10% is where companies at the retail stage can actually compete on the price. According to DERA’s price statistics, the average energy price in 2013 was DKK 0.348/kWh or approx. 16% of the electricity price. Thus companies at the retail stage compete on DKK 0.035/kWh out of a total average consumer price of electricity of DKK 2.21/kWh in 2013. In other words, energy retail companies have relatively modest revenues from sales to the individual consumer.

Total expenditure of consumers on electricity is approximately DKK 22 bn. This estimate is based on the total electricity consumption of households of almost 10,000 GWh in 2012.
In 2013 DERA reduced the revenue cap for the three Danish grid companies which distribute natural gas to customers. The grid companies are natural monopolies, and in the absence of competition DERA has conducted a benchmark analysis of the financial efficiency of the companies and on the basis of this DERA has reduced the cap on the maximum revenues the companies can demand from their customers. The aim is to make the companies more efficient every year.

In the past year, DERA has ordered the natural gas companies to be more efficient. The order from DERA means that the three grid companies in the natural gas sector have had their possibilities to earn revenues through customers’ gas bills trimmed by DKK 20 mill. for the period 2014 to 2017.

The streamlining requirements for the grid companies are realised in annual, individual efficiency requirements for each of the three companies. These will be between 0.6% and 2.05% greater efficiency every year from 2014 to 2017.

The grid companies are natural monopolies, and therefore they are not subject to competitive pressure like other commercial enterprises. With this background, DERA conducted a benchmark analysis of the companies’ costs and efficiency in 2013. The analysis showed that there is a basis to impose new requirements on the companies to be more efficient up to 2017.

This is the third time that DERA has imposed increased efficiency requirements on the grid companies. From 2006 to 2009, the companies were ordered to be between 1.5% and 2.5% more efficient per year. This requirement corresponded to the companies collectively having to streamline operations by DKK 24.8 mill. From 2010 to 2013 DERA issued annual efficiency requirements of between 0.6% and 1.2% of the companies’ costs framework (operating costs and depreciation on investments made after 1 January 2005) per year. The requirement corresponded to the companies collectively having to streamline operations by about DKK 10.5 mill. DERA has thereby imposed efficiency requirements totalling more than DKK 57 mill. on the grid companies (2012 prices) from 2006 to 2017. Table 1 shows the operating costs of the grid companies, excluding debt repayments, costs of energy-saving activities at customers and interest.
Operating costs have been calculated excluding debt repayments, costs of energy-saving activities and interest.

### TABLE 1 | OPERATING COSTS OF GRID DISTRIBUTION COMPANIES, DKK MILL.

<table>
<thead>
<tr>
<th>Company</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>DONG Gasdistribution A/S</td>
<td>183.1</td>
<td>186.5</td>
</tr>
<tr>
<td>HMN Naturgas I/S</td>
<td>273.6</td>
<td>263.5</td>
</tr>
<tr>
<td>Naturgas Fyn Distribution A/S</td>
<td>68.2</td>
<td>64.9</td>
</tr>
</tbody>
</table>

### FACTS | DER A AND EFFICIENCY REQUIREMENTS FOR THE NATURAL GAS SECTOR

#### DISTRIBUTION

The grid companies distribute natural gas to customers in specific geographical areas. The companies are natural monopolies; the absence of competition means that the companies are subject to efficiency regulation administered by DERA. As far as possible, the regulation is to create the same dynamics in efficiency, market and structural developments as competition creates in commercial markets.

Efficiency regulation of grid companies places a cap on the revenues of the individual company and imposes financial requirements on the companies in order to make the companies more efficient every year. In practice the regulation means that DERA imposes a cap on the revenues the companies can charge their customers through gas bills.

Every four years, DERA analyses the financial efficiency of the grid companies. DERA calculates the efficiency requirements on the basis of a benchmark analysis of the companies’ costs and DERA issues efficiency requirements which balance with the efficiency requirements the companies would have faced if they were commercial enterprises.

#### SYSTEM-OPERATOR TRANSMISSION COMPANY

The system-operator transmission company, Energinet.dk, owns and operates the overall gas transmission grid as well as the gas storage facility at Lille Torup in Jutland. The company maintains overall security of supply for the gas area.

Energinet.dk is an independent public-sector company, owned by the Danish state. The company is regulated according to the non-profit principle, meaning that the company can only demand tariffs to cover its necessary costs of efficient operation. DERA approves the majority of the company’s methods of setting tariffs and can decide that a specific cost is not a necessary cost of efficient operation and therefore it cannot be fully or partly included in the company’s tariffs.
In 2013 DERA reduced the revenue cap for the 75 Danish electricity grid companies which distribute electricity to customers. The grid companies are natural monopolies, and in the absence of competition DERA has conducted a benchmark analysis of the financial efficiency of the companies and on the basis of this DERA has reduced the cap on the maximum revenues the companies can demand from their customers. The aim is to make the companies more efficient every year.

DERA’s annual benchmark analysis of electricity grid companies for 2013 shows that there are still large efficiency differences between the grid companies, both internally within the individual groups of companies, and between the groups (figure 13). DERA’s benchmark analysis was conducted using a net-volume model on the basis of accounting figures for 2012. Therefore these are model-calculated efficiency differences between the grid companies.

The transformer associations are the smallest grid companies and have the fewest customers, but these have the largest mutual differences in efficiency (figure 13). Furthermore, according to model calculations, this group of companies includes some of the most efficient and least efficient companies. This reflects that transformer associations make up a very mixed group of companies with large differences in size, number of employees, etc.

The annual benchmark analysis by DERA of the grid companies arises from the fact that the grid companies are ‘natural monopolies’, which are not subject to competition. Instead of competition, DERA analyses and benchmarks the companies’ costs and puts a cap on the revenues the companies can demand from customers; the revenue cap.
FIGURE 13 | DIFFERENCE IN THE CALCULATED EFFICIENCY OF ELECTRICITY GRID COMPANIES IN 2012, INDEX

Source: Own calculations by DERA on the basis of efficiency analyses.

Note: The figure shows the index for the cost efficiency of the electricity grid companies; a high index means high efficiency and a low index means low efficiency. The average is set equal to index 100 and expresses the averagely efficient grid company within each category of company.

The figure contains data for three groups of companies: Two companies with 50kV grids, 50 companies with 0.4-10kV grids, and 20 transformer associations (three companies have been excluded as uncharacteristic observations). The transformer associations are the smallest players among the grid companies, usually with just a few hundred customers. However, the transformer associations differ with regard to number of customers, electricity supply installations, number of employees, etc.

There is a total of 75 grid distribution companies which own and operate the electricity grid with a voltage level of 0.4-60kV. The grid companies have a licence to operate as monopolies and lead electricity to customers within a specific geographical area, to measure the consumption of individual customers and to collect taxes and charges. Therefore they are not subject to competitive pressure.
NEW REVENUE CAP

The latest benchmark analysis by DERA from 2013 of the cost-effectiveness of the companies has led to DERA setting new efficiency requirements for the companies. Overall, the requirements involve a reduction in the companies’ 2014 revenue cap of approximately DKK 95.6 mill., or 5.1% of the companies’ costs of salaries, administration and maintenance etc.

The requirements on electricity grid companies placed by DERA include permanent efficiency requirements because of low financial efficiency, and one-year efficiency requirements resulting from relatively poor quality of supply with actual power failures. The permanent efficiency requirement is about DKK 92.7 mill. and the one-year requirement amounts to DKK 2.9 mill.

This is the seventh time that DERA has set efficiency requirements for the electricity grid companies, i.e. set a new cap on the revenues which the companies can demand from customers via their electricity bills. The DERA requirement means that Danish electricity grid companies have been ordered to reduce the revenue cap by almost DKK 700 mill. since 2007. Most of this amount is a permanent reduction requirement which the electricity grid companies can no longer demand from their customers (table 2).

The revenue caps in current prices have been relatively constant since 2008. This means that the revenue caps have fallen in terms of fixed prices. The changes in the revenue caps are due to a combination of declining necessary new investments, stagnant prices and the efficiency requirements.

In the period 2006-2012, the operating costs of the electricity grid companies fell by about DKK 1,036 mill. (figure 14).

In the same period, depreciation increased by about DKK 350 mill. so the percentage of total costs made up by depreciation has increased from 28% to 36%.

However, there is a reservation for unprocessed and un-notified applications for raises in revenue caps as a result of necessary new investments. This is particularly relevant for the last year in the period.
### TABLE 2  |  EFFICIENCY REQUIREMENTS FOR ELECTRICITY GRID COMPANIES

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency requirements (DKK mill.)</td>
<td>41</td>
<td>70</td>
<td>128</td>
<td>119</td>
<td>104</td>
<td>110</td>
<td>96</td>
</tr>
<tr>
<td>Efficiency requirements according to the revenue cap for the year (%)</td>
<td>0.6</td>
<td>0.9</td>
<td>1.7</td>
<td>1.8</td>
<td>1.5</td>
<td>1.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Accumulated efficiency requirements (current prices, DKK mill.)</td>
<td>41</td>
<td>110</td>
<td>239</td>
<td>358</td>
<td>462</td>
<td>572</td>
<td>668</td>
</tr>
<tr>
<td>Accumulated efficiency requirements according to 2008 revenue cap (%)</td>
<td>0.5</td>
<td>1.5</td>
<td>3.2</td>
<td>4.8</td>
<td>6.2</td>
<td>7.7</td>
<td>9.6</td>
</tr>
</tbody>
</table>

Source: DERA

Note: The revenue caps for 2011 and 2012 are still being processed by DERA and in addition to this the regulation allows for applications for changes with retrospective effect. As a result the percentages in this table could change. The revenue caps used for 2013 and 2014 are estimates. Note also that the benchmarking of companies is conducted in advance of the regulation year in which the revenue caps are reduced. The reduction in the revenue caps in 2008 is therefore based on benchmarking by DERA in 2007 and so on.
The total costs of the electricity grid companies have been relatively stable (in current prices) over the period, meaning that, all else being equal, the electricity grid companies have been able to improve efficiency at the same rate as prices have increased (figure 14). However, it should be emphasised that this development is based on electricity grid companies as a whole, and changes for the individual company may well deviate significantly from this.

Since 2004, when the current regulation of the grid companies was introduced, there has been a consolidation. In 2004 there were 115 electricity grid companies at distribution level. In 2012 this figure had fallen to 75 companies.

**FACTS | DERA AND EFFICIENCY REQUIREMENTS FOR THE ELECTRICITY SECTOR**

**DISTRIBUTION**

The grid companies in the electricity sector – the natural monopolies – are subject to efficiency regulation administered by DERA. As far as possible, the regulation is to create the same dynamics in efficiency, market and structural developments as competition creates in commercial markets. Efficiency regulation of grid companies places a cap on the revenues of the individual company (revenue cap) and imposes financial requirements on the companies in order to make the companies more efficient every year, if they want to preserve their mark-ups.

Every year DERA benchmarks the 75 Danish grid companies. On the basis of this benchmarking, DERA sets efficiency requirements for the companies. The revenue caps show only the maximum permitted revenue charges of the electricity grid companies through the electricity bills. This means the companies can freely choose to exploit the entire revenue cap or they can demand less from their customers than allowed for by the revenue cap. Some companies, usually cooperative societies, choose to keep revenues down and therefore they do not fully exploit their revenue cap. Other companies do not fully exploit their revenue cap because they can receive interest on their capital in the grid that is higher than the interest cap. Overall, the electricity grid companies utilise about 90% of their total revenue caps. The grid companies have a licence to transport electricity in a specific geographical area in Denmark.

**SYSTEM-OPERATOR TRANSMISSION COMPANY**

The system-operator transmission company, Energinet.dk, owns and operates the overall electricity transmission grid. In 2012, Energinet.dk took over the regional electricity transmission grid from ten regional companies. Energinet.dk maintains overall security of supply. Energinet.dk is an independent public-sector company, owned by the Danish state. The company is regulated in accordance with a non-profit principle, under which the tariffs charged by the company may only cover its necessary costs for efficient operation. DERA approves the majority of the company’s methods of setting tariffs, and DERA can decide that a specific cost is not a necessary cost of efficient operation and therefore it may not be fully or partly included in the company’s tariffs.
FIGURE 14 | COSTS OF ELECTRICITY GRID COMPANIES 2006-2012, DKK MILL.

Costs have been calculated in current prices.

The electricity grid companies are obliged to advise customers on how to save energy and make their consumption more efficient. Since 2010, costs of energy savings have been separated for accounting purposes from other operations. The costs amounted to about DKK 450.5 mill. in 2012 and they cover the costs of the electricity grid companies to achieve total energy savings at customers of 1,016.3 GWh.

Source: DERA
DERA does not stipulate efficiency requirements for the approximately 600 district heating companies as it does for grid companies in the natural gas and electricity areas. The district heating companies are regulated according to the non-profit principle, which means that district heating must be sold at a price corresponding to cost of production and distribution. DERA decides which costs are necessary and may be included in the price.

Non-profit regulation means that the efficiency gains of the enterprise are reflected in the price of heating paid by consumers.
ANALYSIS

FEW CONSUMERS RECEIVE DISTRICT HEATING FROM VERY EXPENSIVE SUPPLIERS

On the basis of DERAs price statistics, or similar statistics of district heating prices, the prices quoted in articles and analyses in the media are often shown as a graph to illustrate the large price differences between the various district heating plants. Figure 15 illustrates the issue; the figure has been prepared on the basis of prices from DERAs December 2013 price statistics.

The statistic is based on the prices for heating a standard home of 130 m² with a heating consumption of 18.1 MWh, as all district heating suppliers report prices for this type of dwelling. The statement of prices for standard homes makes district heating prices comparable across Danish suppliers and it is therefore a good basis for comparing district heating prices in different supply areas.

The type of standard home used has no significance for the trends and conclusions of this analysis (see the fact box at the end of this analysis).

When DERA publishes new statistics on heating prices, it is often the most expensive district heating suppliers who receive the most media attention. However, new statistics show that the ten most expensive heating suppliers only account for 0.1% of heating sales and that the 50 most expensive suppliers account for 1% of heating sales in Denmark. A total of 97% of heat is supplied at less than half the price of the most expensive heating.
FIGURE 15 | PRICES OF HEATING FOR A STANDARD HOME OF 130 M² WITH AN ANNUAL HEATING CONSUMPTION OF 18.1 MWH, SUPPLIERS SORTED BY PRICE, DKK PER YEAR

Source: DERA price statistics, December 2013 based on reports to DERA from 2012/2013.

Note: Only supplies to households are included in the figure. The prices in the figure are the annual price of heating including VAT for a standard home of 130 m² with an annual heating consumption of 18.1 MWh.
The cheapest suppliers supply district heating at DKK 8-10,000 per year, while the most expensive district heating suppliers have prices of DKK 30-37,000 per year to heat a standard home of 130 m² with an annual heating consumption of 18.1 MWh (figure 15). The large differences in heating prices are well known and have previously been investigated and described in several analyses, most recently in “Large differences in the price of heating – why?”, completed by DERA in spring 2013. This analysis was published in May 2013 in Results and Challenges 2012. Using a statistical method, the analysis examined why the differences in the prices of heating are so large.

**THE MOST EXPENSIVE DISTRICT HEATING SUPPLIERS ARE USUALLY VERY SMALL**

The ten most expensive district heating suppliers account for about 2% of the 428 district heating suppliers included in the DERA price statistics, and their prices are DKK 26,000 per year and more; see point B on figure 15. For the 50 most expensive district heating suppliers (about 12% of the 428 district heating suppliers), the price of heating a standard home of 130 m² with an annual heating consumption of 18.1 MWh starts at around DKK 22,000 per year; see point A on figure 15. The relatively large number of suppliers with high heating prices may give the impression that many heating consumers pay relatively high prices for heating.

However, the reality is more subtle. There is great variation in the number of district heating consumers to which the district heating suppliers included in figure 15 supply heating. Moreover, the amount of district heating supplied varies greatly. The small district heating suppliers only have a couple of hundred consumers and sales of just 2,000-4,000 MWh heat per year, while the large suppliers have more than a hundred thousand consumers and supply more than a million MWh heat per year. In figure 15, the price of heating charged by each district heating supplier is shown as one point, regardless of whether heat is supplied to hundreds of thousands of consumers or to just a couple of hundred.

The ten most expensive suppliers only account for a very small part of total heating sales. Finally, the 50 most expensive suppliers also account for just a small percentage of heating sales (table 3).
Table 3 shows that the ten most expensive district heating suppliers account for about 2% of all the district heating suppliers in the price statistics, but they account for just 0.1% of heating sales in Denmark. The 50 most expensive district heating suppliers account for about 12% of district heating suppliers, but together they account for just 1% of district heating sales in Denmark. This is because the most expensive suppliers are usually very small. Moreover, 97% of district heating is supplied at a price of less than half the most expensive district heating.

There is a strong correlation between the heating sales of a district heating supplier and the number of consumers, but it is not possible to convert exactly heating sales in MWh to the number of households supplied by a given supplier. However, the ten most expensive district heating suppliers supplying 0.1% of district heating in Denmark also supply around 0.1% of the approximately 1.6 million households in Denmark using district heating. The 50 most expensive district heating suppliers, which account for 1% of total supplies, also supply about 1% of households with district heating.

The analysis confirms that the graphical illustration of district heating prices in figure 15 is not an entirely true picture of the prices charged to district heating consumers. Figure 16 gives a truer picture of prices paid by district heating consumers. A smaller proportion of district heating consumers pay relatively high heating prices to their district heating suppliers (figure 16).

The turquoise area in figure 16 is identical to the turquoise area in figure 15 and it shows every price charged by district heating suppliers for a standard home of 130 m² with an annual heating consumption of 18.1 MWh. The black line shows the price level paid by district heating consumers for district heating and the amount of district heating supplied at a given price after taking account of the different sizes of district heating suppliers and the total MWh heating supplied.

In order to show both graphs in the same figure, the number of district heating suppliers on figure 15 has been converted to the percentage of the total number of district heating suppliers. Points A and B in the turquoise area in figure 16 mark the same two points as in figure 15. A marks the 50 most expensive district heating suppliers and B marks the ten most expensive district heating suppliers.

Point A* on the black line marks exactly the same district heating supply as point A on the turquoise area, i.e. heating supply at the 50 highest district heating prices. The difference in the positions of A and A* shows graphically the same as appears in table 3. The 50 most expensive district heating suppliers account for 12% of the total number of suppliers, but only supply 1% of all district heating.

Correspondingly, point B* on the black line marks district heating supplied at the 10 highest prices; the same supply as marked by point B on the turquoise area. Point B* is very close to 100% on the graph because the 10 most expensive district heating suppliers only supply 0.1% of district heating.

DISTRICT HEATING IS GENERALLY A CHEAP TYPE OF HEATING FOR CONSUMERS

The situation for the district heating area looks very different in figure 16 compared with the way district heating prices are usually illustrated, i.e. in figure 15. Figure 16 shows that by far the majority of district heating consumers receive relatively cheap heating from their district heating suppliers, while only a small minority of district heating suppliers have relatively high prices. However, the relatively few heating consumers who are customers at the most expensive district heating suppliers are in a difficult situation.

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2 Heating consumption per household varies; some suppliers supply significant amounts of district heating to commercial consumers, while other suppliers exclusively supply private households.
3 http://www.statistikbanken.dk/
4 This can be seen in that 88% of district heating suppliers in figure 15 have supplied heat at lower prices than point A, which means that the remaining 12% have the same price as point A or higher. Correspondingly, 99% of heat is supplied at a lower price than point A* in figure 16, which means that 1% of the heat is supplied at the same price as point A* or higher.
TABLE 3 | ANALYSIS OF HEATING SALES AND HEATING PRICES

<table>
<thead>
<tr>
<th>Group of suppliers</th>
<th>Percentage of district heating suppliers</th>
<th>Percentage of district heating supplied</th>
<th>Price of heating</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 most expensive (point B)</td>
<td>2% (10 out of 428)</td>
<td>0.1%</td>
<td>DKK 26,385–37,090</td>
</tr>
<tr>
<td>50 most expensive (point A)</td>
<td>12% (50 out of 428)</td>
<td>1%</td>
<td>DKK 21,950–37,090</td>
</tr>
<tr>
<td>318 cheapest</td>
<td>74% (318 out of 428)</td>
<td>97%</td>
<td>DKK 7,758–18,545</td>
</tr>
</tbody>
</table>

FIGURE 16 | HEATING PRICES FOR A STANDARD HOME OF 130 M², ANALYSED BY PRICE AND STATED AS PERCENTAGE OF TOTAL DISTRICT HEATING SUPPLIED AND PERCENTAGE OF DISTRICT HEATING SUPPLIERS, DECEMBER 2013, DKK PER YEAR

Source: Based on prices from DERA’s price statistics as at December 2013 as well as district heating companies’ budgeted annual sales in MWh reported to DERA.

Note: The figure covers only district heating suppliers that supply dwellings. The prices include VAT.

A* shows that the 50 most expensive suppliers only account for 1% of district heating, even though they make up 12% of suppliers.

B* shows that the 10 most expensive suppliers only account for 0.1% of district heating, even though they make up 2% of suppliers.
Although a relatively small number of district heating consumers have higher heating prices, the majority of district heating consumers actually pay relatively low prices for heating. The generally low district heating prices do not mean that it is not possible to improve conditions and efficiency in the district heating sector.
The most expensive district heating suppliers usually have a small customer base and there are large distances between consumers. Many of the suppliers use natural gas as their primary fuel and they have been categorised by DERA as ‘open-field plants’. Open-field plants were primarily constructed in the 1990s and many of the suppliers are CHP plants that produce electricity in parallel with district heating.

Since the construction of open-field plants, however, natural gas prices have risen considerably and there are much higher taxes on burning natural gas. The developments in the electricity market mean that there are fewer hours in which it is financially advantageous for small CHP plants to produce electricity. At the same time, the spread customer base means that costs for open-field plants are generally higher than for other suppliers. According to the Heating Supply Act, the unavoidable costs paid by district heating suppliers can be included in the price of heating, and this means that the higher costs for the most expensive district heating suppliers are passed on as higher prices of heating for heating consumers.

In recent years, several political initiatives have been launched to reduce heating prices from the most expensive district heating suppliers and in particular from the open-field plants. In June 2000, the government decided to allocate DKK 370 mill. to reducing the debt of distressed open-field plants and other small-scale CHP plants. In the energy agreement of March 2012, the 35 CHP plants with the highest heating prices were granted an option to install a biomass boiler of up to 1MW to reduce prices.

Although a relatively small number of district heating consumers have higher heating prices, the majority of district heating consumers actually pay relatively low prices for heating. The generally low district heating prices do not mean that it is not possible to improve conditions and efficiency in the district heating sector. District heating suppliers have demonstrated this by, for example, investing regularly in new technologies, establishing mergers and collaboration agreements, and by outsourcing tasks to become more cost-effective. The long history of initiatives to achieve cost savings confirms that it will continue to be possible to optimise and streamline the operations of district heating suppliers.

MORE EFFICIENT DISTRICT HEATING SECTOR

In fact, the ambition for a more efficient district heating sector in Denmark is the reason behind the district heating sector becoming part of the government Growth Plan for Energy and the Climate, issued in December 2013. The Growth Plan includes a number of initiatives for the district heating sector to contribute to more a efficient Danish district heating sector. Work includes 1) enhancing the data base in collaboration with the district heating sector in order to complete a resilient comparison of district heating plants; 2) development of common accounting standards and chart of accounts for the district heating sector; 3) development of a solid benchmarking model for the district heating sector; and 4) an assessment of the need to change regulation of the district heating sector.

On the basis of the government Growth Plan, a steering group has been set up and a secretariat for work on efficiency comparisons in the district heating sector. The steering group is headed by the Ministry of Climate, Energy and Building.

According to the government Growth Plan, work on points 1) to 3) above is to be completed before the end of 2014.
FACTS | STANDARD HOME

WHY USE A STANDARD HOME OF 130 M² AND WITH CONSUMPTION OF 18.1 MWH?
DERA’s price statistics contain the price of district heating for a 130 m² home with an annual heating consumption of 18.1 MWh. Moreover, for the majority of suppliers, the price statistics also include the price of district heating for a 75 m² home with heating consumption of 15 MWh, for each district heating supplier supplying heating to households. Prices are shown for these two types of ‘standard home’, in particular, because all district heating suppliers report prices for a 130 m² home and heating consumption of 18.1 MWh. However, not all suppliers report prices for 75 m² homes and consumption of 15 MWh, as district heating suppliers only report prices for the categories of customer represented in their own customer base.

Although these ‘standard homes’ both have a standard area and a standard heating consumption, it is mainly the consumption figure that decides the price of heating.

CHOICE OF STANDARD HOME IS OF NO SIGNIFICANCE FOR RESULTS
The heating prices of the district heating suppliers for the two standard homes are closely linked. Whether the analysis is based on the one or the other of the standard homes is therefore of no significance for the results. In technical terms, the correlation coefficient between the prices of the two standard homes is 0.98, which means there is an almost perfect linear correlation between the prices of heating the two respective standard homes.

HEATING PRICE COMPOSITION AND CONVERSION OF PRICES
DERA is aware that the 130 m² standard home with heating consumption of 18.1 MWh probably does not reflect the home and consumption of the average heating consumer. However, DERA does not know the actual heating consumption of consumers, since a single consumer (a single meter) can refer to everything from a single home to a entire housing block. The two standard homes are still being used, partly because they are specifically referred to in the Executive Order on notifications in the area of heating, and partly because of the informational value of using the same standard home from year to year so that prices can be compared over time.

The 130 m² standard home with heating consumption of 18.1 MWh is assessed to represent greater heating consumption than a typical home receiving district heating today. This means that the heating prices in this analysis actually overestimate what the typical consumer of district heating pays. However, the high consumption of the standard home is of no significance for price differences and the distribution of prices (figures 15 and 16); only for the price level.
The prices of district heating suppliers include up to three elements: a variable amount based on the specific consumption by the district heating consumer; a fixed fee, typically comprising a subscription fee and an 'output fee' determined on the basis of the size of the home, and possibly also an incentive fee typically determined on the basis of how optimally the consumer exploits the heating received (measured by the return water temperature).

The revenues of the district heating sector comprise approx. 73% from the variable amount; approx. 25% from the fixed fee; and approx. 2% from the incentive fee. For more details on this, see ‘district heating statistics’ (only available in Danish) on the DERA website.

An accurate price of heating a home with a different heating consumption than the standard home can only be approximately calculated on the basis of the price for such a standard home. Thus, an approximate price of heating a 130 m² home with a heating consumption of 9 MWh rather than 18.1 MWh can be calculated by scaling the heating price up or down relative to the heating consumption. That is, the price will be approximately half for a consumption of 9 MWh compared with a consumption of 18.1 MWh. The prices are scaled up or down relative to the heating consumption because the heating consumption constitutes the largest element in the heating price calculation for a given home.

**THE AVERAGE PRICE OF HEATING**

The average price of heating can be calculated in two ways: a simple price average for each supplier or a weighted average in which the prices of each supplier are weighted relative to a given factor, e.g. district heating sales in MWh or the number of district heating consumers (district heating meters). The weighted average means that some suppliers are given more weight than others when calculating the average, for example, because they sell more heating or have more consumers.

The simple average price for district heating can be calculated on the basis of the heating prices in figure 15, and this gives around DKK 16,600 including VAT for heating a 130 m² home at a heating consumption of 18.1 MWh. An average weighted relative to the heating sales of the district heating suppliers measured in MWh, gives an average price of DKK 13,900, which is around 16% lower than the simple average. The weighted average is more accurate in terms of how much the average consumer pays for district heating.

For the two standard homes, the (unweighted) average price of an 18.1 MWh heating consumption (in a 130 m² home) is DKK 16,595, while for a 15 MWh heating consumption (in a 75 m² home) this figure is DKK 13,319. In other words, the calculated average heating price is reduced by around 20% when the heating consumption is reduced by 17% and the area is reduced by 40%.
Consumers have had the opportunity to freely choose supplier and electricity product since the electricity market was liberalised in 2003. There are almost 3 million electricity customers (determined by usage measurement points) in Denmark, and the total household electricity consumption is around 10,000 GWh (2012), an average of around 3000 KWh per household.

However, by far the majority of Danish electricity customers have not taken the opportunity to choose supplier and electricity product. At the start of 2013, almost 80% of customers were supply obligation customers and had not taken advantage of the free choice. In practice this means that the majority of customers had bought an electricity product where the price has been regulated by DERA.

There was a fundamental amendment in DERA’s monitoring of electricity prices in 2013, which thus affected DERA’s regulation of prices for those customers who do not purchase a commercial electricity product on the free commercial electricity market.

This amendment was due to changes to the Electricity Supply Act in 2012 by the Danish Parliament and the practical effect of the amendment entered into force on 1 May 2013.
DERA monitors the prices of three electricity products.
Up until 1 May 2013, DERA determined the maximum price that the supply obligation electricity companies in Denmark (covering a total of 39 licence areas) could charge for electricity for the 80% of customers who were not active on the free market.

The amendment of the Electricity Supply Act made changes to four key conditions:
- the supply obligation licences are to be tendered in step with the expiry of the existing licences.
- the enterprise that wins the tender must offer customers a supply obligation product.
- the existing supply obligation supplier must offer a basic product. The basic product is to be offered to supply obligation customers who have not actively chosen a new electricity product in connection with the tendering procedure. In practice, the passive supply obligation customers were automatically transferred to the basic product. The basic product can also be actively chosen by new customers.
- DERA is to monitor prices and supply conditions for supply obligation and basic products in the areas where the licence has been through a tendering procedure.

**MONITORING OF ELECTRICITY PRICES**

The Danish Energy Agency is responsible for the tendering process in relation to the supply obligation licences. By the end of 2013, 26 of the 39 licences in the country had been put up for tender. The majority of the tendered licences entered into force on 1 May 2013.

Amendments to legislation and the tendering of a large number of licences have resulted in changes to the DERA monitoring of certain electricity price products along the following lines:

**SUPPLY OBLIGATION LICENCES THAT HAVE NOT BEEN PUT OUT FOR TENDER:**
- Supply obligation companies report their prices to DERA. DERA operates price control and regulates the price by applying a method to ensure that the profit from the supply obligation product does not exceed the profit from the corresponding products on the free market.

**SUPPLY OBLIGATION LICENCES THAT HAVE BEEN PUT OUT FOR TENDER:**
- DERA ensures that the price of the supply obligation product follows the price on which the tender was won.
- DERA supervises to ensure that the price of the basic product does not exceed the price of the previous supply obligation product; in other words the maximum price that the supply obligation product would have had if there had not been a tender process.

Overall, DERA supervises the prices of three types of product on the electricity market:
- Supervision of the price of the supply obligation product in areas where there has not been a tendering procedure takes place following the earlier model in which DERA determines a maximum price for the product.
- In areas where there has been a tender process, DERA ensures that the price of the supply obligation product follows the price on which the tender was won.
- Technically, supervision of the price of the basic product in each of the 26 licence areas is the biggest innovation within the supervision of prices by DERA.

The method used for the supervision involves two steps. Firstly, DERA calculates a maximum price for the supply obligation product which would have been offered to customers if there
had not been a tendering procedure. The calculation has three cost elements that together constitute the calculated price. The three cost elements are:

- purchase price on the wholesale market (NordPool)
- maximum reasonable gross profit, as set by DERA
- a supplement if electricity consumption (and price) is different from the predicted consumption profile.

These price elements are determined on a quarterly basis. The maximum price calculated for the supply obligation product that would have been offered to customers if there had not been a tender process is now compared with the prices of the basic product for the different companies in the same three-month period.

Every day throughout the three-month period, DERA records the listed price per kWh, including subscription, for every basic product offered on the market. On this basis, DERA can calculate a simple average of the daily average prices throughout the period. This simple average expresses the price of the basic product for the three-month period. These prices are published on DERA’s website.

If the price of the basic product in a given three-month period is higher than the maximum price for the same period, then DERA will contact the electricity company concerned and investigate why the price of the basic product is higher than the benchmark price, i.e. the calculated maximum price. If the company can justify the difference in terms of cost – the benchmark price is, after all, calculated on the basis of averages – then DERA will take no further action. However, if the company is unable to justify the higher price in terms of cost, then DERA will request that the company lower the price.

**SURVEY OF BASIC PRODUCT PRICES**

The surveillance of basic product prices has shown that prices were lower than the previous supply obligation product in 14 of the 26 companies in West Denmark in the third quarter of 2013. All three of the companies in East Denmark had a lower price for the basic product than the previous supply obligation product. The same trend was observed in the second quarter.

The same trend was also observed in the fourth quarter (Table 4), i.e. that the price of the basic product was lower than the price of the previous supply obligation product in most companies. Higher prices for basic products in relation to the previous supply obligation product can generally be explained by the companies as the result of an extraordinarily high consumption profile.

However, DERA has requested more detailed explanations by the end of the year from four companies in relation to the prices established for basic products. The companies concerned are Hornum Elforsyning, Nibe Elforsyning, Tårn Elforsyning and Aars Elforsyning.

Results were not available at publication went to press.

The Secretariat also supervises supply conditions to ensure that the supply conditions for the basic products match those for the previous supply obligation product. This means that the binding period can be no more than one month and that the price is fixed throughout each quarterly period. Similarly, associated fees must not exceed fees associated with the previous supply obligation product.
### Table 4 | Prices of Basic Products – Fourth Quarter 2013

<table>
<thead>
<tr>
<th>Company</th>
<th>Product name for basic product</th>
<th>Basic Product õre/kWh</th>
<th>Previous supply obligation õre/kWh</th>
<th>Price difference õre/kWh</th>
<th>Difference in %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WEST DENMARK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELRO Forsyngspilgt A/S</td>
<td>Basisprodukt kvartal</td>
<td>34.75</td>
<td>34.76</td>
<td>-0.01</td>
<td>-0.04</td>
</tr>
<tr>
<td>Energi Fyn Handel A/S</td>
<td>Basisprodukt Kvartal</td>
<td>33.64</td>
<td>34.76</td>
<td>-1.12</td>
<td>-3.23</td>
</tr>
<tr>
<td>Energi Nord Forsyning A/S</td>
<td>BasisEl</td>
<td>35.00</td>
<td>34.76</td>
<td>0.24</td>
<td>0.68</td>
</tr>
<tr>
<td>Energi Viborg Forsyning A/S</td>
<td>Markeds-El Kvartal</td>
<td>34.24</td>
<td>34.76</td>
<td>-0.52</td>
<td>-1.51</td>
</tr>
<tr>
<td>EnergiMidt Handel A/S</td>
<td>Basisprodukt Kvartal</td>
<td>34.75</td>
<td>34.76</td>
<td>-0.01</td>
<td>-0.04</td>
</tr>
<tr>
<td>Frederikshavn Forsyningpligt A/S</td>
<td>Basisprodukt Kvartal</td>
<td>34.87</td>
<td>34.76</td>
<td>0.11</td>
<td>0.31</td>
</tr>
<tr>
<td>Hirtshals El-forsyningsselskab A/S</td>
<td>Kvartalsprisprodukt</td>
<td>33.63</td>
<td>34.76</td>
<td>-1.14</td>
<td>-3.27</td>
</tr>
<tr>
<td>Hjerting El-og Vandforsyning A/S</td>
<td>Markedsel</td>
<td>33.64</td>
<td>34.76</td>
<td>-1.13</td>
<td>-3.24</td>
</tr>
<tr>
<td>Hornum Elforsyning A/S</td>
<td>Fri El</td>
<td>38.45</td>
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<td>3.69</td>
<td>10.60</td>
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<td>Ideelle A/S</td>
<td>Markedsel</td>
<td>34.13</td>
<td>34.76</td>
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<td>-1.84</td>
</tr>
<tr>
<td>Jysk Energi A/S</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>LEF A/S</td>
<td>Basisprodukt</td>
<td>32.01</td>
<td>34.76</td>
<td>-2.75</td>
<td>-7.92</td>
</tr>
<tr>
<td>Company</td>
<td>Product name for basic product</td>
<td>Basic Product øre/kWh</td>
<td>Previous supply obligation product øre/kWh</td>
<td>Price difference øre/kWh</td>
<td>Difference in %</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------</td>
<td>-----------------------</td>
<td>--------------------------------------------</td>
<td>--------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Lokalenergi Forsyning A/S</td>
<td>ForsyningsEl</td>
<td>34.25</td>
<td>34.76</td>
<td>-0.51</td>
<td>-1.48</td>
</tr>
<tr>
<td>Nibe Elfofsyning A/S</td>
<td>Fri El</td>
<td>38.45</td>
<td>34.76</td>
<td>3.69</td>
<td>10.60</td>
</tr>
<tr>
<td>Thy-Mors Energi Elsalg A/S</td>
<td>Basisprodukt kvartal</td>
<td>35.00</td>
<td>34.76</td>
<td>0.23</td>
<td>0.67</td>
</tr>
<tr>
<td>Nyfors Energi A/S</td>
<td>Basisprodukt kvartal</td>
<td>34.76</td>
<td>34.76</td>
<td>-0.01</td>
<td>-0.02</td>
</tr>
<tr>
<td>Scanenergi Elsalg A/S</td>
<td>Basisprodukt kvartal</td>
<td>35.22</td>
<td>34.76</td>
<td>0.46</td>
<td>1.31</td>
</tr>
<tr>
<td>Taars Elfofsyning A/S</td>
<td>Basisprodukt kvartal</td>
<td>39.00</td>
<td>34.76</td>
<td>4.24</td>
<td>12.19</td>
</tr>
<tr>
<td>VOS El-handel A/S</td>
<td>Markedsel</td>
<td>35.22</td>
<td>34.76</td>
<td>0.46</td>
<td>1.31</td>
</tr>
<tr>
<td>Ærø Elfofsyning A/S</td>
<td>Basisel</td>
<td>32.60</td>
<td>34.76</td>
<td>-2.16</td>
<td>-6.22</td>
</tr>
<tr>
<td>Aars Elfofsyning A/S</td>
<td>Fri El</td>
<td>38.45</td>
<td>34.76</td>
<td>3.69</td>
<td>10.60</td>
</tr>
<tr>
<td><strong>EAST DENMARK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DONG Energy El &amp; Gas A/S</td>
<td>Basispris Kvartal</td>
<td>35.70</td>
<td>36.91</td>
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<td>-3.28</td>
</tr>
<tr>
<td>Helsingør Elfofsyning A/S</td>
<td>Basisprodukt kvartal</td>
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<td>36.91</td>
<td>-1.49</td>
<td>-4.04</td>
</tr>
<tr>
<td>SEAS-NVE Strømmen A/S</td>
<td>BasisEnergi</td>
<td>35.35</td>
<td>36.91</td>
<td>-1.56</td>
<td>-4.22</td>
</tr>
</tbody>
</table>

**Note:** The majority of the basic products were offered from 1 May 2013. Certain basic products were first offered during May and June 2013. Jysk Energi will not offer a basic product until 1 January 2014, but they are included in the table for the sake of completeness.
Consumers have had the opportunity to freely choose supplier and natural gas product since the natural gas market was liberalised in 2004. There are around 400,000 natural gas customers in Denmark. The total natural gas consumption was almost 25,000 GWh, or the equivalent of over 11% of the total energy consumption.

However, by far the majority of Danish natural gas customers have not taken the opportunity to choose supplier and natural gas product. At the start of 2013, almost 80% of customers were supply obligation customers and had not taken advantage of the free choice. In practice this means that the majority of customers had bought a natural gas product where the price has been regulated by DERA.

In 2013, there were fundamental changes in the supervision of prices for gas products by DERA for those customers who had not actively chosen a product on the free commercial market. These changes were due to amendments made to the Natural Gas Supply Act in December 2012 by the Danish Parliament. The practical amendment entered into force on 1 May 2013. The amendments entailed a change in DERA’s supervision of supply obligation products, from retrospective adjustment of the supply obligation companies’ profits to supervision of the prices of the supply obligation products.

The amendment of the Natural Gas Supply Act made changes to four key conditions:
- supply obligation licences in the country’s three supply areas were put out to tender;
- the winner of the tendering round was obliged to offer customers a supply obligation product.

Amendments to the Natural Gas Supply Act in December 2012 led to fundamental changes in DERA’s supervision of prices and products for customers who are not active. Since May 2013, DERA has supervised prices of supply obligation products and the new basic product. At the end of 2013, the monitoring indicates that the companies’ prices are in line with regulations.

ANALYSIS

NEW SUPERVISION OF NATURAL GAS PRICES
- A completely new product, the basic product, was created. The basic product was offered to supply obligation customers who had not actively chosen a new gas product in connection with the tendering procedure. In practice, the passive supply obligation customers were automatically transferred to the basic product. The basic product is comparable with commercial gas products, but it is also unique as DERA supervises the price of this product, in contrast to the commercial products.

- DERA must monitor prices and supply conditions for supply obligation and basic products.

The Danish Energy Agency was responsible for the tender process for the supply obligation licences in 2013. There are three licence areas in Denmark and these were previously distributed between DONG Energy El & Gas A/S, HMN Gassalg A/S and Naturgas Fyn A/S. However, after the tender process, Naturgas Fyn A/S won all three areas and is now the only company offering a supply obligation product in each of the three gas areas in Denmark.

The change in legislation and tender process in the three areas means that DERA supervises the prices of two types of product on the natural gas market.

**SUPPLY OBLIGATION PRODUCT:** The price of the supply obligation product may only follow 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.

Customers are entitled to receive a supply obligation product if the customer:
- actively chooses it from the supply obligation company (i.e. Naturgas Fyn as they won the tender process in the three supply areas)
- actively chose the product before 1 May 2013, i.e. after the Danish Energy Agency had carried out the tender procedure for supply obligation.
- moves and becomes a new gas customer, or no longer has an agreement with another gas supplier.

**BASIC PRODUCT:** If the customer was already a supply obligation customer and did not change gas supplier or gas product before 1 May 2013, then they will receive a basic product from their existing supplier. The basic product can have different product names dependent on the supply company.

There are three companies offering basic products. They are:
- DONG Energy El & Gas A/S, where the product is called ‘Basispris Måned’
- HMN Gassalg A/S, where the product is called ‘HMN Månedspris’
- Naturgas Fyn A/S, where the product is called ‘Basispris’.
SUPERVISION OF SUPPLY OBLIGATION AND BASIC PRODUCTS
DERA only supervises the natural gas prices of supply obligation and basic products. The supervision is carried out as follows:

- Supply obligation product. DERA monitors the price to ensure that it does not exceed the amount upon which the tender was won.
- Basic product DERA monitors the price to ensure that it does not exceed the price of the previous supply obligation product. That is the price that the supply obligation product would have had if there had not been a tendering procedure.

In 2013, the three largest gas suppliers in the country: DONG Energy, HMN and Naturgas Fyn, had the vast majority of natural gas consumers as customers. Over 400,000 customers – small consumers such as households and small enterprises – were divided between the three companies. The three companies therefore supply natural gas to the majority of Danish customers, of whom almost 80 percent were supply obligation customers before the tendering procedure.

There are no publicly available figures regarding the number of customers who purchase the different products. However, as the majority of customers were supply obligation customers before the tendering procedure, it is reasonable to assume that most customers receive a basic product, and therefore supervision of the basic products is important for many households.

SUPERVISION OF BASIC PRODUCTS
The new innovation – the basic product – is offered by the three largest natural gas suppliers in the country: DONG Energy, HMN and NGF. It is stated in the legislation that the basic product should be the standard product if the supply conditions correspond to, and the price does not exceed the price of, the previous supply obligation product. In order to protect the inactive consumers DERA is to supervise the prices and supply conditions for the basic products.

Supervision of the basic products is carried out using the following method:\(^5\)

\(^5\) (in Danish, from 17 December 2013) "Tilsynet med priser og leveringsvilkår for tilbagefaldsprodukter på gasområdet"http://energitilsynet.dk/gas/afgjørelser/tilsynsafgjørelser/2013/metode-til-tilsyn-med-tilbagefaldsprodukter-far-gas/#c10364696
### TABLE 5 | PRICES FOR BASIC PRODUCTS IN THE GAS AREA

<table>
<thead>
<tr>
<th>Month</th>
<th>Company</th>
<th>Product name</th>
<th>Price of basic product DKK/m³</th>
<th>Expected price of basic product (previous supply obligation product) DKK/m³</th>
<th>Difference DKK/m³</th>
<th>Difference %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DONG</td>
<td>Basispris Måned</td>
<td>3.09</td>
<td>3.01</td>
<td>0.08</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>HMN</td>
<td>HMN månedspris</td>
<td>2.68</td>
<td>3.14</td>
<td>-0.47</td>
<td>-15%</td>
</tr>
<tr>
<td></td>
<td>NGF</td>
<td>Basispris</td>
<td>3.08</td>
<td>3.16</td>
<td>-0.08</td>
<td>-2%</td>
</tr>
<tr>
<td>December</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DONG</td>
<td>Basispris Måned</td>
<td>2.99</td>
<td>2.93</td>
<td>0.06</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>HMN</td>
<td>HMN månedspris</td>
<td>2.63</td>
<td>3.06</td>
<td>-0.43</td>
<td>-14%</td>
</tr>
<tr>
<td></td>
<td>NGF</td>
<td>Basispris</td>
<td>2.99</td>
<td>3.08</td>
<td>-0.08</td>
<td>-3%</td>
</tr>
<tr>
<td>November</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DONG</td>
<td>Basispris Måned</td>
<td>2.97</td>
<td>2.96</td>
<td>0.00</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>HMN</td>
<td>HMN månedspris</td>
<td>2.56</td>
<td>3.09</td>
<td>-0.53</td>
<td>-17%</td>
</tr>
<tr>
<td></td>
<td>NGF</td>
<td>Basispris</td>
<td>2.98</td>
<td>3.11</td>
<td>-0.13</td>
<td>-4%</td>
</tr>
<tr>
<td>October</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DONG</td>
<td>Basispris Måned</td>
<td>2.88</td>
<td>2.89</td>
<td>-0.01</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>HMN</td>
<td>HMN månedspris</td>
<td>2.62</td>
<td>3.02</td>
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<td>-13%</td>
</tr>
<tr>
<td></td>
<td>NGF</td>
<td>Basispris</td>
<td>2.94</td>
<td>3.03</td>
<td>-0.09</td>
<td>-3%</td>
</tr>
<tr>
<td>September</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DONG</td>
<td>Basispris Måned</td>
<td>2.92</td>
<td>2.93</td>
<td>-0.01</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>HMN</td>
<td>HMN månedspris</td>
<td>2.52</td>
<td>3.06</td>
<td>-0.54</td>
<td>-18%</td>
</tr>
<tr>
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<td>NGF</td>
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<td>2.90</td>
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<td>-6%</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DONG</td>
<td>Basispris Måned</td>
<td>2.91</td>
<td>2.95</td>
<td>-0.04</td>
<td>-1%</td>
</tr>
<tr>
<td>June</td>
<td>HMN</td>
<td>HMN månedspris</td>
<td>2.56</td>
<td>3.08</td>
<td>-0.52</td>
<td>-17%</td>
</tr>
<tr>
<td></td>
<td>NGF</td>
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<td>2.81</td>
<td>3.10</td>
<td>-0.29</td>
<td>-9%</td>
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<tr>
<td>July</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>DONG</td>
<td>Basispris Måned</td>
<td>2.96</td>
<td>3.03</td>
<td>-0.07</td>
<td>-2%</td>
</tr>
<tr>
<td>June</td>
<td>HMN</td>
<td>HMN månedspris</td>
<td>2.58</td>
<td>3.16</td>
<td>-0.58</td>
<td>-18%</td>
</tr>
<tr>
<td></td>
<td>NGF</td>
<td>Basispris</td>
<td>2.88</td>
<td>3.17</td>
<td>-0.29</td>
<td>-9%</td>
</tr>
<tr>
<td>May</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DONG</td>
<td>Basispris Måned</td>
<td>2.97</td>
<td>3.14</td>
<td>-0.17</td>
<td>-5%</td>
</tr>
<tr>
<td>June</td>
<td>HMN</td>
<td>HMN månedspris</td>
<td>2.83</td>
<td>3.27</td>
<td>-0.44</td>
<td>-14%</td>
</tr>
<tr>
<td></td>
<td>NGF</td>
<td>Basispris</td>
<td>2.83</td>
<td>3.28</td>
<td>-0.45</td>
<td>-14%</td>
</tr>
</tbody>
</table>

Source: DERA Secretariat
The supply obligation price is an average of the prices within the three gas areas. The supply obligation product is offered by Naturgas Fyn A/S.

Note: The prices do not include distribution tariff as the size of the distribution tariff depends on where the consumer lives (distribution areas: DONG 1.73 DKK/m³; HMN 0.72 DKK/m³; NGF 1.54 DKK/m³ – prices including VAT).
DERA’s supervision of prices of basic products since May 2013 reveals a difference in prices, but this was also the case for the companies’ supply obligation products before May 2013.

DERA calculates the expected price of the basic product each month. The expected price of the basic product is calculated as the price that the supply obligation product would have had if there had not been a tendering procedure.

The price of the basic products depends upon prices on the different gas exchanges. On that basis, the prices of the basic products will rise and fall in line with price developments on the gas market. DERA refers to the prices on the gas exchanges as index prices. In addition to the index price, the companies’ retail prices include costs such as transmission costs, inside and outside Denmark, flexibility costs and contribution margin. An important aspect of the supervision of basic products is publication of the prices. The prices of basic products and supply obligation products are published on a monthly basis on DERA’s website. The form and content of the publication is considered with a view to making the supervision visible.

In addition to the prices of the basic products, DERA also publishes the expected prices of the previous supply obligation products and the difference between the expected and actual prices expressed as a percentage. The expected prices are only indicative as they are estimated. The prices of the basic products can be found on the price portal www.gasprisguiden.dk.

The prices of the basic products must not exceed the expected prices of the previous supply obligation products. If the price is lower than the expected price then the price difference is negative and the requirements for the price have been met. If, however, the price difference is positive then the requirements in relation to price have not been met.

If the requirements have not been met, then DERA will ask the companies to account for the price in the month concerned. If the company finds that DERA has made a mistake and they can demonstrate that the price of the basic product does not exceed the price of the previous supply obligation product, then DERA will take no further action. DERA can require that the company lower the price if the company is unable to explain the discrepancy.

SURVEY OF BASIC PRODUCT PRICES
DERA’s supervision of prices of basic products since May 2013 reveals a big difference in prices, but this was also the case for the companies’ supply obligation products before May 2013. The supply obligation product has been the cheapest product on the Danish gas market since May 2013 (Table 5).

In Figure 17, the prices of the basic products are compared with the average price for supply obligation products and an average of the market price (gas exchange prices).
The owners of the electricity grid companies have charged interest on their investments at a par with industrial enterprises, after adjusting for risk. This is indicated in an analysis of the largest electricity grid companies carried out by DERA. The analysis also shows that interest rates are very different from enterprise to enterprise and that several enterprises seem to choose a low interest rate, probably in order to pay dividends to their owners through lower prices. The analysis of grid companies’ interest rates was made at a general level and is a snapshot insight into the rates.

Just as every bank customer expects interest return on their bank account, the owner of an enterprise expects a return on the money that is tied up in capital assets in connection with investments in the grid. Grid companies are monopolies and their incomes are regulated in order to attempt to reflect the conditions that the enterprises would have faced in a competitive market. Reasonable conditions for owners are therefore dependent on factors such as whether the return on capital corresponds to the returns in sectors with the same risk profile, i.e. sectors where the risk of losing the money deposited or receiving low returns is the same as for grid enterprises.

Just as the interest rate influences companies’ return on capital, it will also affect consumer prices because interest is included in the prices of distribution services from the grid companies and therefore, ultimately, it is paid for by the consumers.

In the light of this, it is relevant to investigate the size of returns for Danish grid companies – both between companies but also in relation to the maximum permissible returns after regulation and the returns in competitive sectors.

6 For example, the size of current assets as receivables and liquid assets can differ in the two annual reports. In the regulatory annual report, these are calculated using a predetermined method, whereas the actual figures will be used in the standard annual report.
FACTS | KEY FIGURES

REGULATORY INTEREST RATES
It is relevant to examine the key figures as the calculation of the regulatory interest rates is statutory, and therefore reflects the method that the legislator has found appropriate to use for regulation of enterprises. The regulatory interest rates indicate the possibility to remunerate the regulatory capital. The regulatory capital is partly estimated and partly calculated on the basis of historical information about loans and equity capital.

RATE OF RETURN
Key figures are calculated on the basis of information found in the enterprises’ annual reports (the external accounts). This information can differ from the information found in the regulatory annual reports. The figure is therefore more accurate when compared with interest rates from competitive markets as the comparison builds upon information calculated using the same methods. This key figure indicates the possibility to remunerate all capital in the enterprise, i.e. both liabilities and equity capital.

CALCULATION | REGULATORY INTEREST RATES

The regulatory interest rate is calculated for 2008-2010 as the percentage that the operational revenue less operational costs and depreciations constitute of the grid assets plus 2%. This 2% corresponds to the regulatory operational assets.

\[
\text{REGULATORY INTEREST RATE (2008-2010)} = \frac{\text{Operational revenue} - \text{operating costs} - \text{depreciations}}{\text{Grid assets} + 2\%}
\]

The regulatory interest rate for 2008-2010 is defined in the Executive Order on revenue caps 1294/2010. Pursuant to the current Executive Order on Revenue Caps 335/2011, the method of calculation has been changed (from and including 2011) so that corrections for differences are included in the numerator. This means that differences in favour of the enterprise and repayment of differences in the consumers’ favour must be added, whilst differences in the consumers’ favour and collection of differences in favour of the enterprise must be deducted.

\[
\text{REGULATORY INTEREST RATE (2011-)} = \frac{\text{Operational revenue} - \text{operating costs} - \text{depreciations} \pm \text{differences}}{\text{Grid assets} + 2\%}
\]

All the incoming payments are regulatory amounts and are calculated using a different method than the methods used in the standard annual reports. For example, only the value of material fixed assets is used in the calculation of grid assets. The value of these is partly estimated and partly calculated on the basis of historical information. Additionally, it is not possible to carry out revaluations or write-downs on these assets.
It is important to stress that returns can be calculated using different methods and using different key figures; when choosing a method, it should be considered in which context the figures will be used. In this survey, two general types of return have been chosen that are interesting to compare across grid companies and sectors. These are regulatory interest rate and rate of return. More detail on these can be found in the box ‘key figures’.

It should be noted that, in addition to the regulation, grid companies’ interest rates are influenced by the individual company’s efficiency and presumably by whether the company is consumer-owned. Consumer-owned grid companies can have as a specific goal that they should not take advantage of the possibilities for returns that legislation provides, they can therefore set lower prices than the regulations allow. In a competitive market, the most effective enterprises will achieve the highest returns. This survey gives a snapshot insight into the grid companies’ interest rates, but it is not intended as an analysis of the background for the size of the interest rates.

**REGULATORY INTEREST RATES**

The method of calculation for regulatory interest rates is statutory, and therefore reflects the method that the legislator has found appropriate to use for regulation of enterprises. This key figure indicates the enterprises’ possibilities to remunerate their total regulatory capital.

Figure 18 shows regulatory interest rates for the ten largest grid companies from 2008 – 2012. Around 80% of Danish electricity consumers were covered by the ten largest grid companies in 2012. As a reference, the grid companies’ average actual (weighted) regulatory interest rate and the maximum permitted interest rate are shown in the figure as a blue and a purple line respectively. The maximum permitted interest rate is statutory and is calculated annually as the average long mortgage bond rate plus one percentage point.

Grid companies are regulated according to the revenue cap regulation, and revenues are generally limited by either a revenue cap or the maximum permitted interest rate. A revenue cap is the total, maximum amount that a grid company is permitted to collect from consumers, and this is determined based on the companies’ revenue in 2004. It is not necessarily the case that all companies have the possibility to achieve an interest rate that corresponds to the average long construction bond rate plus one percentage point, because the revenue cap can be a limiting factor. This could be due to both differences in companies’ regulatory basis (their revenues in 2004) and their efficiency.

Figure 18 shows that the regulatory interest rates are very different from company to company. Some grid companies have interest rates that are higher than the maximum permitted, whilst others have had negative interest rates in the years before 2011. However, it appears that there has been a reduction in the size of the regulatory interest rates for the companies over the years.

8 Grid assets +2%

9 It should be noted that the grid companies have the opportunity to obtain (and maintain) an interest rate that is greater than maximum permitted rate, but that the consequence of this is future, long term reductions of the revenue cap. Consequently, the companies endeavour to avoid exceeding the maximum permitted interest rate.
The rate of return is calculated from the result of the year’s operating profit or loss divided by the average assets.

\[
\text{Rate of Return} = \frac{\text{Operating profit or loss for the year}}{\text{Average assets}}
\]

The calculation of the key figures is based on recommendations found in the Danish Society of Financial Analysts’ Recommendations and Key Figures 2010.

Net profit or loss for the year is calculated as the profit for the year before financial items and tax. It is thus the average capital remuneration of both loan and equity capital before tax.

The average assets for a given year are calculated as an average of the assets at the end of the year and at the end of the previous year. In the regular annual reports, assets consist of material assets such as cables, intangible assets such as goodwill and working capital such as cash. Therefore, this will often have a greater value than the regulatory capital (grid assets + 2%), see the box on calculation of regulatory interest rates.
Figure 19 | Rates of Return for the Ten Largest Grid Companies, Percent

Source: Grid companies’ annual reports, own calculations and Statistics Denmark’s table “REGN5 – Accounts statistics by industry and items.

Note 1: The ten largest grid companies are chosen for each year.
Note 2: For 2008 – A rate of return of -19% has been removed from the graph.
Note 3: Data from REGN5 has yet to be processed for 2012. The average rate of return is expected to be the same as in 2011.
In addition to differences in regulatory basis and efficiency, the differences in interest rates could be due to a conscious choice by the individual companies. Some companies are consumer-owned and, in effect, these companies make a dividend payment through their prices, which is not reflected in the regulatory interest rates. In summary, it is difficult to conclude how much significance can be attributed to the regulation, efficiency and the dividend payment. However, it can be concluded that the actual interest rates vary considerably from company to company and that the regulation provides an opportunity for some companies to achieve the maximum permitted interest rate.

RATE OF RETURN
Like the regulatory interest rates, the rate of return reflects the companies' possibilities for remunerating the total capital. This key figure is often used as an indicator, because the key figure for profit-maximising companies gives an indication of the company's capital remuneration and the incentive to make new investments. The figures incorporated in this key figure are found in the companies' annual reports and are therefore more comparable with key figures from competitive sectors. This is due to the fact that these are also based on the regular annual reports and there is therefore a consistency between the methods of calculation of the accounting figures.

In competitive branches, the rate of return is a frequently used target for interest rates, as it indicates, for profit-maximising companies, whether it is cost-effective to invest money in a company and whether is cost-effective to make new investments. As rate of return can be calculated for both grid companies and for companies in the competitive sectors, it can give an indication of whether the existing capital will be remunerated as well as, or better than, capital in the comparable competitive markets.

Figure 19 shows the rates of return for the ten largest grid companies for the last five years. As a reference, the average rate of return in the industry is included in the figure.

Figure 19 shows that rates of return, like the regulatory interest rates, vary greatly from company to company. As described earlier, this could be due to differences in either the regulation, efficiency or form of ownership. It appears that few companies achieve performance levels equivalent to or higher than the average rate of return in the industry.

As in the case of the regulatory interest, the rates of return do not reflect any dividends handed down to consumers due to the grid company not taking advantage of the revenue opportunities that the revenue cap allows for. To improve the comparison with the average rate of return in the industry, the grid companies' rates of return are adjusted for these payments, known as 'implied dividend payments'. The following is therefore based on the premise that a grid company has made dividend payments through low prices in those cases where the company, through regulation, has had the possibility to charge higher prices than it actually has. Thus, the rates of return are adjusted for this so they reflect the real rate of return for the owners. This adjustment is made in the black points in figure 20, where both the (unadjusted) rates of return and the average rates of return from the industry are reproduced from figure 19.

10 As DONG ENERGY E distributor is not consumer-owned it is assumed not to apply for DONG ENERGY E distribution.
It is often assumed that the risk in regulated monopolies is less than that in competitive markets as the companies have a predominantly secure revenue base, where consumers have no choice of supplier. A comparison of rates of return for electricity grid companies with the average rate of return of companies on the competitive market would therefore seem unfair. Therefore, as a purely calculation example, the average rate of return in the sector is also shown in figure 20, if the company-specific risk was half the size. Where there is a lower company-specific risk in grid companies, the interest rate does not need to be as high as on the competitive markets, where the revenue base for the individual company depends upon its ability to constantly attract and keep consumers, and where revenues can not necessarily be increased following external cost increases. On the competitive markets, a high, possible interest rate reflects a situation where the owners run a relatively high risk – either of low interest rates or of losing the invested capital.

In figure 20, there is a tendency for the adjusted rates of return to be shifted upwards in relation to the unadjusted rates, so it appears that several companies have chosen not to take advantage of the revenue opportunities that the revenue cap regulation actually offers. A comparison of figures 19 and 20 shows that especially the companies with the lowest rates of return have paid out implied dividends. In relation to this, it can be seen that negative rates of return usually reflect a conscious choice by companies not to take advantage of the revenue cap, i.e. to keep prices lower than the rules would allow.

The figure also shows that some grid companies current efficiency levels that make it impossible for them to achieve the risk-adjusted, average rate of return for the sector. However, the gap between the companies’ adjusted rates of return is significantly reduced in comparison with the unadjusted rates, and, in recent years, around half of the companies achieve an adjusted rate of return equivalent to or higher than the risk-adjusted, average rate of return for the sector. This means that the grid companies’ average possible rates of return are in line with the average for industrial companies after risk adjustment.

**SUMMARY**

It is not easy to compare interest rates of electricity grid companies with either interest rates from other electricity grid companies or with rates from companies on the competitive markets. This is because grid companies have different regulatory bases and efficiency, and additionally because any dividend payments through low prices are not reflected in the key figures that are normally used in analyses of this type. However, this introductory interest rate survey shows that:

- Interest rates vary greatly from company to company
- The regulation makes it possible for some companies to attain the maximum permitted regulatory interest rate
- Several grid companies consciously choose to have a low (sometimes negative) interest rate – presumably to enable them to pay dividends to their owners through low prices
- In recent years, many grid companies’ average possible rates of return have been in line with the average for industrial companies after risk adjustment.
FIGURE 20 | RATES OF RETURN FOR THE TEN LARGEST GRID COMPANIES, PERCENT

Source: Grid companies’ annual reports, own calculations and Statistics Denmark’s table REGN5 – “Accounts statistics by industry and items” and Statistics Denmark’s table MPK3 – “Danmarks Nationalbank’s official interest rates, inter-bank interest rates and average bond by type.”

Note 1: The ten largest grid companies are chosen for each year.
Note 2: Outliers 2008 – A rate of return and an adjusted rate of return of -19% have been removed from the graph.
Note 3: Data from REGN5 has yet to be processed for 2012. The average rate of return is expected to be the same as in 2011.
Note 4: Regulatory data for recent years is still being processed and the regulation gives an additional option for applications concerning changes with retrospective effect. Consequently, the figures shown here could change at a later date.
Every form of economic value received by the municipality from its electricity, natural gas or district heating enterprises is subject to legislation for offsetting the public subsidy to the municipalities, regardless of whether it is sales revenue, yield, physical assets or other economic benefits. In practice, this legislation means that central government offsets a share of the received value in the block subsidy that the municipality concerned receives from the state.

The offsetting regulations are formed so that the authorities focus on whether the municipalities transfer assets from the municipal supply area (financed through charges) to other activities in the municipalities, not least to areas that are financed by municipal taxation. The legislation also covers cases where a municipality transfers funds from electricity, natural gas and district heating activities to the municipality’s activities within water supply, waste water or waste management.

**THE ROLE OF THE DANISH ENERGY REGULATORY AUTHORITY**

Those municipalities that either directly or indirectly own shares in electricity and heating supply companies, are obliged to report annually to DERA whether the municipality has received funds of economic value from their supply enterprises (with reporting obligation) and whether there have been funds transferred from the municipality’s electricity, gas and heating activities to water, waste water or waste management activities. The total sum is known as the available amount.

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**ANALYSIS**

**MUNICIPALITIES EARN LARGE REVENUES FROM ENERGY COMPANIES**

Danish municipalities are obliged to submit reports to DERA on whether they have received some form of economic value from the municipal supply enterprises. A new statement from DERA shows that Danish municipalities received more than DKK 29 billion from 2003 to 2012.
### TABEL 6 | REGISTERED AVAILABLE AMOUNT*, 2003-2012, DKK BILLION

<table>
<thead>
<tr>
<th>Year of transfer</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>ALT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total amount</td>
<td>0.0009</td>
<td>9.5</td>
<td>2.1</td>
<td>4.2</td>
<td>7.1</td>
<td>1.9</td>
<td>0.3</td>
<td>1.4</td>
<td>1.6</td>
<td>1.3</td>
<td>29.4</td>
</tr>
</tbody>
</table>

Source: DERA

* The available amount is the total of the economic assets that the municipalities have received from their supply enterprises (with reporting obligation) and economic funds that have been transferred from the municipalities’ electricity, gas and heating activities to water, waste water or waste management activities.
Those municipalities that either directly or indirectly own shares in electricity and heating supply companies, are obliged to report annually to DERA whether the municipality has received funds of economic value from their supply enterprises.
A total of 89 municipalities were subject to reporting obligation in 2013. The municipalities reported on 318 enterprises in 2013, of which 26 of the enterprises were joint-municipal.

Every year, DERA decides the extent to which the available amount can be approved. These decisions are reported to Ministry of Economic Affairs and the Interior, which offset the funds in the respective municipalities’ block subsidy according to the legislation concerning municipal offsetting. The municipalities are then offset by either 60% of the available amount or 40% if the municipality deposits 20% of the available amount in a 10 year period.

NEW FIGURES ON MUNICIPAL REVENUES

A new statement from DERA shows that on a national basis the municipalities received DKK 29.4 billion from their electricity and district heating enterprises in the decade from 2003 to 2012 (table 6). The current legislation entered into force in 2003.

The statement shows a great variation in the amounts of the funds reported to DERA since the regulations were introduced. For example, in 2004 and 2007 amounts of DKK 9.5 billion and DKK 7.1 billion respectively were reported, whilst in 2003 DKK 900,000 was reported.

OVERVIEW OF THE OFFSETTING LEGISLATION

The offsetting regulations have undergone a number of amendments since they were first introduced in 1997.

The first version of the offsetting provisions in the Electricity Supply Act was introduced in 1997. This established that any municipal profits through sale of their electricity supply companies should be fully offset in the municipal block subsidy.

The profits were calculated as the sales price less the original municipal capital injected into the energy enterprise. The regulations were introduced with the aim that the relationship between municipal tax rate and the level of service could continue. The relationship between the tax rate and level of service was considered broken if, in individual municipalities, there were significant revenues which were not included under tax collection, state subsidy or, for example, offsetting. Significant revenues could occur if a municipality divested ownership interests in, for example, an electricity supply company, to use the return for other municipal purposes. With the decision to fully offset municipalities’ revenues from activities covered by the Electricity Supply Act in the municipalities’ block subsidy, the relationship between municipal service and tax rate was preserved, irrespective of the municipalities’ involvement in electricity supply.

Parallel provisions for offsetting in the heating sector were introduced in 2000.

In 2003, the Danish Parliament decided to amend the offsetting regulations in the electricity and heating sector so that there would only be offset at a lower percentage, but now in the total available amount achieved by selling supply enterprises. The extent of the offsetting was extended to include distributions, such as dividends, in order to avoid evasion and so as not to counteract the municipalities’ sales incentive.

In the explanatory notes from 2003, it was further clarified that the offsetting regulations should not only cover funds from supply companies, but also funds from any company that was associated with an electricity or heating company, such as service companies, biogas companies and water companies etc. The explanation for this clarification was that activities carried out in connection with electricity and heating activities could be taken to either be activities that originated from the Electricity Supply Act or Heating Supply Act, or be activities covered by the municipal power of attorney and thereby subject to equivalent non-profit principles.
Analysis

Market Developments for Natural Gas – 2013 Was an Important Gas Year

Approval by DERA of a new tariff structure in the transmission system; a decision on the price of transport of natural gas in transmission pipelines in the North Sea; and development of a web-based platform to increase transparency on the natural gas market, have all improved the framework for players and paved the way for a more efficient market.

The Danish government’s energy agreement from 2012 gives a complete overview of the political framework for the energy sector and for developments towards a green transition up to 2050, with the focus on more renewable energy such as wind energy, biogas, biomass and greater energy efficiency.

The transition of the energy sector also affects the natural gas sector, and as regulator, it is a central task for DERA to ensure compliance with the current Natural Gas Supply Act and the European harmonisation requirements, including ensuring the best possible framework conditions for an operational natural gas market for consumers and market stakeholders.

2013 has, in many ways, been a “gas year” where stakeholders, Energinet.dk and decisions made within DERA have improved conditions on the market.

New Principles for Pricing

In September 2013, DERA approved two new tariffing methods notified by Energinet.dk. These methods lay out new principles for pricing of gas transport in the natural gas system, support future use of the natural gas system and incorporate the cost a new gas infrastructure.

The basis for this approval is that Energinet.dk took an extension of the Danish transmission system into operation in September 2013. This is the first time since 1996 that the transmission system in Denmark has been expanded and the work consisted of a compressor station at Egtved and a transmission pipeline from Ellund – Egtved in South Jutland (see the fact box on infrastructure).
FIGURE 21 | PREVIOUS AND NEW PRINCIPLES FOR PRICING IN THE TRANSMISSION SYSTEM

TRANSMISSION PAYMENT BEFORE 1 OCTOBER 2013

TRANSMISSION PAYMENT AFTER 1 OCTOBER 2013

VOLUME PAYMENT

CAPACITY PAYMENT

FIGURE 22 | PREVIOUS AND NEW PRINCIPLES FOR PRICING OF IMPORTS / EXPORTS AND ENTRY FROM THE NORTH SEA, DKK/KWH/HOUR/YEAR

UNIFORM CAPACITY PAYMENT BEFORE 1 OCTOBER 2013

CAPACITY PAYMENT AFTER 1 OCTOBER 2013
FACTS | NEW INFRASTRUCTURE

THE COMPRESSOR STATION will ensure that there is sufficient pressure in the system for the transportation of the gas. The compressor station at Egtved is placed at a focal point in the system – where the gas enters the system and midway between the two gas storage facilities in Denmark. Until now, the existing compressors at the platforms in the Danish sector of the North Sea (Tyra) and at the two gas storage facilities in Stenlille on Zealand and Lille Torup in North Jutland have been sufficient, which is why the Danish transmission system has not previously been equipped with a compressor. The compressor station consists of four compressors. One compressor acts as reserve if one of the other compressors fails.

THE TRANSMISSION PIPELINE between Ellund and Egtved is a duplication of an existing pipeline, resulting in a significance increase in capacity on the stretch. The new pipeline from Ellund to Egtved is 94 km long. There is around 10 metres between the two pipelines for most of the stretch.

The compressor station and pipeline duplication have been built to ensure pressure in the pipes and to enable Denmark to obtain gas via the German system in the future. For many years, Denmark’s natural gas requirements have been accommodated entirely from the North Sea.

The compressor station combined with the new pipeline means that in future there will be two transport connections to the Danish market – from the North Sea and from Germany. The station and the new pipeline additionally ensure sufficient capacity to freely transport natural gas and avoid bottlenecks. The compressor station specifically provides a transport system that is better equipped to handle the changes in transport customers’ gas supplies within the system and end customers’ consumption.

Capacity from Germany to Denmark is also to be increased in the North German transmission system (which meets the Danish system at Ellund point) by the system operator Gasunie Deutschland. Until now, gas transported from Germany to Denmark has only been ‘interruptible capacity’. From October 2014, there will be ‘uninterruptible capacity’ between the German part of the infrastructure into the Danish transmission system for the first time. From October 2015, it is expected that the uninterruptible capacity will be further extended.
DERAs approval of the new tariffing principles means that Energinet.dk can determine tariffs for use of the transmission system which take into account new investments in the system, the changed needs of shippers and for the green transition, which, in practice, must be expected to lead to a replacement of natural gas consumption in the coming years, and that demand for natural gas will become more variable with the need for greater flexibility.

The first principle that DERA has approved is a new principle for weighting of capacity and volume payment. From now on, the transmission charge will be more cost-oriented, so that the capacity charge reflects the actual capacity costs, whilst the volume charge reflects the variable costs. In practice, the amendment will mean that capacity payment will constitute a smaller share of the tariffing than previously, whilst volume payment will make up a greater share. The amendment could also contribute to the further opening up of the gas market, and make it more attractive for new suppliers to use the transmission grid.

The second principle that DERA has approved is a principle for the incorporation of new investments in Energinet.dk’s tariffs. More specifically, DERA has approved that Energinet.dk’s capital costs for the new compressor system should be collected through an additional charge on transport tariffs for gas imported from Germany. DERA has also approved that capital costs for the new pipeline between Ellund and Egtved should be covered by transport customers transporting gas to Sweden or to distribution areas within Denmark.

In approving the methods, DERA emphasised that tariffing principles should be based on objective, transparent and non-discriminatory criteria, and that the tariffs should reflect actual costs and support future use of the system. DERA established that a requirement for tariff differentiation is that it should reflect the actual costs in the system and users’ actual usage of the system compared with the benefit that the individual stakeholders within the system derive from a more robust, cohesive system.

When DERA approved the new tariffing principles, Energinet.dk did not have practical experience with either compressor station usage or pipeline duplication. During 2014, Energinet.dk will therefore notify a new method based on actual usage of the new infrastructure.

**LOWER PRICES FOR TRANSPORT OF NATURAL GAS FROM THE NORTH SEA**

DERA supervises prices and conditions for access to the infrastructure for transporting gas into Denmark from the production areas in the North Sea – also known as the upstream pipelines. The upstream pipelines are an essential infrastructure for the Danish wholesale market for natural gas (see the fact box on the upstream system). In October 2011, a complaint was made by Maersk Energy Marketing (one of the transport customers) to DERA that DONG’s tariffs in the upstream system were too high. In October 2012, DERA made a specific ruling stating that DONG’s tariffs should be in the range DKK 0.05 – DKK 0.07 per cubic meter in shipping agreements entered into between DONG and Maersk Energy Marketing in the period July 2011 – October 2012. DONG’s tariffs at the time were over DKK 0.1 per cubic meter.

Both DONG and Maersk Energy Marketing complained to the Energy Board of Appeal concerning DERA’s ruling. DONG felt that a fair tariff would be higher, and Maersk Energy Marketing felt that a fair tariff would be lower.
FACTS | THE UPSTREAM SYSTEM IN THE NORTH SEA

DONG Naturgas own and operate the transmission pipelines from the production fields in the North Sea into Nybro Gas processing plant on the west coast of Jutland.

There are two pipelines: Tyra – Nybro and Syd Arne/Harald – Nybro. The great majority of gas is transported in the Tyra – Nybro pipeline.

There has been third party access to the upstream system since 2001. The first third party gas transport was in 2007. Third party access means that parties other than the owner have the right, for a fee, to transport gas in the system.

FACTS | REMIT

REMIT is an EU regulation on wholesale energy market integrity and transparency. The purpose of REMIT is to encourage open and fair competition on the wholesale energy market for the benefit of end users.

An essential part of the regulation is the Obligation on market participants to publish inside information. Inside information is defined as “information of a precise nature which has not been made public, which relates, directly or indirectly, to one or more wholesale energy products and which, if it were made public, would be likely to significantly affect the prices of those wholesale energy products.”

DERA is the supervisory authority in relation to REMIT.

FACTS | WEB-PLATFORM ON TRANSPARENCY

The platform is aimed at market participants on the Danish wholesale market for natural gas. A market participant is any person who enters into transactions, including the placing of orders to trade, on the wholesale market for natural gas in Denmark.

There are 120 individuals registered, from around 20 different institutions, who can publish inside information on the platform. These individuals also receive all the information that is sent from the platform. There is no charge for users to use the platform, i.e. it is free to send messages. Any stakeholders, who do not have a signed contract with Energinet.dk, cannot publish messages on the platform.

The operation, maintenance and further development of the platform are carried out by Energinet.dk. Energinet.dk ensures the ongoing improvement of the platform in collaboration with stakeholders from the sector and the DERA Secretariat.
In October 2013, the Energy Board of Appeal made a decision in the case. The Energy Board of Appeal confirmed that the range of DKK 0.05 – DKK 0.07 per cubic meter was a fair tariff level for the specific agreements, but that DERA should have established a specific price. The Energy Board of Appeal has therefore remitted this part of the ruling for review at DERA so that a specific price can be set. All other aspects of the ruling were upheld.

In January 2014, DERA established a specific price for agreements between the parties in the relevant period. DERA has ordered DONG to reduce the transport price to DKK 0.0575 per cubic meter natural gas for contracts entered into in the period from July 2011 to October 2012. DERA’s decision is based on a broad estimate in which account was taken for costs incurred, reasonable interest rates, market practice and competition-related considerations. However, the reduction of the tariff in the upstream system has a consequence for the gas market as, all things being equal, several stakeholders may find it attractive to transport gas into the market.

**TRANSPARENCY PLATFORM**

Lack of transparency can create inequality for stakeholders and weaken competition.

Together with Energinet.dk, DERA has collaborated with stakeholders in the Danish part of the North Sea, the Danish gas exchange and the Danish gas storage facilities to establish a web-based transparency platform. The process was based on a voluntary and sector-based solution which has resulted in a practical platform, that is manageable and easy to use for the market participants. The platform has made it possible for market participants to publish inside information to the rest of the market in an effective and timely manner. At the same time, all information relevant to the market is made accessible for market stakeholders and is assembled in one place on equal terms.

A platform for information relevant to the market, especially relating to the Danish part of the North Sea, was started 1 October 2012. During 2013, the platform was developed and made more functional – also for other relevant stakeholders on the gas market, such as Danish gas storage facilities, the gas exchange and Energinet.dk.

The initiative for setting up a platform grew out of a survey undertaken by DERA of accessibility in the upstream system in June 2011. The survey showed a need for greater transparency in the Danish upstream sector. Establishing the platform coincided with the REMIT-regulation’s entry into force. REMIT requires market participants to make effective and timely public disclosure of inside information that could influence the price of a wholesale energy product.

**SUMMARY**

The year 2013 saw a new infrastructure for the Danish natural gas market that is crucial for an effective market, security of supply and the green transition. The new and more cost-oriented tariffing principles for gas transport have been adopted, the price of natural gas transmission in upstream pipelines in the North Sea has been set down and transparency on the market has been increased with the introduction of a platform for information, to which all market participants have free and open access.

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71 Maersk Oil, DONG E&P, DONG Energy, Pipeline, Nordsefonden, Shell, Gaspoint Nordic, Energinet.dk gaslager and DONG Storage.
Decisions made by DERA can be brought before the Energy Board of Appeal by stakeholders with a significant and individual interest in the decision.

**DANISH ENERGY REGULATORY AUTHORITY TASKS – IN BRIEF:**
- supervises and regulates prices as well as terms and conditions for customers in the “natural monopolies” within the electricity, natural gas and district heating sectors.
- lays down efficiency requirements every year for electricity grid companies and natural gas grid companies.
- supervises and regulates district heating companies so as to ensure that they only include necessary costs in their prices.
- supervises and regulates Energinet.dk so as to ensure that only necessary costs are included in the company’s prices.
- monitors and regulates district heating companies so as to ensure that they only include necessary costs in their prices.
- monitors wholesale markets for electricity and natural gas.
- participates in international collaborations for a well-functioning European market for electricity and natural gas.
- monitors and regulates Energinet.dk so as to ensure that only necessary costs are included in the company’s prices.
- carries out specialised analyses of areas where mapping and innovative ideas are needed.

This means that DERA focuses on:

**THE ELECTRICITY SECTOR**
DERA’s tasks in the electricity sector focus on the natural monopolies, the electricity grid companies, as well as on the prices for supply obligation customers and basic product customers.
The regulation covers companies’ prices and terms for customers. Through revenue-cap regulation and benchmarking the electricity grid companies, DERA puts an efficiency pressure on the companies which replaces the pressure of competition found on free and well-functioning markets. DERA supervise and regulate the electricity price for supply obligation products and basic products in the areas where the supply obligation has been called for tender. Furthermore, DERA takes part in preparing legislation by issuing replies to consultations and DERA also takes part in international partnerships etc.

THE NATURAL GAS SECTOR
DERA’s tasks in the natural gas sector focus on the natural monopolies, that is the grid companies, as well as on the prices for supply obligation and basic product customers.

The regulation covers companies’ prices and terms for customers. Through revenue-cap regulation and benchmarking the electricity grid companies, DERA puts an efficiency pressure on the companies. DERA also supervises the prices of supply obligation and basic products. DERA also regulates terms of use of the two Danish natural gas storage facilities. Furthermore, DERA takes part in preparing legislation by issuing replies to consultations and DERA also takes part in international partnerships etc.

THE DISTRICT HEATING SECTOR
DERA regulates the full consumer price of district heating.

In the district heating sector, the prices of companies are only allowed to reflect the costs necessary for production and distribution (non-profit regulation). DERA does not determine efficiency targets directly for district heating companies, but the requirement that a cost must be necessary includes both the nature of the cost and its size. This allows DERA to make demands on cost developments in companies.

THE SYSTEM OPERATOR COMPANY, ENERGINET.DK
Energinet.dk is regulated in accordance with a non-profit principle, under which the tariffs charged by the company may only cover its necessary costs for efficient operation as well as interest to secure the real value of its basic capital as at 1 January 2005. DERA can determine that a specific cost, or the size of this, does not represent a necessary cost for efficient operation and therefore all or part of the cost cannot be included in Energinet.dk’s tariffs.

DERA is established as an independent authority.
NEW LEGISLATION

A number of amendments to the energy acts have been made in the past year. The most significant changes for DERA are:

THE ELECTRICITY AND NATURAL GAS AREAS
AMENDMENT OF THE ELECTRICITY SUPPLY ACT, NATURAL GAS SUPPLY ACT, CRIMINAL CODE OF ADMINISTRATION OF JUSTICE ACT – REMIT (ACT NO. 642 OF 12 JUNE 2013)

The act implements the parts of the European Parliament and Council Regulation No. 1227/2011/EU of 25 October 2011 on integrity and transparency on the wholesale energy markets (REMIT regulation) that requires conversion into national law. The act contains regulations for the national regulatory authority’s investigation and enforcement powers, the regulation provides for a right of appeal against decisions made by the national regulatory authority, provisions on sanctions for violations of the regulation and on publication of sanctions etc.

AMENDMENT TO THE ELECTRICITY SUPPLY ACT – REMOTELY-READ ELECTRICITY METERS (EXECUTIVE ORDER NO. 1329 OF 3 DECEMBER 2013)

With the amendment of the Electricity Supply Act, the Minister gained the authority to issue an executive order on the replacement or upgrading of existing meters to remotely-read meters. The aim is to give consumers the opportunity to take advantage of time-based prices. For this, it is necessary that the consumer has installed a remotely-read meter.

The Minister issued the Executive Order on remotely-read meters on 3 December 2013. Grid companies must ensure that remotely-read electricity meters are put into operation for all end users by 31 December 2020. Grid companies will receive compensation for this through revenue cap increases for documented additional costs of the remotely-read meters, which additionally must meet the technical requirements stipulated in the executive order. Furthermore, the net companies receive compensation for documented costs incurred as they must submit hourly-metered consumption data to the data hub when, in the regulations issued by Energinet.dk, there is a model introduced for hourly settlement for all end users.

Compensation will take place according to standardised assumptions for raising the regulation price as determined by DERA in accordance with the Executive Order on revenue caps.
A number of amendments to the energy acts have been made in the past year.
DERA comprises a chairman, vice chairman, five members, and two deputies appointed by the Minister for Climate and Energy for a period of three or five years. In the appointments of members from 1 January 2012, some members were appointed for three years, while others were appointed for five years. The members represent expertise in legal, economic, technical, environmental, business and consumer matters.

DERA held 10 meetings in 2013. DERA also held a strategy seminar and visited companies subject to the regulations administered by DERA. This year, DERA has also held an Energy forum with the participation of companies and organisations within the sector and an international Energy Forum in the form of a seminar on the REMIT regulation for authorities, stakeholders and energy companies in the sector.

Lis Holst has resigned from her position as a member of DERA. Lis Holst has taken a new position in her civilian life, a position that might disqualify her from taking part in certain cases. Therefore, Lis Holst has chosen to resign from DERA. Peter Skak Iversen, MSc (econ), previously a proxy, has been appointed as member of DERA. The new proxy will be Anette Timmermann, MSc in Economics & Business Administration.
Uffe Bundgaard-Jørgensen, MSc (Econ.), PhD, director
CHAIRMAN
Appointed for the period
1/1 2012 – 31/12 2016

Jacob Erik Holmblad MSc (Econ.), director
VICE-CHAIRMAN
Appointed for the period
1/1 2012 – 31/12 2014

Mogens Arndt, BSc (Engineering)
MEMBER
Appointed for the period
1/1 2012 – 31/12 2014

Ella Maria Bisschop-Larsen, MSc, president
MEMBER
Appointed for the period
1/1 2012 – 31/12 2016

Anita Rønne, associate professor in energy law
MEMBER
Appointed for the period
1/1 2012 – 31/12 2014

Peter Skak-Iversen, MSc (econ)
MEMBER
Appointed for the period
1/1 2012 – 31/12 2014

Jørgen G. Jørgensen, MSc (econ), ceo
MEMBER
Appointed for the period
1/1 2012 – 31/12 2016

Niels Erik Andersen, MSc, PhD
ALTERNATE
Appointed for the period
1/1 2012 – 31/12 2016

Annette Timmermann, MSc in Economics & Business Administration, director
ALTERNATE
Appointed for the period
1/1 2014 – 31/12 2014
THE DERA SECRETARIAT

The Secretariat prepares cases for processing by DERA and makes decisions in accordance with the practices and guidelines stipulated by DERA.

The management of the Secretariat comprises director general, Finn Dehlbæk, head of division for Retail and Distribution, Rune Moesgaard, head of division for Law and Administration, Pia Rønager, head of division for District Heating, Martin Windelin and head of division for Wholesale and Transmission, Mads Lyndrup.
FIGUR 21 | ORGANISATION

MINISTRY OF CLIMATE, ENERGY AND BUILDING

DANISH ENERGY REGULATORY AUTHORITY

DANISH ENERGY AGENCY

DERA SECRETARIAT

DIRECTOR GENERAL

LAW AND ADMINISTRATION

RETAIL AND DISTRIBUTION

WHOLESALE AND TRANSMISSION

HEATING
In 2013 there were about 1200 closed and therefore decided cases.
LARGER CASES FOR DERA

THE ELECTRICITY AREA
ENERGINET.DK DERA supervises Energinet.dk’s market regulations for access to the retail market and Energinet.dk’s meter regulations for settlement purposes. In connection with setting up the data hub, the regulations were revised so that they were adapted for the reporting and documentation requirements that the data hub demands. DERA approved adaptations in five regulations on change of supplier, moving, settlement metering, form of communication, load-profile settlement of customers not on hourly settlement and requirements for master data.

Additionally, DERA has declared that Energinet.dk’s costs for the purchase of ten regional electricity transmission grids can be considered necessary expenditure that can be included in the companies’ transmission tariffs. DERA has assessed the purchase on the basis of criteria announced by DERA in December 2010.

Energinet.dk is well placed on the list of effective electricity transmission companies in Europe. This is shown by a benchmark analysis undertaken by three independent consultants for DERA and sister-supervisory authorities in the other EU member states in 2013.

Energinet.dk, together with seven other European electricity transmission companies, is among the most effective companies in EU. This is the second time that Energinet.dk have been analysed and compared on cost-effectiveness with other European electricity transmission companies. In 2008, when the first analysis was made, Energinet.dk was placed under average with a cost-effectiveness of 84%. In the new analysis Energinet.dk has a cost-effectiveness of 100%.

SUPERVISING ELECTRICITY PRICES DERA has established a new method for supervision of basic products for electricity. The method is devised to ensure that the price of the basic product does not exceed the price of the previous supply obligation product. Furthermore, the method ensures that supply conditions for basic products correspond to supply conditions for the previous supply obligation products.
the change will mean that prices for gas transport will consist of around 54% capacity payment and 46% volume payment from 1 October 2013 until 30 September 2014.

DERA estimates that the new tariff structure will have several advantages. The new tariff will help to open up the natural gas market further by attracting new suppliers. The new tariff structure will help to ensure a more flexible use of the transmission system, a flexibility that will be more suited to the future gas market with an expected fall in consumption and an expected rise in imports and handling of, for example, biogas.

UPSTREAM PIPELINES: DERA has made a principle ruling on the price of transporting natural gas from the natural gas fields in the North Sea to the gas processing plant in Nybro on the west coast of Jutland (the special upstream system). In 2012, DERA decided that DONG Naturgas A/S should lower the transport price to DKK 0.05 – DKK 0.07 per cubic meter natural gas. The decision was appealed against to the Energy Board of Appeal. The Energy Board of Appeal’s ruling in the case means that DERA must set a specific price within the range DKK 0.05 – DKK 0.07 per cubic meter for transport of gas in transport agreements between DONG Naturgas and Mærsk Energy Marketing entered into between July 2011 and October 2012. The Energy Board of Appeal’s ruling means that the tariff must under no circumstances exceed DKK 0.07 per cubic meter.
The Energy Board of Appeal upheld all other terms in DERA’s decision.

SUPERVISION OF GAS PRICES DERA has established a new method for supervision of basic products for natural gas. The method is devised to ensure that the price of the basic product does not exceed the price of the previous supply obligation product. Furthermore, the method ensures that supply conditions for basic products correspond to supply conditions for the previous supply obligation products.

THE DISTRICT HEATING SECTOR

BIO-BASED DISTRICT HEATING FROM LARGE-SCALE CHP PLANTS. DERA has approved an agreement between DONG Energy and the two heat transmission companies in Greater Copenhagen, CTR and VEKS. The agreement concerns how the two parties should share a tax benefit from supplying biomass district heating from the Avedøre power plant. It is DERA’s task to ensure that the agreement meets the conditions in the Heating Supply Act on free distribution of the tax benefit.

The background for the case is that the Heating Supply Act was amended in 2012. The amendment opened up for the large-scale CHP plants and buyers of heating to, through agreement between themselves, allocate the tax benefit which the buyers of heating obtain through choosing biomass-based heating instead of the taxed fossil-based heating (a number of other defined conditions must also be met). DERA’s approval of the agreement between DONG Energy, CTR and VEKS is a principle ruling and is expected to help encourage more large-scale CHP plants to change to biomass-based district heating from fossil-based district heating.

BIOGAS: DERA has also decided that a biogas plant should be exempted from the price regulations in the Heating Supply Act. The decision entails that Hashøj Biogas A.m.b.A can set the price of biogas for Hashøj Kraftvarmeforsyning A.m.b.A. according to market conditions and is no longer required to set the price in compliance with the cost principle stipulated in the Heating Supply Act. It was first possible for DERA to exempt a biogas plant from the cost principle in 2010, and this is the first time that DERA has made a ruling of this nature.

PRICE CAP: In October 2013, the Secretariat announced price caps for waste incineration plants following a new price cap model. The new Executive Order
on price caps entered into force 1 January 2013 and under the new regulations DERA will only announce one price cap for all waste incineration plants, regardless of the placement of the plants according to energy policy guidelines. The new price cap applies to plants in cases where supply agreements have been made or renegotiated after the Executive Order entered into force. DERA will continue to announce three price caps, one for each of the energy policy areas, during a transitional period up to 2016 for plants with supply agreements made before the Executive Order entered into force.

LEGAL RIGHT OF ACCESS: Last year, DERA processed a principle case on the legal right of access. A stakeholder applied for full legal right of access to documents on pricing of heating from waste from Haderslev Kraftvarmeværk A/S. DERA informed the stakeholder that it would not be possible to grant full legal right of access. The refusal was based on two conditions: firstly, the documents contain information that, if forwarded, have considerable economic significance for Haderslev Kraftvarmeværk A/S and its owner, secondly, it is necessary to withhold certain information to protect public interest in the form of a well-functioning waste market. There was no appeal to the Energy Board of Appeal so the decision is considered to reflect current legislation.

STANDARD CHARGES: DERA has decided that a survey of costs should be undertaken before DERA can decide whether standard charge rates can be raised for a number of charges in the three supply areas, electricity, gas and heating, in line with requests from energy companies and sector organisations. The Secretariat has held meetings with the parties concerned and is awaiting the survey of costs from the sector organisations.

NEW SYSTEM OF REPORTING: A new and more flexible reporting system is on the way. DERA has a contract with Delegate A/S to provide a new online reporting system; “EnergiAnmeldelse Online” (ENAO). The IT system will be used by companies in the energy sector which, according to the Heating Supply Act, are required to report to DERA. Among other things, it is expected that the system will make it easier for companies to report to DERA, and enable them to find previously submitted reports themselves. The IT system will primarily deal with companies’ accounts and price-related data, and additionally data relating to the quality of the companies’ deliveries to customers. The companies are obliged to submit data of this kind in accordance with legislation. The reporting system will be operational towards the end of 2014.

WHOLESALE MARKETS: MARKET SURVEILLANCE DERA has continued to strengthen
supervision and monitoring of the wholesale markets for electricity and natural gas. To this end, DERA publishes reports which monitor developments in the wholesale markets. DERA pays special attention to the variable nature of trading capacity on the electricity connection between West Denmark and Germany. Together with Energinet.dk, the DERA Secretariat is in dialogue with BendesnetzAgentur and TenneT – the German sister-organisation to Energinet.dk – on the possibility of improving the capacity situation. DERA is the national regulatory authority for the REMIT Regulation which introduces a ban on insider dealing and market manipulation on the wholesale markets for electricity and gas in the EU. DERA works with ACER, the European Agency for the Cooperation of Energy Regulators, which is responsible for coordinating monitoring of the wholesale markets. Moreover, DERA has also commenced collaboration with the Danish gas exchange, NordPool Gas, and the Nordic electricity exchange, NordPool on monitoring markets in relation to the provisions of the REMIT Regulation.

LARGER CASES IN INTERNATIONAL COOPERATION
DERA is involved in international cooperation in order to contribute to meeting the national and international energy policy goals and to support economic growth and consumer benefits in Denmark.

In the past year, international cooperation has concentrated on three themes:

- completion of the EU single market for energy in 2014, as decided by heads of state and government in 2011. The European regulator plays an important role in the design of common market rules and terms for the electricity and natural gas markets. The work focuses on forming common and harmonised rules for market access to the grids and tariffing methods.
- establishment of a common Nordic end-user market in 2015 to which the Nordic Council of Ministers has asked the Nordic regulators to contribute. The regulators assist in the work, but have also pointed out to the Nordic Council of Ministers that the work on implementation of the market is proceeding at a different pace in the various Nordic countries.
- increased mutual European dependency. As the national markets in the EU become increasingly integrated, the need is growing to find cohesive European solutions.
The primary task of DERA is to decide important, principle cases which determine a practice for the area. The DERA Secretariat processes and decides cases on the basis of the practice set by DERA.

In 2013 DERA processed 19 cases (table 7). This is essentially on par with the previous year.

The average case processing time for cases processed by DERA was 6.9 months in 2013 (table 8).

Case processing times for DERA in decision cases is especially dependent on the nature of the specific case, where complexity and consultation rounds have an impact on the case processing time.

In 2013 there were about 1200 closed and thereby decided cases. A total of 409 cases were being heard at the turn of the year 2013/2014. However there is only a weak connection between the complexity of cases and the number of both decided cases and cases being heard. The number of cases being heard is also affected by the time of year at which the cases were received by DERA.

At the end of 2012, the DERA Secretariat acquired a new filing system that does not include the same functionality as the previous system. It is therefore not possible to carry out fair measurements of case processing times for Secretariat cases, i.e. a measurement that is comparable with the previous year.

However, the Secretariat assesses that the case processing time for Secretariat cases in 2013 is at a comparable level with the previous year as the case processing time for a specific case depends on the nature of the case and the extent of stakeholder involvement and consultations.
### TABLE 7 | CASES PROCESSED AT DERA MEETINGS, 2012 AND 2013

<table>
<thead>
<tr>
<th></th>
<th>2012 Decision</th>
<th>2012 Briefing</th>
<th>2013 Decision</th>
<th>2013 Briefing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>9</td>
<td>11</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Natural gas</td>
<td>4</td>
<td>6</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>District heating</td>
<td>6</td>
<td>8</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cross-sectoral</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>30</td>
<td>22</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: The DERA Secretariat

### TABLE 8 | AVERAGE PROCESSING TIME FOR DERA CASES, FROM 2010 – 2013, MONTHS

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>DERA</td>
<td>7.5</td>
<td>9.4</td>
<td>8.6</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Source: The DERA Secretariat
Amongst other things, the Energy Board of Appeal processes appeals against decisions by DERA and figures for 2013 show that the Energy Board of Appeal has decided 17 cases arising from DERA or the DERA Secretariat. This is a slight increase compared with the previous year. However, there has been a fall in the number of cases decided by the Energy Board of Appeal when seen over a number of years (table 9).

The rate of cases reversed varies from year to year. The differences are related to the fact that DERA is the first instance and therefore deals with cases where practice is to be established for the first time.

The number of cases decided by the Energy Board of Appeal must be seen in context with the number of cases decided by either DERA or DERA Secretariat. Around 1100 – 1200 cases a year are decided by DERA or the DERA Secretariat. It is therefore a modest percentage of decisions that are brought before the Energy Board of Appeal.

At the end of 2013, the Energy Board of Appeal had 13 appeals against decisions by DERA under process.
## TABEL 9 | ENERGY BOARD OF APPEAL CASES ARISING FROM DERA

<table>
<thead>
<tr>
<th>Number of cases</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decided by the Board of Appeal</td>
<td>44</td>
<td>29</td>
<td>29</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>Of these:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- upheld</td>
<td>36</td>
<td>13</td>
<td>17</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>- annulled/amended/remitted</td>
<td>5</td>
<td>11</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>- dismissed by the Board of Appeal</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>- concluded without decision</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rate of cases reversed*</td>
<td>12</td>
<td>46</td>
<td>29</td>
<td>23</td>
<td>23</td>
</tr>
</tbody>
</table>

*The rate of cases reversed is calculated as the total number of cases annulled/amended/remitted divided by the total number of cases decided less cases dismissed or concluded without a decision.
The costs of DERA’s work are funded by the companies that DERA supervises. This funding is in accordance with the Electricity, Natural gas and Heating Supply Acts. More detailed payment regulations are found in executive orders on payment.

Payroll costs increased by DKK 1.9 mill. from 2012 to 2013 (table 10). The increase was primarily due to increased cost of wages as a result of necessary employment of temporary staff.

Remuneration to DERA members was DKK 0.6 mill. in 2013 and this is included under payroll costs in the accounts.

Costs for rent, service and administrative service fell by DKK 1.3 mill. from 2012 to 2013. The savings are offset by additional costs for system operation and consultancy. The rise in costs for system operation is connected with increased costs to the Agency for Governmental IT Services. The Secretariat has additionally launched several projects as offshoots of DERA’s strategy for 2013 and 2014.

FEES
Financing of DERA’s tasks is shown in table 11.

DERA has a total excess liquidity of DKK 7.7 mill. of which DKK 9.4 mill. are for the electricity sector and DKK 1.6 mill. are for the district heating sector. On the other hand, there was an under coverage of DKK 3.2 mill. for the gas sector. The fees – and thus DERA’s revenues – follow demand for energy in the three sectors and therefore revenues vary from year to year. Reserves at the end of 2013 amounted to DKK 38.5 mill.

In accordance with the Agency for the Modernisation of Public Administration’s budget guidelines on the setting of fees and rates, DERA must endeavour to balance costs and revenues over a four year period. On account of this, DERA will repay DKK 20 mill. to the energy companies in 2014. The repayment will be made as an offset against on-account payments from the energy companies.

Executive Order no. 835 of 27 June 2013 on payment for processing by authorities in accordance with the Electricity Supply Act, Executive Order no. 836 of 27 June 2013 on payment for processing by authorities in accordance with the Heating Supply Act and Executive Order no. 837 of 27 June 2013 on payment for processing by authorities in accordance with the Natural Gas Supply Act.
### TABLE 10 | DERAS COSTS, DKK MILL.

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll costs</td>
<td>27.8</td>
<td>28.8</td>
</tr>
<tr>
<td>Operating costs</td>
<td>13.7</td>
<td>14.1</td>
</tr>
<tr>
<td>Investments</td>
<td>0.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Total costs</td>
<td>41.5</td>
<td>43.4</td>
</tr>
<tr>
<td>Number of full-time-years</td>
<td>50.4</td>
<td>53.2</td>
</tr>
</tbody>
</table>

### TABLE 11 | FEES, DKK MILL.

<table>
<thead>
<tr>
<th></th>
<th>Electricity</th>
<th>Gas</th>
<th>Heating</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserves brought forward from 2012</td>
<td>19.3</td>
<td>3.9</td>
<td>7.6</td>
<td>30.8</td>
</tr>
<tr>
<td>Actual revenues from fees 2013</td>
<td>29.0</td>
<td>7.6</td>
<td>14.5</td>
<td>51.1</td>
</tr>
<tr>
<td>Costs</td>
<td>19.6</td>
<td>10.8</td>
<td>12.9</td>
<td>43.4</td>
</tr>
<tr>
<td>Results 2013</td>
<td>9.4</td>
<td>-3.2</td>
<td>1.6</td>
<td>7.7</td>
</tr>
<tr>
<td>Reserves carried forward 2013</td>
<td>28.7</td>
<td>0.7</td>
<td>9.2</td>
<td>38.5</td>
</tr>
</tbody>
</table>
OTHER AUTHORITIES IN THE ENERGY AREA

The work of DERA borders up to other authorities which also have competence in the energy area: The Minister for Climate, Energy and Building, who is ultimately responsible for the energy area, the Danish Energy Agency, the Energy Board of Appeal, the Danish Competition Council and the Energy Supplies Complaint Board, the Competition Council and Energinet.dk which is also responsible for a number of authority tasks in the electricity and natural gas sectors.

THE DEPARTMENT OF THE MINISTRY OF CLIMATE, ENERGY AND BUILDING is responsible for contact with the Danish Parliament, including the Parliament’s Standing Committee on Energy, and it is responsible for legislation for the area etc.

THE DANISH ENERGY AGENCY is responsible for establishing the correct framework and tools for the energy area, ensuring security of energy supply, and making sure that developments are appropriate in a socio-economic, environmental and security context.

ENERGINET.DK owns the transmission grids for electricity and natural gas, however the company is also responsible for a number of other tasks, including upholding the overall security of supply in the electricity and gas areas in the short term as well as the long term, extending the overall Danish infrastructure in the electricity and gas areas, creating objective and transparent conditions for competition in the energy markets and monitoring that competition works, and implementing cohesive and holistic planning which includes future needs for transmission capacity and the long-term security of supply etc.

THE ENERGY BOARD OF APPEAL processes appeals against decisions by the authorities in individual cases and appeals regarding misinterpretation of the legislation.

THE ENERGY SUPPLIES COMPLAINT BOARD deals with personal complaints about purchase and supply of services from energy supply companies. The Complaint Board was set up on 1 November 2004 as a personal complaint board under the Consumer Complaints Act (forbrugerklagenævnsloven). The secretariat function is managed by the Danish Competition and Consumer Authority.

THE DANISH COMPETITION AND CONSUMER AUTHORITY monitors that the liberalised companies are complying with competition legislation.