

# ECONOMY



---

For many years, oil and gas production from the North Sea has made a positive contribution to the balance of trade for oil and gas and contributed to Denmark's status as a net exporter of oil and gas. Tax revenue and the profits made by the oil and gas sector have a positive impact on the Danish economy, while the North Sea activities also create workplaces both on- and offshore.

#### **State revenue**

The Danish state generated revenue of DKK 18.8 billion from North Sea oil and gas production in 2014, equal to about 62 per cent of total profits on the activities. State revenue was down by almost 15 per cent on 2013, due to lower production and a plunge in oil prices in the second half of the year. The forecast for 2015 foresees a continued decline in state revenue from oil and gas production because of a sustained drop in production and expectations for a low oil price level. In the period 1963-2014, state revenue from hydrocarbon production in the North Sea aggregated DKK 404 billion in 2014 prices.

#### **Value of oil and gas production**

The cumulative production value was about DKK 1,010 billion during the period under review. The total estimated value of Danish oil and gas production in 2014 is DKK 40.7 billion, a decline of 18 per cent compared to the production value in 2013. According to the estimate, oil production accounts for about DKK 33.6 billion and gas production for DKK 7.1

billion of the total production value. The production value is determined by supply and demand in oil and gas, the dollar exchange rate and the volume of production.

#### **Investments and operating costs**

The licensees' investments and expenses for exploration, field developments and operations totalled about DKK 355 billion (2014 prices) during the period 1963-2014. Investments in field developments amounted to about DKK 187 billion in 2014 prices, thus accounting for more than half the licensees' aggregate costs.

Investments in field developments are estimated to come to almost DKK 8.8 billion for 2014, up about 31 per cent on 2013, which is mainly attributable to the development of the South Arne, Hejre, Valdemar and Tyra Fields. By comparison, annual investments in field developments have averaged about DKK 5.8 billion in the past ten years.

The preliminary figures for 2014 show that exploration costs slightly exceeded DKK 1.3 billion in 2014, an increase of about 4 per cent on 2013. These costs comprise the oil and gas companies' total exploration costs, including for exploration wells and seismic surveys.

According to the forecast, total investments for the period 2015-2019 will come to about DKK 51 billion.



## OIL PRICE DEVELOPMENT 2014

Figure 1 shows that the first half of 2014 was characterized by a relatively stable oil price averaging around USD 109 per barrel. However, increasing oil production and waning global demand are some of the reasons that the price dropped over the year to an average price of just below USD 63 per barrel in December 2014.

This resulted in an average oil price of slightly more than USD 99 per barrel for the whole of 2014, 8.9 per cent down on the average oil price for 2013.

Oil is usually traded in USD on the world market. Therefore, to some extent the impact of the falling oil price on state revenue was offset by the sharp increase in the USD exchange rate in the second half of 2014. In mid-2014 the USD exchange rate stood at about DKK 5.5 per USD, compared to about DKK 6.00 at the end of the year. The exchange rate continued to climb and peaked at almost DKK 7 per USD in April 2015.

The fluctuating oil price and dollar exchange rate caused the average oil price, in terms of Danish kroner, to drop from

DKK 610.2 per barrel in 2013 to DKK 556.7 per barrel in 2014, equal to a decline of almost 8.8 per cent.

Generally, the drop in the oil price is explained by a combination of supply and demand factors. The supply factors most frequently reported are the supply of shale oil, high production levels in the OPEC countries, and – most recently – the prospect that trading sanctions against Iran will be lifted.

As concerns demand, the price drop is explained by lower economic growth worldwide and increasing consumption of energy from renewable resources. In the short term, the supply of oil is fairly resilient to price fluctuations.

Despite lower oil prices, in the short term it pays for producers to carry on production for as long as the crude oil price exceeds the marginal operating costs. Therefore, it may be profitable to produce oil even when oil prices are very low. However, in the longer term, the supply of oil and the oil price will be more greatly impacted by factors such as investments in exploration activities and the exploitation of new accumulations.

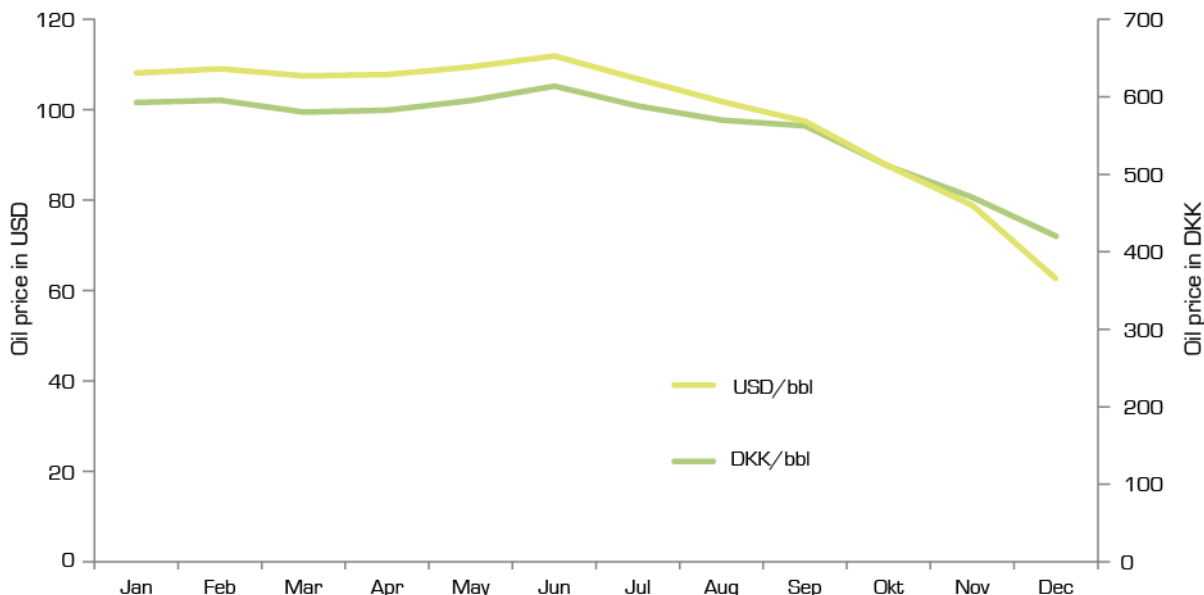


Figure 1. Monthly development in the Brent spot oil price in 2014

Note: The oil price for 2014 has been calculated as an average of the monthly Brent spot oil price. The monthly Brent spot oil price is an average of the daily Brent spot price.



## HISTORICAL OIL PRICE DEVELOPMENT

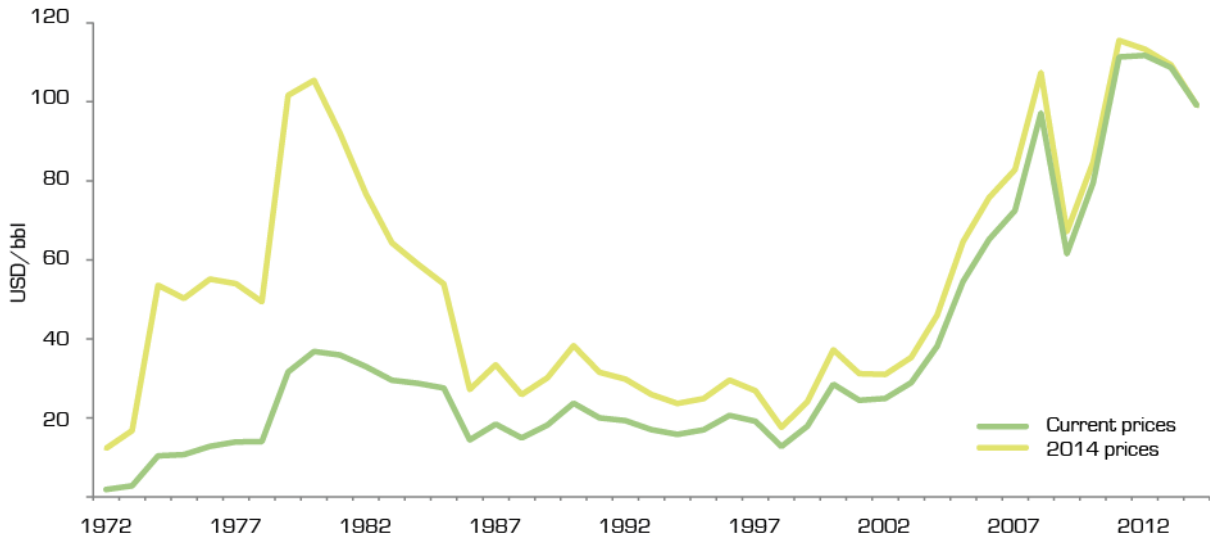


Figure 2. Oil price development 1972-2014, USD per barrel

Figure 2 shows oil price developments in USD per barrel in fixed and current prices. The soaring oil prices in 1973 and 1979 were triggered by political unrest in the Middle East. During these crises, the OPEC countries curtailed the supply

of crude oil to the world's markets, thus driving prices up. The figure also shows that the oil price reached a record high in 2011, peaking at about USD 116 per barrel in 2014 prices.

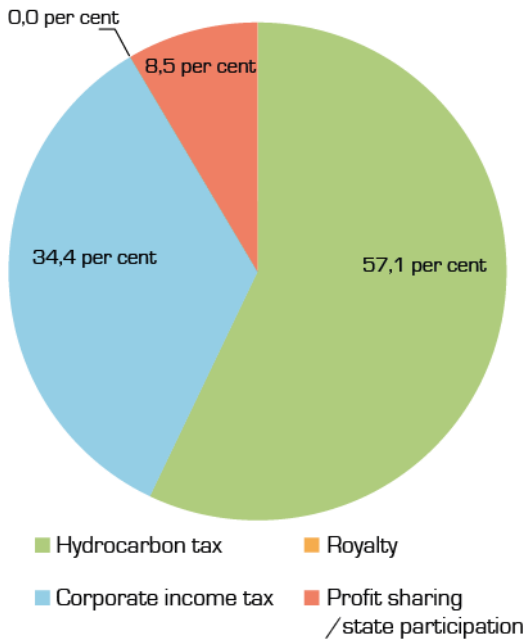


Figure 3. Breakdown of state revenue from oil and natural gas production from the North Sea in 2014

## STATE REVENUE

State revenue from the North Sea activities derives from hydrocarbon tax, corporate income tax and royalty, of which hydrocarbon tax and corporate income tax are the main sources of revenue, accounting for 57 and 34 per cent, respectively.

In addition to taxes and fees, the Danish state receives revenue from the North Sea through Nordsøfonden, which has managed the state's 20 per cent share of all new licences since 2005. Since 9 July 2012, Nordsøfonden has also managed the state's 20 per cent share of Dansk Undergrunds Consortium (DUC), whose other partners are A.P. Møller - Mærsk, Shell and Chevron.

In addition, the state may generate indirect revenue from oil and gas production through its shareholding in DONG Energy, as this company's subsidiary, DONG E&P A/S, participates in oil and gas exploration and production in the North Sea.

## EXISTING FINANCIAL CONDITIONS

Table 1.

	Sole Concession at 1 January 2004	Licences granted before 1 January 2004	Licences granted after 1 January 2004
Corporate income tax	25 per cent  Deductible from the hydrocarbon tax base	25 per cent  Deductible from the hydrocarbon tax base	25 per cent  Deductible from the hydrocarbon tax base
Hydrocarbon tax	52 per cent  Allowance of 5 per cent over 6 years (a total of 30 per cent) for investments  Transitional rules for investments and unutilized losses from before 1 January 2004	52 per cent  Allowance of 5 per cent over 6 years (a total of 30 per cent) for investments  Transitional rules for investments and unutilized losses from before 1 January 2004	52 per cent  Allowance of 5 per cent over 6 years (a total of 30 per cent) for investments
Royalty	No	No	No
Oil pipeline tariff/compensatory fee	No	No	No
State participation	20 per cent	20 per cent *)	20 per cent
Profit sharing	No	No	No

\*) The state's share in a few of the remaining licences has increased due to a licence condition regarding increased state participation relative to the volume of production.

## CENTRAL GOVERNMENT (CIL) BALANCE

Figure 4 shows state revenue from the North Sea relative to the central government balance on the current investment and lending account (CIL balance), which is the difference between total central government revenues and expenditures. As appears from the figure, revenue from the Danish part of the North Sea contributed to generating a central government surplus in 2014.

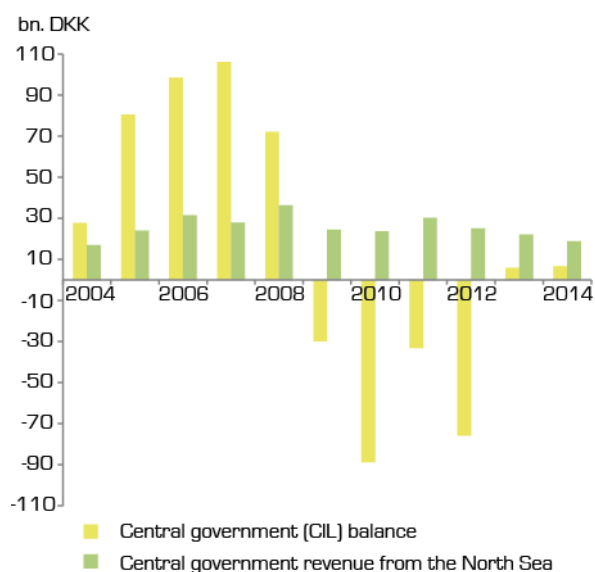


Figure 4. Central government (CIL) balance and central government revenue from the North Sea, current prices.

## DEVELOPMENT IN STATE REVENUE

State revenue from hydrocarbon production in the North Sea aggregated close to DKK 404 billion in 2014 prices in the period 1972-2014. In 2014 state revenue fell by slightly

more than 15 per cent relative to 2013, due mainly to the oil price drop and declining production. State revenue is estimated at DKK 18.8 billion for 2014.

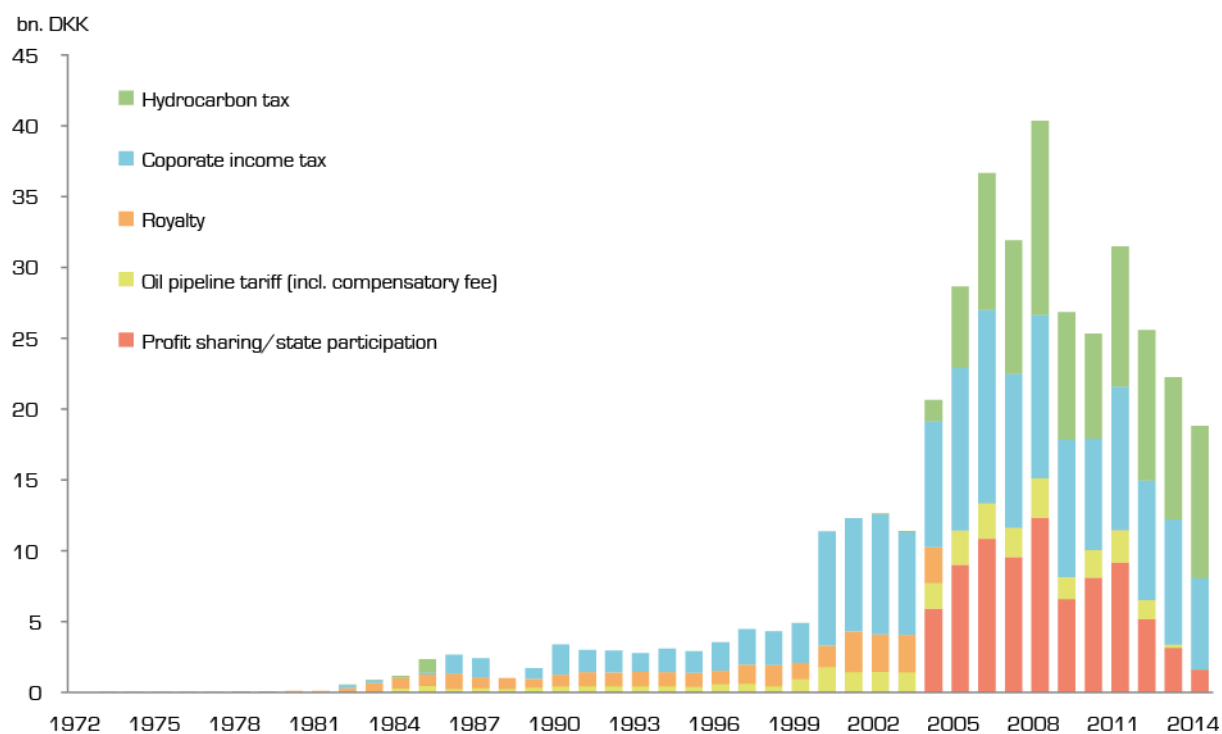


Figure 5. Development in total state revenue from oil and gas production 1972-2014

## STATE REVENUE OVER THE PAST FIVE YEARS

The state's share of oil company profits is estimated at 62 per cent for 2014, including state participation. The marginal income tax rate is about 64 per cent according to the new rules, excluding state participation. When including state participation, about 71 per cent of earnings in the top tax bracket accrues to the state according to the new rules.

From 1 January 2014, all companies are taxed according to the new rules. However, transitional rules apply to licences being transferred from the old to the new tax regime, such that the new tax rules are phased in over a period of time.

	2010	2011	2012	2013	2014
<b>HYDROCARBON TAX</b>	6,940	9,521	10,467	9,951	10,734
<b>CORPORATE INCOME TAX</b>	7,377	9,754	8,304	8,782	6,459
<b>ROYALTY</b>	0	1	2	1	1
<b>OIL PIPELINE TARIFF *</b>	1,824	2,201	1,337	239	0
<b>PROFIT SHARING/STATE PARTICIPATION **</b>	7,594	8,819	5,090	3,116	1,600
<b>TOTAL</b>	<b>23,736</b>	<b>30,296</b>	<b>25,200</b>	<b>22,089</b>	<b>18,794</b>

Table 2. State revenue over the past five years, DKK million, current prices

\* Incl. 5 per cent compensatory fee.

\*\* The figures from 2009 until mid-2012 relate to profit sharing. The calculation as from 9 July 2012 until 2013 covers state participation (Nordsøfondens post-tax profits). The figure for 2013 includes an expenditure of DKK 202 million in the form of profit sharing repaid for the years 2004-2006 and DKK 18 million in revenue from post-adjustments of profit sharing for the years 2009-2012.

Note: Accrual according to the Finance Act (year of payment).

## STATE REVENUE FORECAST

Based on oil price fluctuations in 2014 and the DEA's production forecast, an estimate of the development in state revenue from the North Sea over the next five years has been prepared together with the Ministry of Taxation. The figures in the table merely illustrate the possible sensitivity to fluctuations in the oil price. The figures should be interpreted

with great caution in the scenarios where the assumed oil price differs significantly from the assumptions used in the production forecast, see the note below, as no allowance has been made for the effect of oil price fluctuations on costs, etc.

**Table 3.** State revenue from oil and gas production, DKK billion, current prices\*

M. DKK.	OIL PRICE/BBL	2015	2016	2017	2018	2019
CORPORATE INCOME TAX BASE	120 USD	42,345	43,791	42,527	37,551	34,875
BEFORE TAXES AND FEES	95 USD	29,707	31,153	29,807	25,928	23,192
AND TAX LOSS CARRYFORWARDS **	70 USD	17,511	17,564	17,178	14,476	12,075
	45 USD	5,741	6,780	4,681	2,898	1,356
<b>STATE REVENUE</b>						
	120 USD	10,213	10,871	10,632	9,388	8,621
CORPORATE INCOME TAX	95 USD	7,214	7,573	7,429	6,482	5,771
	70 USD	4,315	4,272	3,928	3,619	3,019
	45 USD	1,435	1,695	1,118	399	67
	120 USD	13,502	13,129	12,203	11,392	10,733
HYDROCARBON TAX	95 USD	9,502	9,256	7,903	5,720	5,193
	70 USD	5,502	5,011	4,511	2,798	1,670
	45 USD	1,138	1,558	1,109	0	0
	120 USD	2,435	2,486	1,582	710	511
DIVIDENDS FROM NORDSØFONDEN ***	95 USD	1,697	1,762	934	144	0
	70 USD	958	779	318	0	0
	45 USD	0	332	0	0	0
	120 USD	26,151	26,486	24,417	21,491	19,864
<b>TOTAL</b>	95 USD	18,413	18,591	16,266	12,346	10,964
	70 USD	10,776	10,062	8,757	6,417	4,689
	45 USD	2,573	3,585	2,227	399	67
	120 USD	61.8	60.5	57.4	57.2	57.0
<b>THE STATE'S SHARE INCL.</b>	95 USD	62.0	59.7	54.6	47.6	47.3
<b>STATE PARTICIPATION (PER CENT)</b>	70 USD	61.5	57.3	51.0	44.3	38.8
	45 USD	44.8	52.9	47.6	13.8	4.9

\* Based on an annual inflation rate of 1.8 per cent and existing Danish legislation.

\*\* The tax base comprises positive incomes only.

\*\*\* Nordsøfonden is liable to pay tax, for which reason the revenue from state participation appears under different headings, including in corporate income tax and hydrocarbon tax revenue. Nordsøfonden's post-tax profits accrue to the state. However, it should be noted that Nordsøfonden must first repay its loans and finance its continuous investments before delivering any profits to the state.

Note: The calculations are based on the DEA's five-year production forecast, which includes estimates of production from the Danish sector of the North Sea and the companies' operating costs and investments. The budgets for all hydrocarbon exploration and production licences in Denmark are included in the basis used for making the forecast. These budgets were prepared in autumn 2014 when the oil price was considerably higher. The companies' expectations for the future oil price are used as a basis for the budgets, among other factors. The subsequent significant oil price drop has greatly influenced earnings and will impact the amount of investments and operating costs, both in the short and the long term. Therefore, these figures cannot be expected to remain constant, as assumed in the forecast, in the price scenarios ranging from USD 45 to 120 per barrel.

Source: The Danish Ministry of Taxation.

## INVESTMENTS AND COSTS

Investments in field developments totalled slightly more than DKK 187 billion in 2014 prices, thus accounting for more than half the licensees' aggregate costs. The costs of operations, including administration and transportation, exploration and field developments account for 36, 11 and 53 per cent, respectively, of total costs.

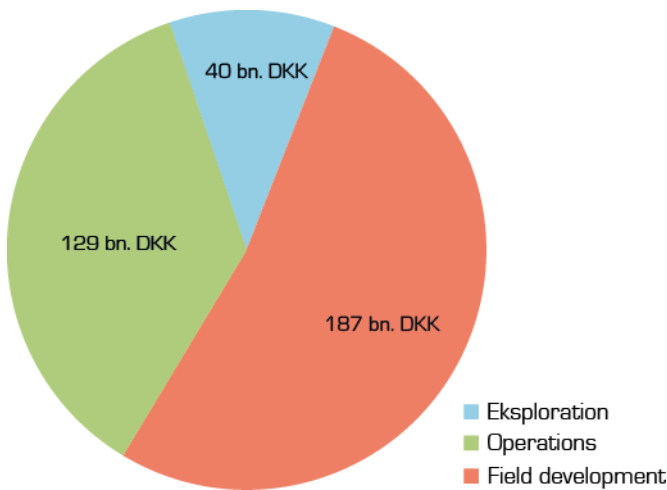


Figure 6. All licensees' total costs 1963-2014, DKK billion, 2014 prices.

The licensees' investments in field developments are the single largest budget item, being estimated at almost DKK 8.8 billion for 2014, an increase of about 31 per cent on 2013. Over the past five years, annual investments in field developments have averaged close to DKK 6.2 billion.

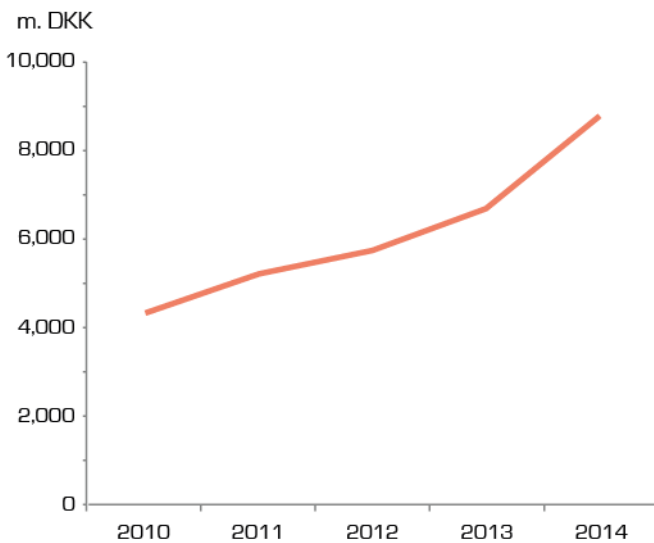


Figure 8. Investments in field developments 2010-2014, current prices

Exploration costs include the oil companies' expenses for both exploration wells and seismic surveys. The preliminary figures for 2014 show that exploration costs increased about 4 per cent compared to the year before, amounting to about DKK 1.3 billion

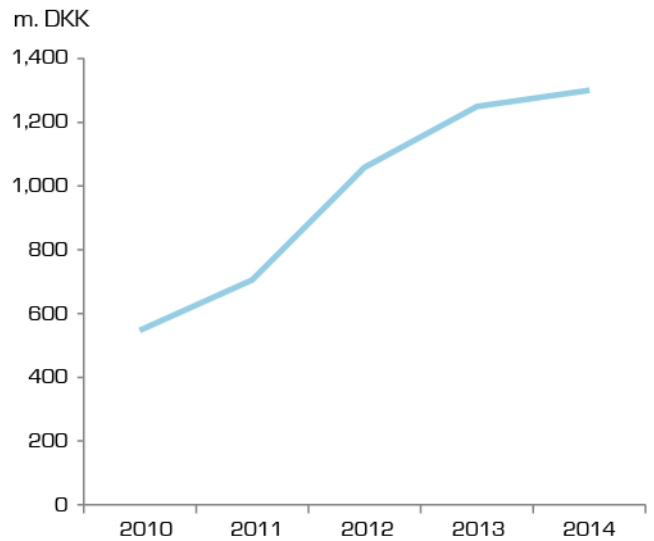


Figure 7. Exploration costs 2010-2014, current prices

Figure 9 shows the development in investments and the costs of operations and hydrocarbon transportation from 2015 to 2019. The estimate is based on the following resource categories: ongoing recovery and approved for development, justified for development, risk-weighted contingent resources and the category technological resources. For the next five years, investments in field developments are estimated to total DKK 51 billion.

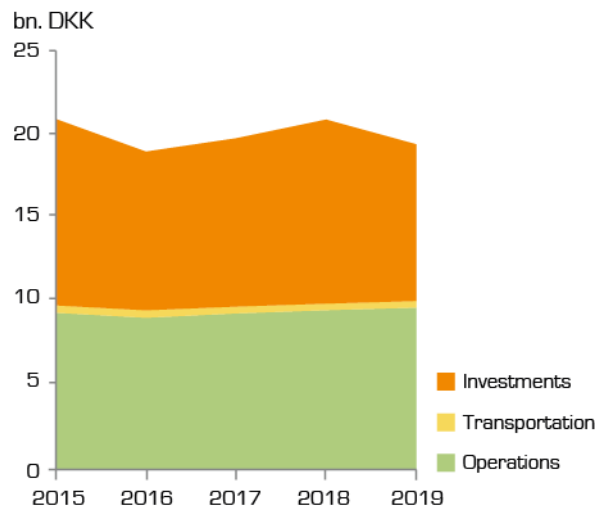


Figure 9. Expected development in investments and operating and transportation costs 2015-2019





**Table 4.** Investments in field developments 2015-2019, DKK million, 2014 prices

	2015	2016	2017	2018	2019
<b>ONGOING AND APPROVED</b>	10,715	6,696	2,994	452	34
<b>JUSTIFIED FOR DEVELOPMENT</b>	0	0	512	0	0
<b>RISK-WEIGHTED CONTINGENT RESOURCES AND TECHNOLOGICAL RESOURCES</b>	401	2,768	6,533	10,525	9,314
<b>TOTAL</b>	<b>11,116</b>	<b>9,464</b>	<b>10,038</b>	<b>10,977</b>	<b>9,348</b>