

World Geography Academy

Norman, Oklahoma

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North Sea Petroleum Reserves: The Value to Developed Nations' Economies Part 1



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World Political Map

Can you locate the North Sea?

This is a detailed map of Europe, showing the continent's geographical features, major cities, and surrounding bodies of water. The map is color-coded by country and includes a scale bar and projection information.

Geographical Features:

- Major Bodies of Water:** North Atlantic Ocean, Norwegian Sea, North Sea, Baltic Sea, Mediterranean Sea, Black Sea, Aegean Sea, Ionian Sea, Adriatic Sea, Tyrrhenian Sea, Aeolian Sea, and the Barents Sea to the north.
- Major Islands:** Greenland (Denmark), Iceland, Shetland Islands, Orkney Islands, Hebrides, Ireland, and the British Isles.
- Major Cities:** Oslo, Stockholm, Helsinki, Tallinn, Riga, Vilnius, Minsk, Moscow, Kyiv, Warsaw, Prague, Vienna, Budapest, Bucharest, Sofia, Athens, Rome, Paris, London, Madrid, Lisbon, Algiers, Tunis, and many others.
- Geographical Markers:** Arctic Circle, Tropic of Cancer, and various latitude and longitude lines.

Scale and Projection:

- Scale: 1:19,300,000
- Projection: Lambert Conformal Conic Projection, standard parallels 40°N and 60°N
- Scale bar: 0 to 300 Kilometers / 0 to 300 Miles

<https://www.cia.gov/library/publications/the-world-factbook/docs/refmaps.html>



<http://maritime-connector.com/images/north-sea-platforms-3-ships-17373.jpg>

Oil was found on the shores of the North Sea in 1851, but it was not until 1964 that the first well was drilled offshore.



<http://www.serpentproject.com/assets/images/image%20comp%204/images/1st%20Bob%20Clark%20Cat4-23.jpg>

The North Sea is known for its turbulent weather, which makes drilling dangerous. Many lives have been lost on drilling platforms.

The North Sea petroleum reserves have been an important energy resource for many nations' economies since their discovery.



http://upload.wikimedia.org/wikipedia/commons/a/a1/Oil_platform.jpeg

Oil and Natural Gas Fields in the North Sea

Five countries
produce oil in
the North Sea:

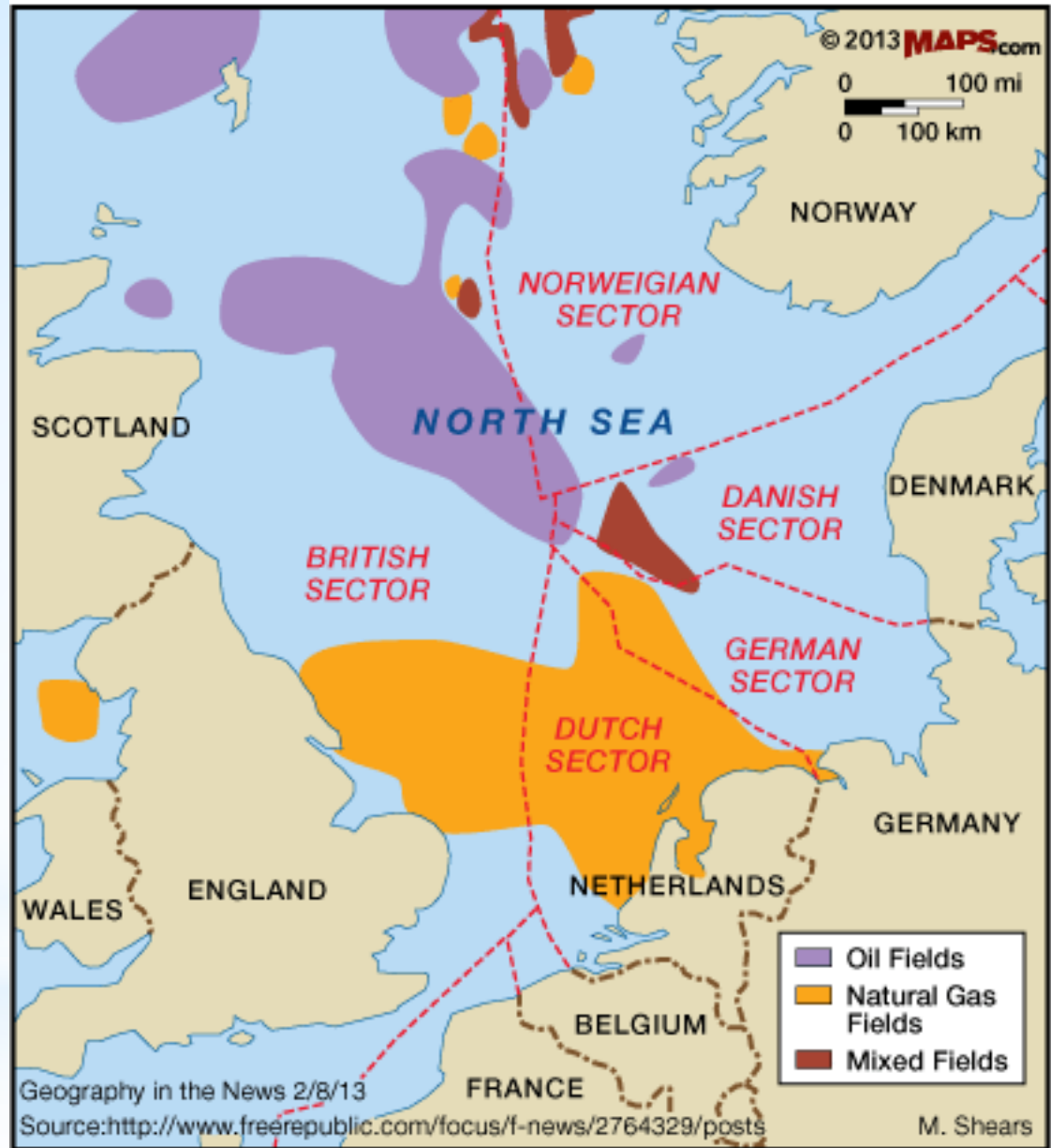
United Kingdom

Norway

Denmark

Germany

Netherlands



The North Sea petroleum reserves, which contain **LARGE** quantities of oil and natural gas, are extremely important to the economies of the countries in Europe who depend upon them.





This includes both energy producing countries, and energy consuming countries.

They are economically interconnected in many ways.

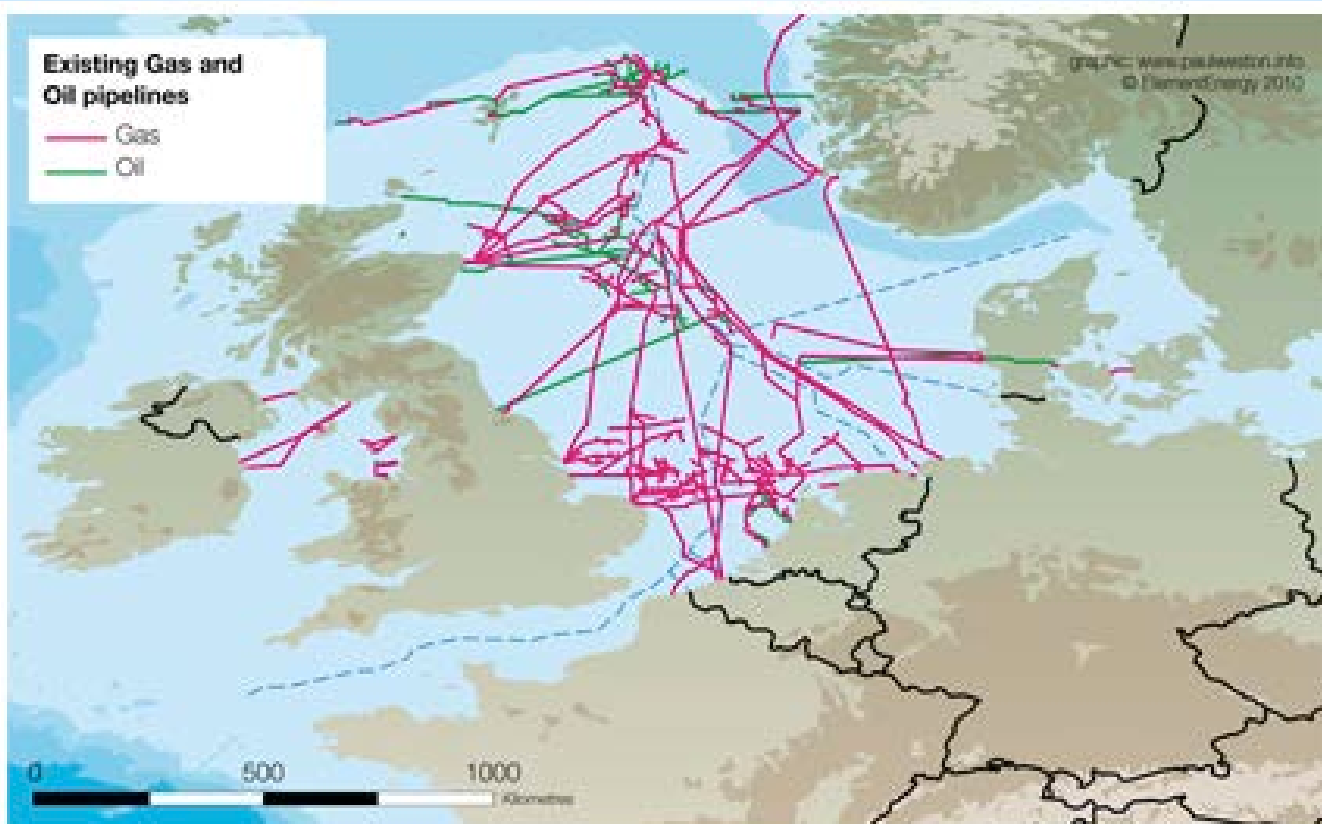


Figure 11: Existing gas and oil pipelines in the North Sea



Home > International > International Energy Statistics

International Energy Statistics

Petroleum

Natural Gas

Coal

Electricity

Renewables

Total Energy

Indicators

Country

Production | Consumption | Capacity | Bunker Fuels | Stocks | Reserves | Imports | Exports | CO2 Emissions | Heat Content

Country: Denmark, Germany, Neth ▾

Start Year: 2009 ▾

End Year: 2013 ▾

UPDATE

Product: Total Oil Supply ▾

Unit: Thousand Barrels Per Day ▾

Total Oil Supply (Thousand Barrels Per Day)

Units Conversion

Download Excel

	2009	2010	2011	2012	2013
Denmark	264.3	249.5	226.3	207.4	180.5
Germany	133.1	125.0	141.0	144.5	144.7
Netherlands	37.8	34.8	41.0	43.2	41.0
Norway	2,352.6	2,134.6	2,007.4	1,902.1	1,826.1
United Kingdom	87.4	87.1	82.7	86.2	89.0

Total Petroleum Production (Thousand Barrels Per Day) from North Sea Energy Producing Countries.

What information do you see about the United Kingdom?



[Home](#) > [International](#) > [International Energy Statistics](#)

International Energy Statistics

Petroleum

Natural Gas

Coal

Electricity

Renewables

Total Energy

Indicators

Country

[Production](#) | [Consumption](#) | [Capacity](#) | [Bunker Fuels](#) | [Stocks](#) | [Reserves](#) | [Imports](#) | [Exports](#) | [CO2 Emissions](#) | [Heat Content](#)

Country:

Start Year:

End Year:

UPDATE

Product:

Unit:

Total Petroleum Consumption (Thousand Barrels Per Day)

[Units Conversion](#)

[Download Excel](#)

	2009	2010	2011	2012	2013
Denmark	166.5	167.5	164.0	155.5	154.7
Germany	2,453.0	2,469.6	2,396.6	2,388.4	2,405.3
Netherlands	1,005.2	1,019.8	1,016.5	1,020.8	978.0
Norway	225.3	222.3	223.9	221.9	232.3
United Kingdom	1,636.8	1,621.5	1,583.8	1,502.7	1,512.7

Total Petroleum Consumption (Thousand Barrels Per Day) from North Sea Energy Producing Countries.

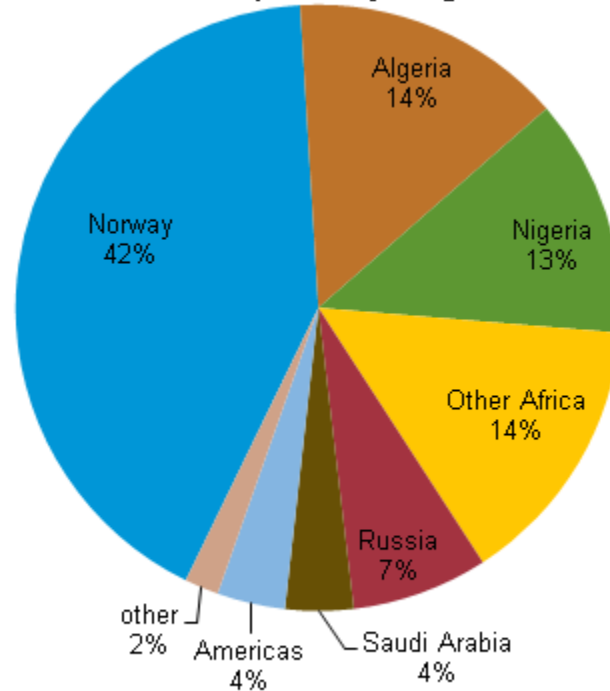
What information do you see about the United Kingdom?



http://i.telegraph.co.uk/multimedia/archive/00441/news-graphics-2008-_441078a.jpg

So
if the United Kingdom consumes *more*
oil and gas than it *produces*, it must
..... (?)

UK crude oil imports by origin, 2013

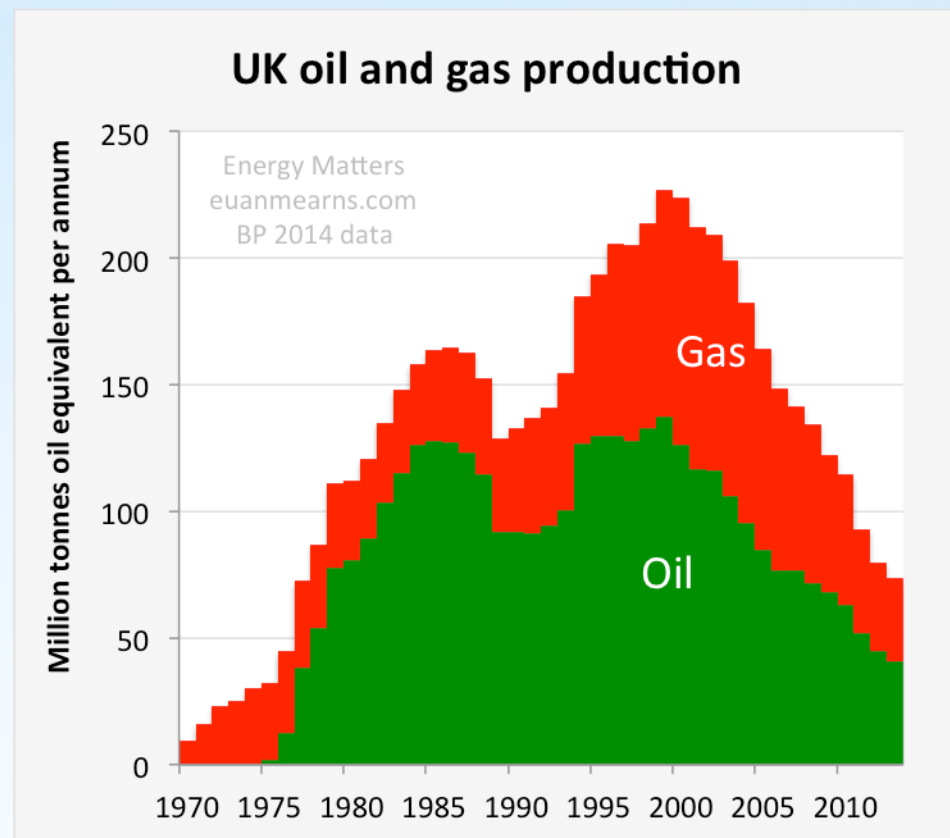


Source: U.S. Energy Information Administration,
International Energy Statistics, GTIS, UK HMRC

http://www.eia.gov/countries/analysisbriefs/United_Kingdom/images/crude_oil_imports.png

.....**IMPORT** what it needs! Look at the graph.
From what North Sea producing country do you see
the United Kingdom importing crude oil?

Look at this graph.



-MORE PRACTICE-

http://www.euanmearns.com/wp-content/uploads/2014/08/UK_oil_gas.png

What information can this graph provide about oil and gas production in the United Kingdom? Name two facts:

1.

2.

How can you explain these facts? What might be happening? (Draw conclusions or make inferences about the facts.)



[Home](#) > [International](#) > [International Energy Statistics](#)

International Energy Statistics

Petroleum | **Natural Gas** | **Coal** | **Electricity** | **Renewables** | **Total Energy** | **Indicators** | **Country**

All Flows | **Production** | **Consumption** | **Reserves** | **Imports** | **Exports** | **Carbon Dioxide Emissions** | **Heat Content**

Country:

Start Year:

End Year:

UPDATE

Product:

Unit:

Dry Natural Gas Production (Billion Cubic Feet)

[Units Conversion](#)

[Download Excel](#)

	2009	2010	2011	2012	2013
Denmark	297	290	250	227	171
Germany	621	526	524	434	416
Netherlands	2,786	3,131	2,851	2,840	3,052
Norway	3,664	3,756	3,580	4,155	3,840
United Kingdom	2,087	1,988	1,546	1,323	1,359

Total Natural Gas Production (Thousand Barrels Per Day) from North Sea Energy Producing Countries.

What information can you determine about Norway on this chart?



[Home](#) > [International](#) > [International Energy Statistics](#)

International Energy Statistics

Petroleum	Natural Gas	Coal	Electricity	Renewables	Total Energy	Indicators	Country
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[All Flows](#) | [Production](#) | [Consumption](#) | [Reserves](#) | [Imports](#) | [Exports](#) | [Carbon Dioxide Emissions](#) | [Heat Content](#)

Country:

Start Year:

End Year:

[UPDATE](#)

Product:

Unit:

Dry Natural Gas Consumption (Billion Cubic Feet)

[Units Conversion](#)

[Download Excel](#)

	2009	2010	2011	2012	2013
Denmark	156	175	148	138	131
Germany	3,033	3,329	3,037	3,080	3,123
Netherlands	1,729	1,937	1,691	1,624	1,637
Norway	231	194	161	150	210
United Kingdom	3,110	3,337	2,849	2,641	2,735

Total Natural Gas Consumption (Thousand Barrels Per Day) from North Sea Energy Producing Countries.

What information can you determine about Norway on this chart?

Domestic and international Norwegian pipelines



Norway produces a lot of oil and gas, but consumes very little. What do you think they do with all their extra oil and gas?

HINT



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