



WORLD GEOGRAPHY ACADEMY

Norman, Oklahoma

Wednesday, November 10, 2014

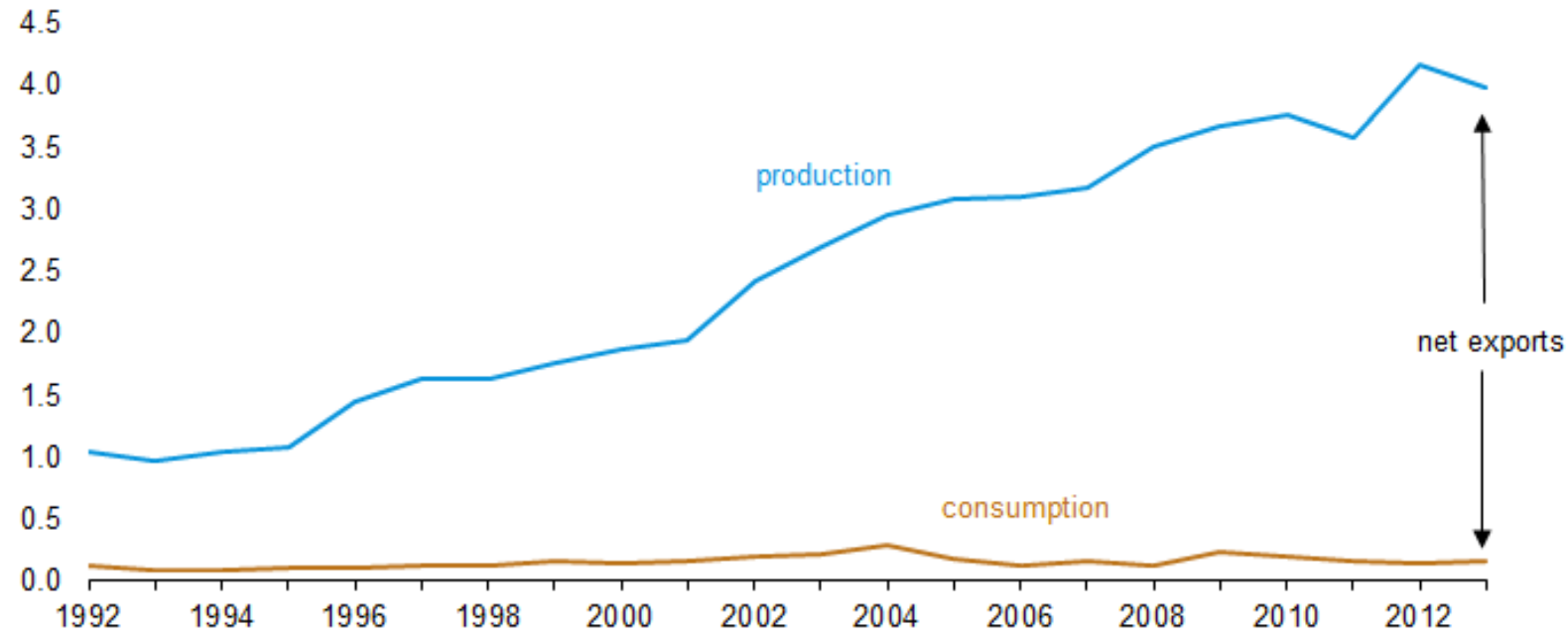
North Sea Petroleum Reserves: The Value to Developed Nations' Economies Part 2



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Norway dry natural gas production and consumption, 1992-2013

trillion cubic feet



Source: U.S. Energy Information Administration
Note: Data for 2013 are estimates.

<http://www.eia.gov/countries/cab.cfm?fips=NO>

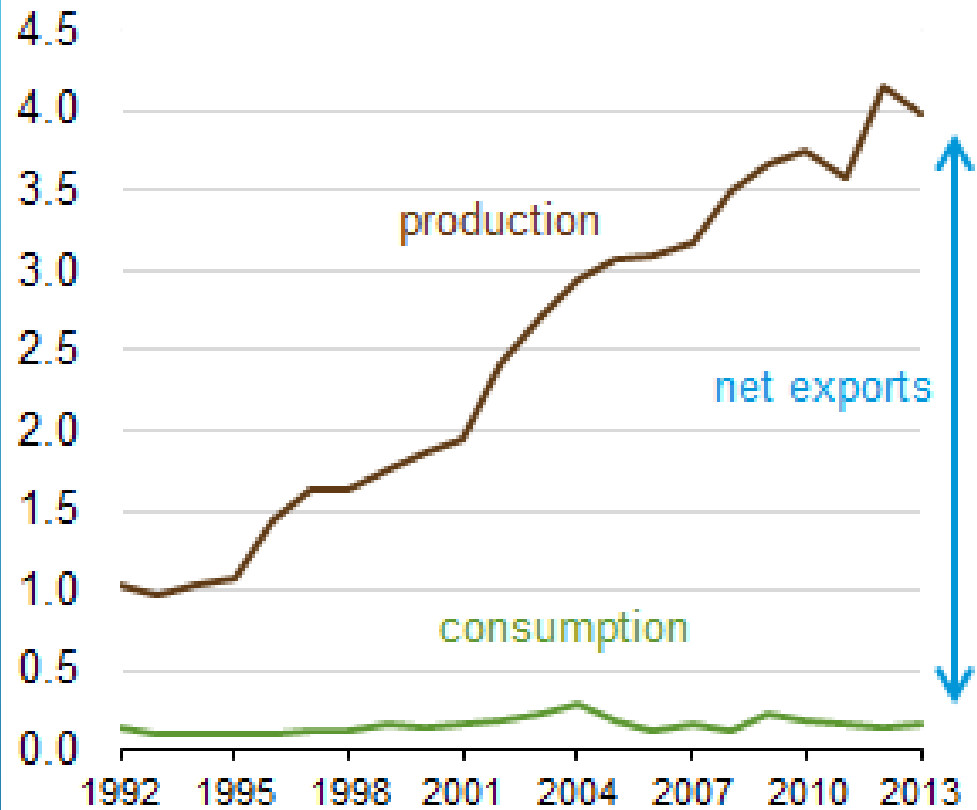


Explain this graph. What is happening? What does it mean?

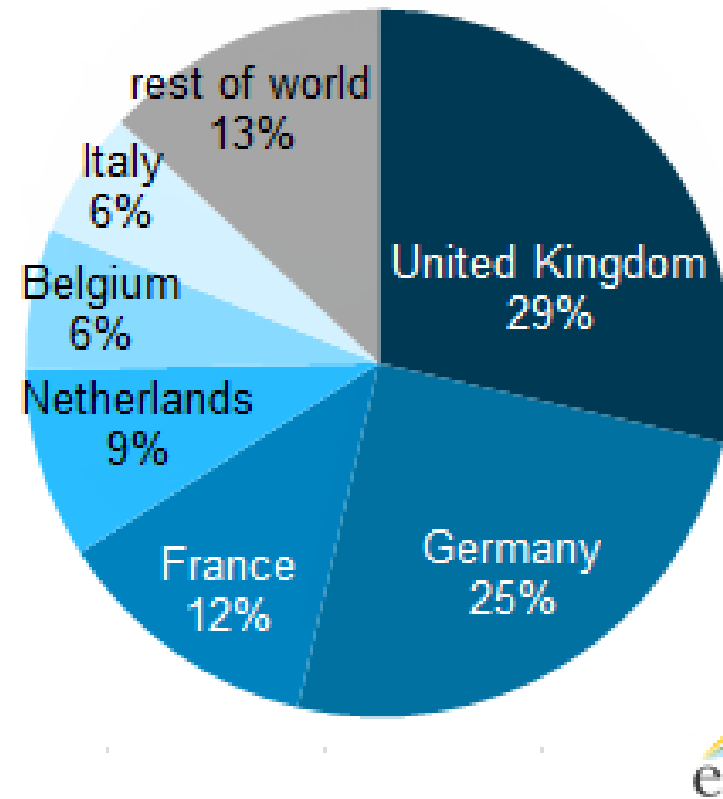
http://s3.amazonaws.com/beZambee/smiley_images/180/babc34f2758fa36a3afc4adaf8b94fd25964f1cb.png?1323901593

Norway dry natural gas production and consumption (1992-2013)

trillion cubic feet



Norway gas exports by destination (2013)



Norway is Europe's largest oil *producer*, the world's third-largest natural gas *exporter*, and an important supplier of both oil and natural gas to other European countries. What countries get most of Norway's exported oil and gas?



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

International Energy Statistics

Petroleum

Natural Gas

Coal

Electricity

Renewables

Total Energy

Indicators

Country

Electricity Generation

Electricity Consumption

Biofuels Production

Biofuels Consumption

Heat Content

Country:

Start Year:

End Year:

UPDATE

Product:

Unit:

Total Renewable Electricity Net Generation (Billion Kilowatthours)

[Units Conversion](#)

[Download Excel](#)

	2008	2009	2010	2011	2012
Denmark	10.951	10.820	13.151	14.673	15.580
Germany	94.964	99.272	109.591	126.184	139.497
Netherlands	10.995	12.346	12.763	14.009	14.808
Norway	139.051	125.309	116.988	121.406	142.577
United Kingdom	23.292	26.902	27.186	36.266	43.823

Renewables: Electricity Generation (Billion Kilowatthours) of the North Sea Energy Producing Countries. What information do you see in this chart about Norway?



<http://www.uioenergi.uio.no/english/research/news-and-events/news/2014/vannkraft507.jpg>

Norway generates a lot of electricity from renewable sources.



http://www.dongenergy.no/EN_/Generation/PublishingImages/124_vandkraft.jpg

97% of Norway's energy usage is from hydropower.



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: Denmark, Germany, Neth ▾

Start Year: 2009 ▾

End Year: 2013 ▾

UPDATE

Product: Dry Natural Gas ▾

Unit: Billion Cubic Feet ▾

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 do you see about Germany on this chart?



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: Denmark, Germany, Neth ▾

Start Year: 2009 ▾

End Year: 2013 ▾

UPDATE

Product: Dry Natural Gas Consumption ▾

Unit: Billion Cubic Feet ▾

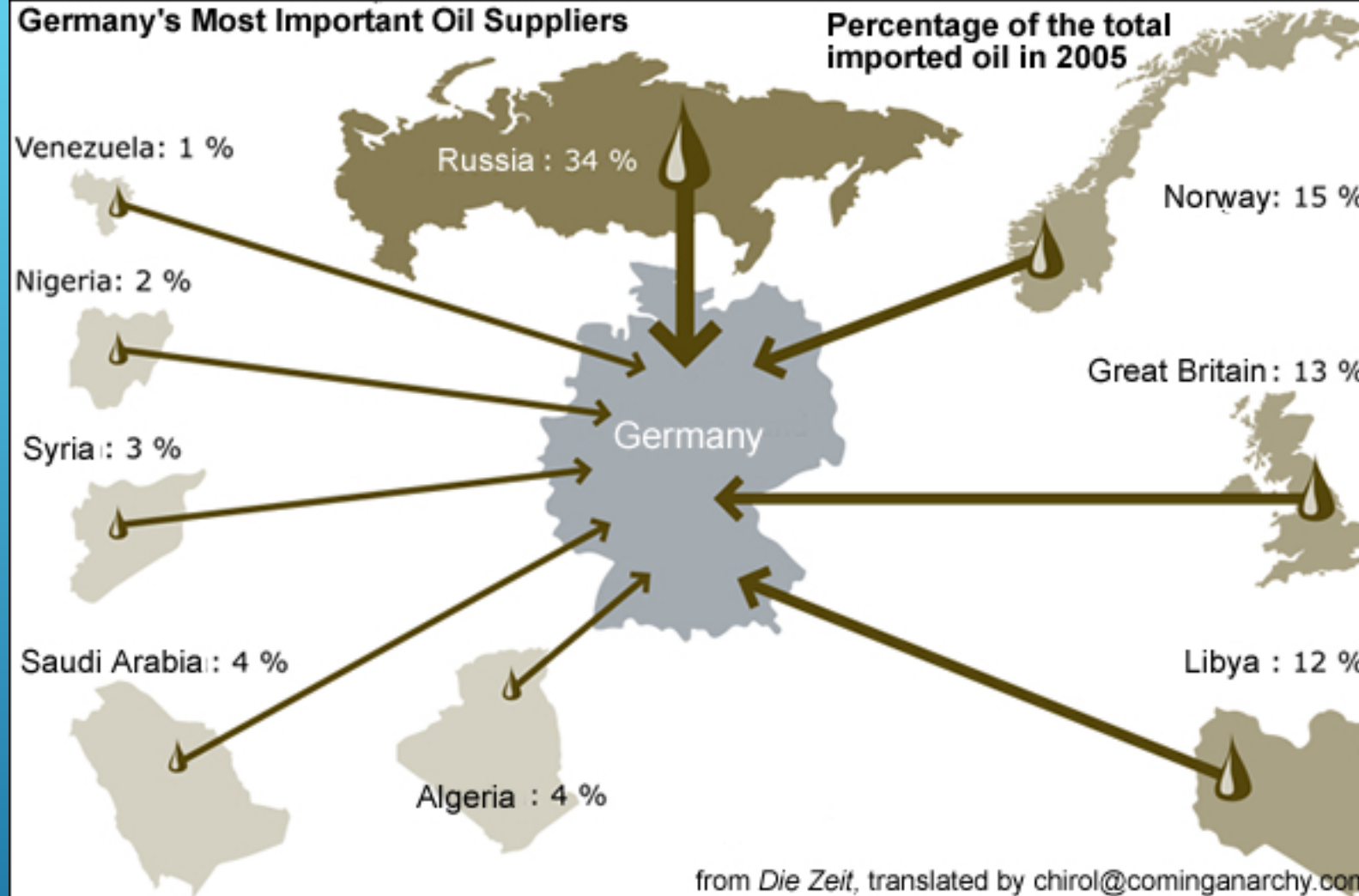
Dry Natural Gas Consumption (Billion Cubic Feet)

Units Conversion

Download Excel

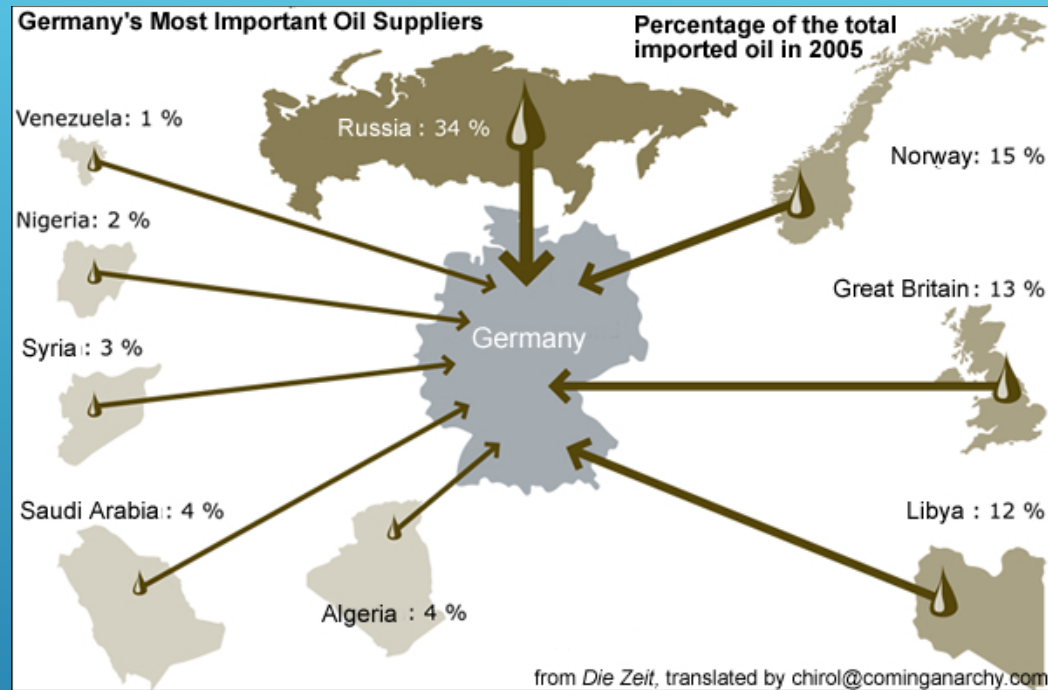
	2009	2010	2011	2012	2013
Denmark	156	175	148	138	131
Germany	3,033	3,329	3,037	3,080	3,123
Netherlands	1,729	1,937	1,691	1,624	1,637
Norway	231	194	161	150	210
United Kingdom	3,110	3,337	2,849	2,641	2,735

Total Natural Gas Consumption (Thousand Barrels Per Day) from North Sea Energy Producing Countries.
What information do you see about Germany on this chart?



<http://cominganarchy.com/wordpress/wp-content/uploads/2007/09/germanyoil.jpg>

Oil imports are important to Germany as well.
Germany consumes more than they produce. How
much do they import from North Sea countries?

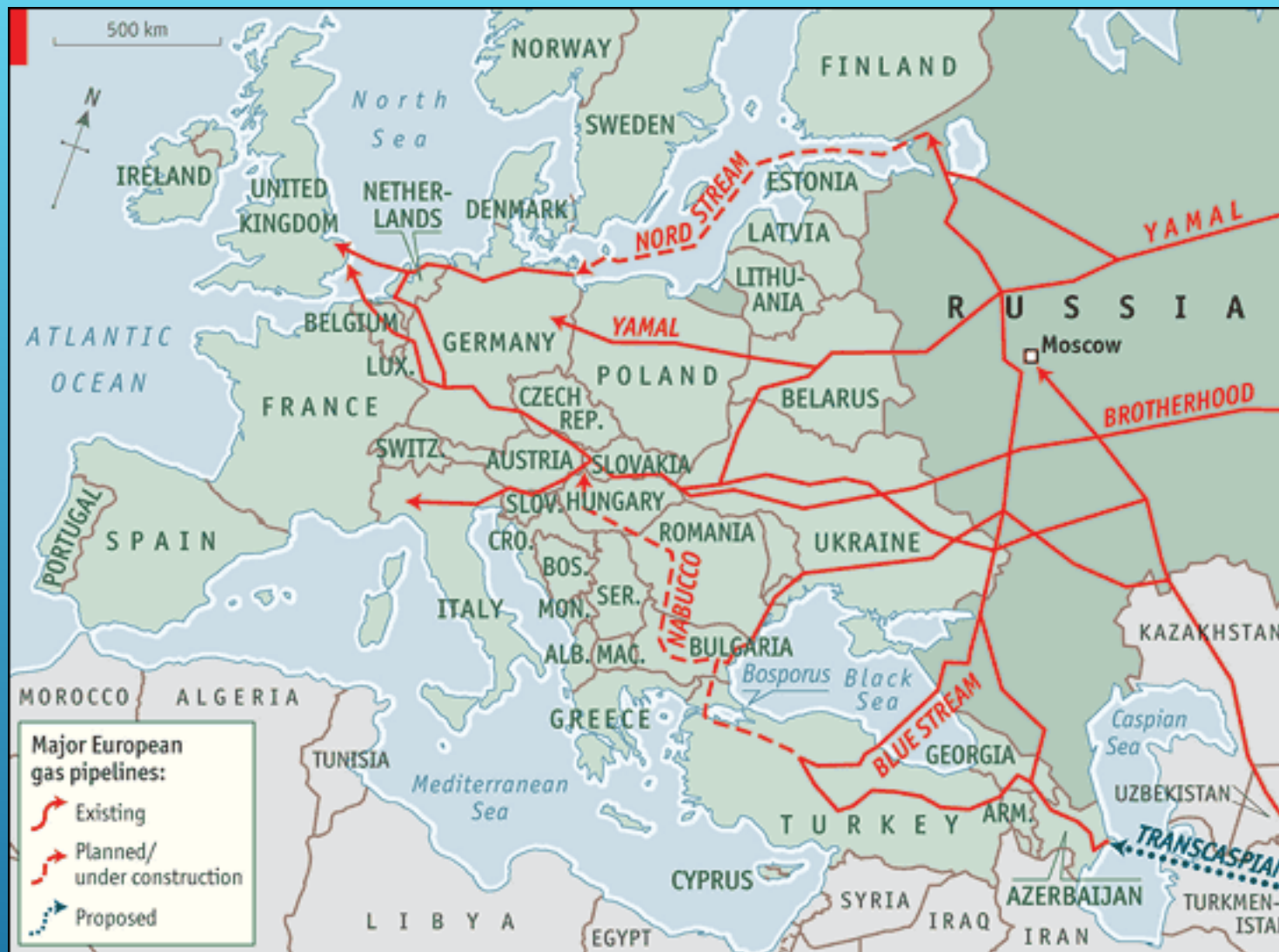


<http://cominganarchy.com/wordpress/wp-content/uploads/2007/09/germanyoil.jpg>



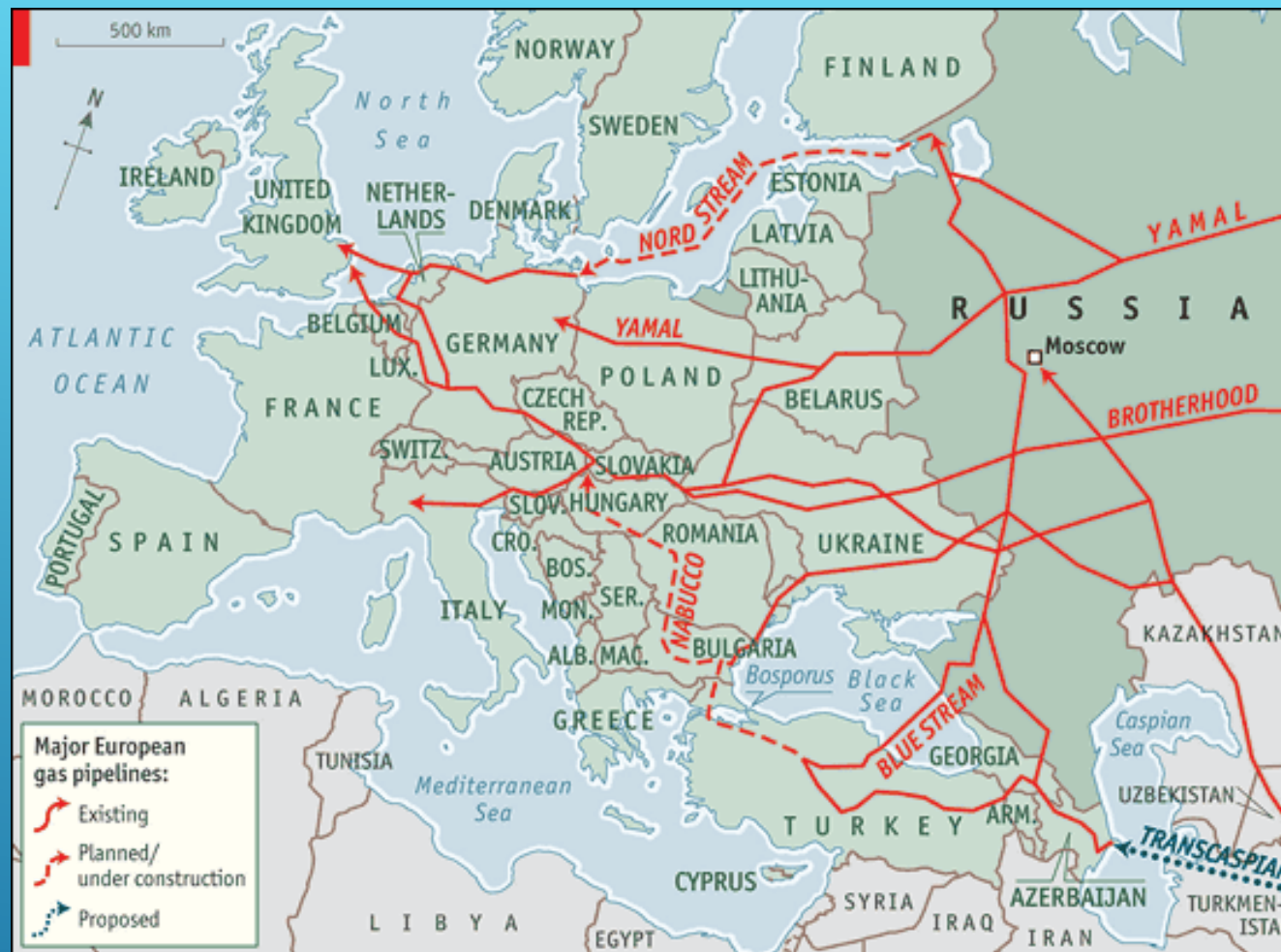
<https://www.cia.gov/library/publications/the-world-factbook/docs/refmaps.html>

Why do you think Germany imports so much oil and gas from Russia?



http://media.economist.com/sites/default/files/cf_images/20070414/CEU957.gif

Because the pipelines are in place to bring the gas to Germany from Russia. What countries must they travel through to get to Germany?



http://media.economist.com/sites/default/files/cf_images/20070414/CEU957.gif

Is this a potential problem if the oil supply routes were *cut off*? What about the current disagreement over Ukraine? Does this make North Sea oil even more important to Germany?



The Netherlands is not a significant producer of liquid fuels, but it plays an important role as an *European liquid fuels transportation and processing hub.*



A liquefied natural gas carrier at sea.



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

International Energy Statistics

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Electricity Generation

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Renewables: Electricity Generation (Billion Kilowatthours) of the North Sea Energy Producing Countries. What information do you see in this chart about Denmark????



These wind turbines are in the North Sea, off the coast of **Denmark**. Could this explain Denmark's increase in use of renewables from 2008 to 2012 to generate electricity ?



<http://cdn.images.express.co.uk/img/dynamic/1/590x/Oil-Helo-381888.jpg>

Oil and gas companies employ 14,600 people offshore, most in the central North Sea.



http://i.telegraph.co.uk/multimedia/archive/02661/oil_2661631b.jpg



<http://rigjobsonline.com/req/img/034-offshore-catering-job.jpg>



<http://subseaworldnews.com/wp-content/uploads/2012/07/Aker-Bags-Subsea-Intervention-Services-Contract-Offshore-Angola.jpg>




http://oilrigjobsoffshore.files.wordpress.com/2012/11/offshore_jobs_now_hiring2.jpg

But the economic impact to the countries that use and produce North Sea oil and gas is also HUGE.



<http://www.itic.ie/fileadmin/iticttc2010/pic-London-0513.jpg>



WHEN ONE TUGS AT A
SINGLE THING IN
NATURE,

HE FINDS IT ATTACHED TO
THE REST OF THE WORLD.

JOHN MUIR



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Administration

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Topics ▾
Geography ▾

Tools ▾
Learn About Energy ▾
News ▾

A-Z ▾
Index



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2014
Long-term trends in liquid fuels
markets >

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- [Saudi Arabia Country Analysis Brief >](#)
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- [Short-Term Energy Outlook >](#)
September 9
- [International Energy Outlook 2014 >](#)
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Today in Energy

Posted September 17, 2014

Panama Canal expansion will allow transit of larger ships with greater volumes >

Ships carrying crude oil and petroleum products are limited by size restrictions imposed by several of the main thoroughfares of maritime navigation: the Panama Canal, the Suez Canal, and the Strait of Malacca. These size restrictions provide another way to classify the large tankers that carry most of global crude oil and petroleum product trade. [More>](#)

Maximum ship sizes for the Panama and Suez Canals, Strait of Malacca

Waterway	Ship Type	Length (ft)	Width (ft)	Draft (ft)	DWT
Panama Canal	Old	965	106	39.5	60-80
	New	1200	161	49.9	60-100

Data Highlights

WTI crude oil futures price

9/16/2014: **\$94.88/bbl**
↑ \$2.13 from week earlier
↓ \$11.71 from year earlier

Natural gas futures price

9/16/2014: **\$3.995/mmBtu**
↑ \$0.011 from week earlier
↑ \$0.257 from year earlier

Retail gasoline price

9/15/2014: **\$3.408/gal**
↓ \$0.049 from week earlier
↓ \$0.139 from year earlier

The U.S. Energy Information Administration (EIA) collects, analyzes, and disseminates independent, impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interactions with the economy and the environment.

<http://www.eia.gov/>



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