

Global coal trade

Introduction

This article gives an overview of EU and global trade of hard coal¹ since 1990. Utilising data from Eurostat and the International Energy Agency it shows how EU and global imports of coal have increased, production has decreased and how source countries have changed over the period 1990 - 2012.

In 2012 coal imports in the EU were 231 million tonnes, while production was 125 million tonnes. Germany was the largest importer of coal in the EU, while Russia was the main supplier to the EU.

In 2012 1,181 million tonnes of coal were traded globally, with the largest importer being China and the largest exporter being Indonesia.

European Union

Data on European Union coal trade is available from Eurostat available at:

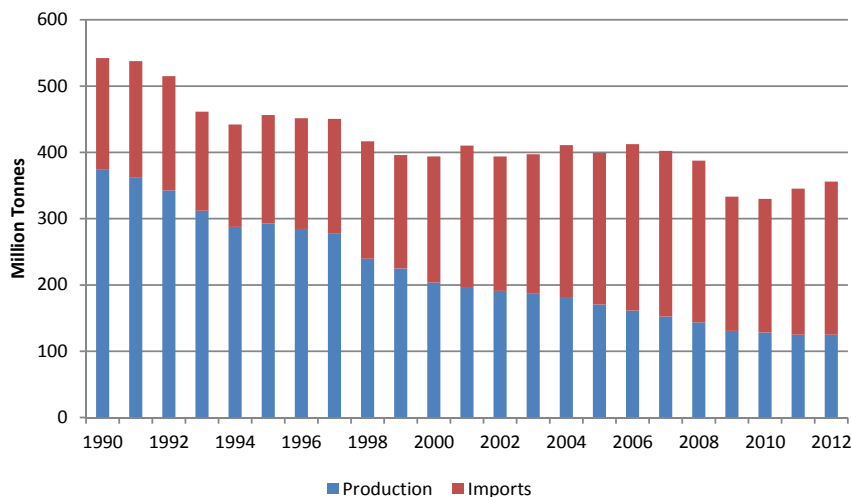
www.epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

EU Coal Imports and Production

EU imports of hard coal were 168 million tonnes in 1990. After a dip in 1993 hard coal imports rose steadily as production in the EU fell. In 2001 imports of hard coal overtook production for the first time and increased to a record high of 251 million tonnes in 2006. From 2007 imports fell every year until 2010, before rising again due to increased demand for electricity generation. Imports of hard coal were 231 million tonnes in 2012.

Production of hard coal in the EU was 374 million tonnes in 1990. From 1991 onwards production fell gradually with imports rising in most years. The supply of hard coal production and imports together were 542 million tonnes in 1990. After 1990 supply fell steadily as energy supply started to become more diverse through natural gas and renewables. In 2012 production and imports were 356 million tonnes. **(Chart 1)**

Chart 1: EU (28) Hard Coal Production and Imports^{2 3}



¹ Hard coal is anthracite, coking coal and other bituminous coal.

² Not all 28 EU countries were in the EU in 1990, but data is included for them back to 1990

³ Figures include intra-EU trade

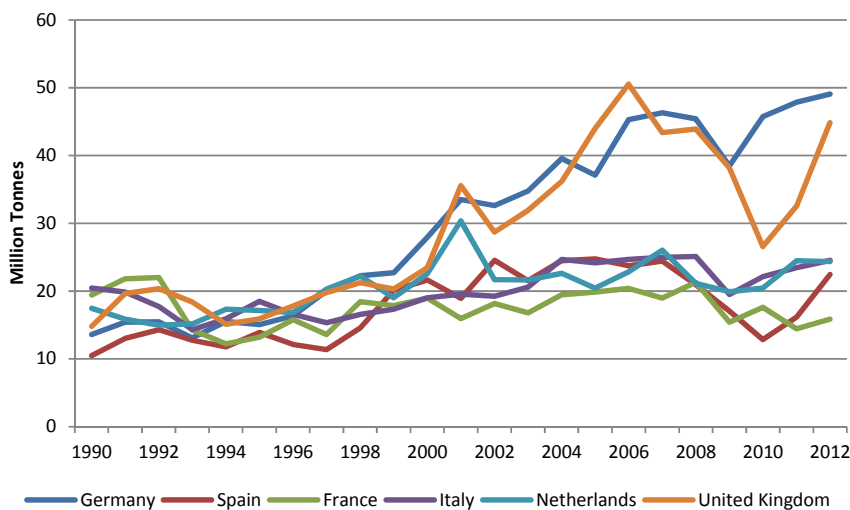
Special feature – Global coal trade

In 1990 Italy was the main importer of hard coal in the EU, importing 20 million tonnes, followed by France with 19 million tonnes, the Netherlands with 17 million tonnes, UK with 15 million tonnes, Germany with 14 million tonnes and Spain with 10 million tonnes. The Netherlands is both a high importer and high exporter, as much coal is in transit through the ports, e.g. Rotterdam. **(Chart 2)**

After 1990 German imports increased rapidly, as less coal was home produced due to costs. Germany is the largest producer of electricity in the EU, and this is predominantly fuelled by coal. In 2002 Germany was the largest importer of coal in the EU with 49 million tonnes.

Since 1990 UK imports of hard coal have also increased as home production fell due to mines closing, although there was a decline in imports between 2007 and 2010 due to less demand by electricity generators. In 2012 UK was the second largest importer of coal with 45 million tonnes. Imports for the other main EU importers have been mainly stable in the last 22 years.

Chart 2: Main EU Importing Countries of Hard Coal

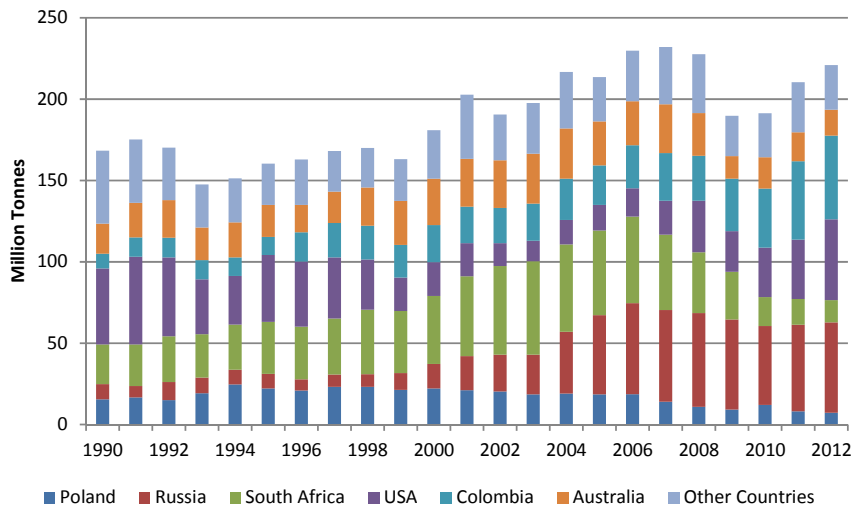


In 1990 just over half of hard coal imported to the EU came from three countries, with 47 million tonnes from the USA (28 per cent), 25 million tonnes from South Africa (15 per cent) and 19 million tonnes from Australia (11 per cent).

During the 1990s, imports from the USA gradually fell, as imports from South Africa, Colombia, Australia and Poland increased. South Africa took over as the main source of imports in 1998 and continued to increase its share, reaching a record high of 57 million tonnes (27 per cent) in 2003. After 2003 imports from South Africa fell sharply, as imports from Russia, Colombia and the USA increased. Imports from Russia had started to increase from 1999 and it took over as the main exporter of hard coal to the EU in 2006. Russian and Colombian imports have increased due to the restructuring of the coal mining industries in these countries which has led to increased production.

In 2012 EU imports of hard coal came mainly from Russia (55 million tonnes; 24 per cent), Colombia (51 million tonnes; 22 per cent) and the USA (50 million tonnes; 22 per cent). In 2012 the USA has used more shale gas for electricity generation meaning that more coal was available to export. **(Chart 3)**

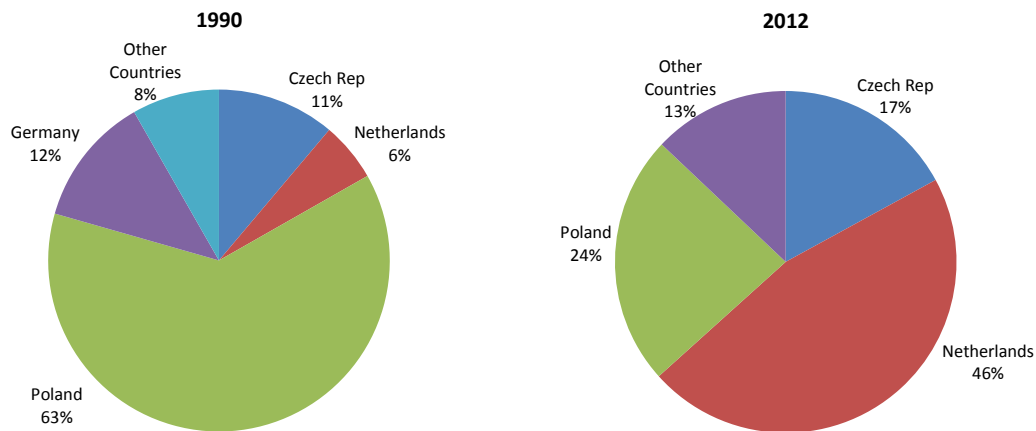
Chart 3: EU (28) Hard Coal Imports By Country Of Origin⁴



EU Coal Exports

In 1990 45 million tonnes of coal were exported from the EU. Of this, 63 per cent came from Poland (28 million tonnes), 12 per cent came from Germany (5 million tonnes), 11 per cent came from the Czech Republic (5 million tonnes) and 6 per cent came from the Netherlands (3 million tonnes). In 2012 EU exports had fallen to 29 million tonnes. The Netherlands was the main exporter with exports of 14 million tonnes (46 per cent), followed by Poland with 7 million tonnes (24 per cent) and Czech Republic with 5 million tonnes (17 per cent). It should be noted though that there is very little coal production in the Netherlands, with exports generally sourced from imports. (Chart 4)

Chart 4: EU (28) Exporting Countries Hard Coal



⁴ Please note that there might be differences in imports reported by one country compared to exports reported by the partner country

Global

Data on global coal trade is sourced from the International Energy Agency at: www.wds.iea.org/WDS/Common/Login/login.aspx

Global Coal Imports

In 1990 global imports of hard coal were 491 million tonnes. This had increased to 1,181 million tonnes in 2012.

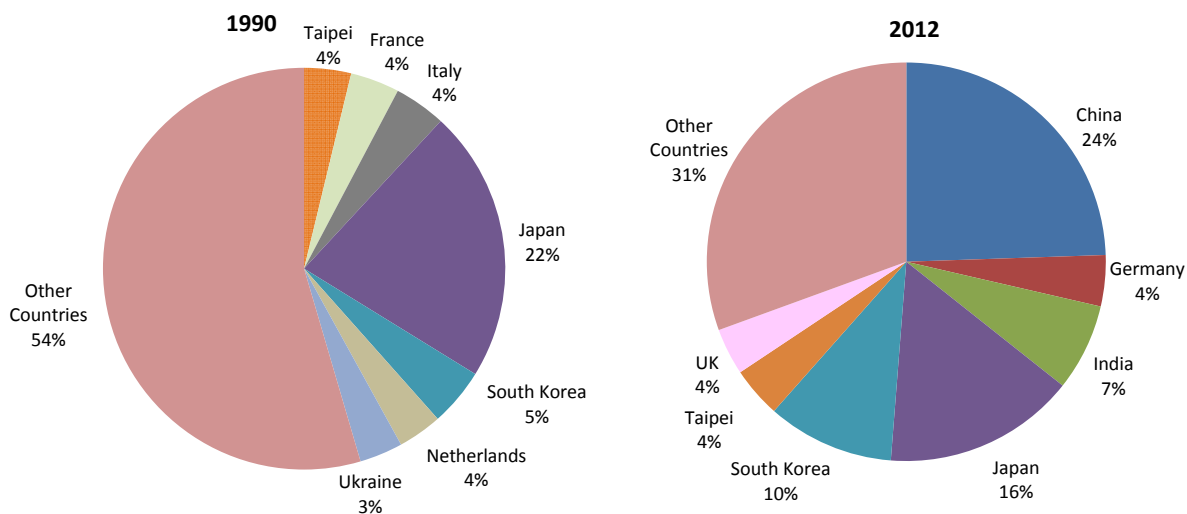
In 1990 Japan was the largest importer of hard coal with 22 per cent of global imports. This was followed by South Korea (5 per cent), Italy, France, Taipei and the Netherlands (4 per cent). China's share of global imports of coal was 0.4 per cent, while India's share was 1 per cent. Coal imports to China and India have grown since 1990 as demand for coal increased.

In 2012 China was the largest importer of hard coal with 24 per cent of global imports. This was followed by Japan (16 per cent), South Korea (10 per cent), India (7 per cent), Taipei (4 per cent) and Germany (4 per cent). The UK was the seventh largest importer of coal in the world.

China, the largest importer of hard coal, is also the largest consumer of coal and in 2012 the largest generator of electricity in the world, but as its coal mines are closing (due to the government crackdown on mines that are unsafe, polluting or wasteful), more coal is being imported to meet this demand.

Japan, which is the second largest importer of hard coal is the third largest generator of electricity in the world and imports the majority of its coal to meet its demand for electricity generation. **(Chart 5)**

Chart 5: Global Imports of Hard Coal



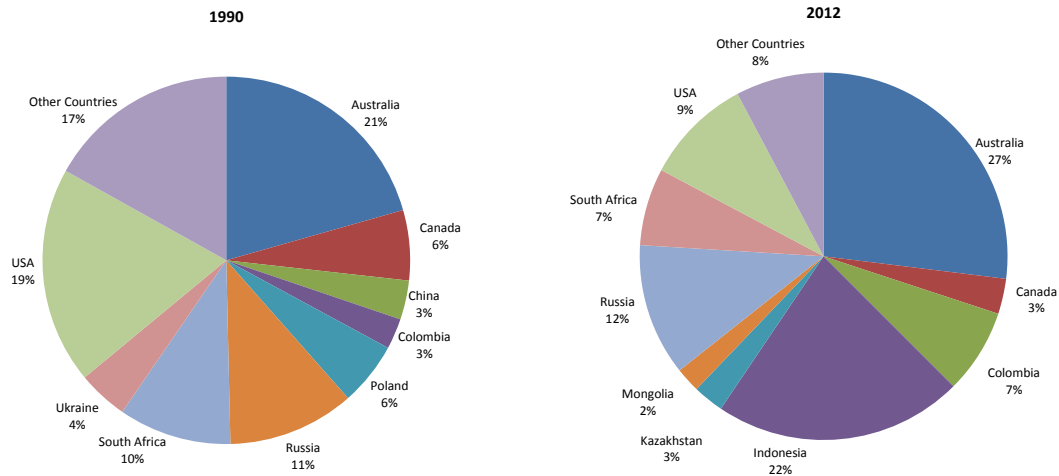
Global Coal Exports

In 1990 Australia was the largest exporter of hard coal with 21 per cent of total world exports. This was followed by the USA (19 per cent), Russia (11 per cent) and South Africa (10 per cent). Indonesia's share of world exports of coal was 1 per cent, but exports have grown since.

In 2012, Australia was the largest exporters of hard coal with 27 per cent of total world imports. This was followed by Indonesia (22 per cent), Russia (12 per cent), USA (9 per cent), Colombia (7 per cent) and South Africa (7 per cent).

The main export markets for the top two exporters of coal, Indonesia and Australia are Japan, India, China and Korea. This is required to meet their large demands of electricity generation. **(Chart 6)**

Chart 6: Global Exports of Hard Coal



Global Coal Production

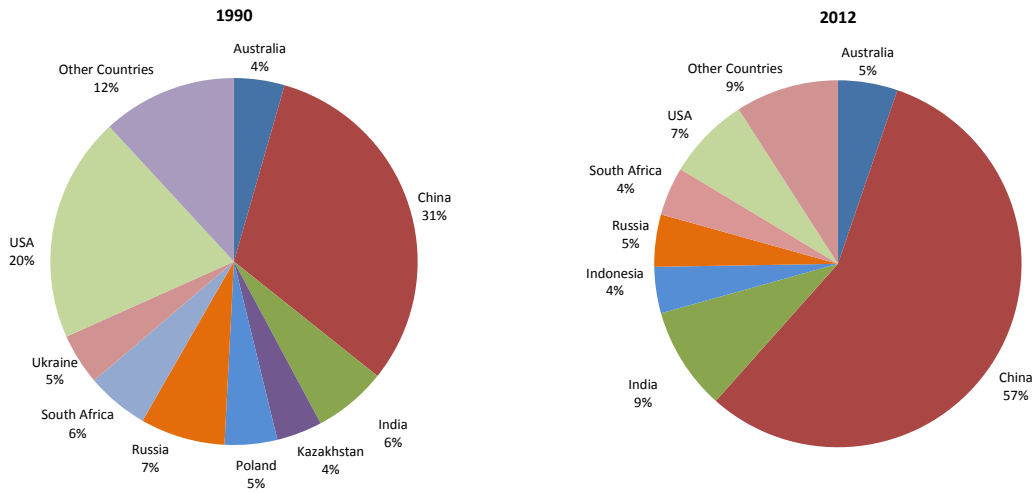
In 1990 global production of hard coal was 3,183 million tonnes. This had risen to 6,039 million tonnes in 2012.

In 1990 China was the largest producer of coal with 31 per cent. This was followed by the USA (20 per cent), Russia (7 per cent), India (6 per cent) and South Africa (6 per cent).

In 2012, 57 per cent of the world's coal production came from China. It was followed by India (9 per cent), USA (7 per cent), Australia (5 per cent) and Russia (5 per cent).

In spite of having large reserves of coal, India is unable to increase its coal production to meet its huge demand. There are various reasons why India is not producing more coal, including the unavailability of the latest technological equipment and the illegal mining and exporting of coal. Therefore, India has to import coal to meet its additional requirements. **(Chart 7)**

Chart 7: Global Production of Coal



Global Coal Used in Electricity Generation

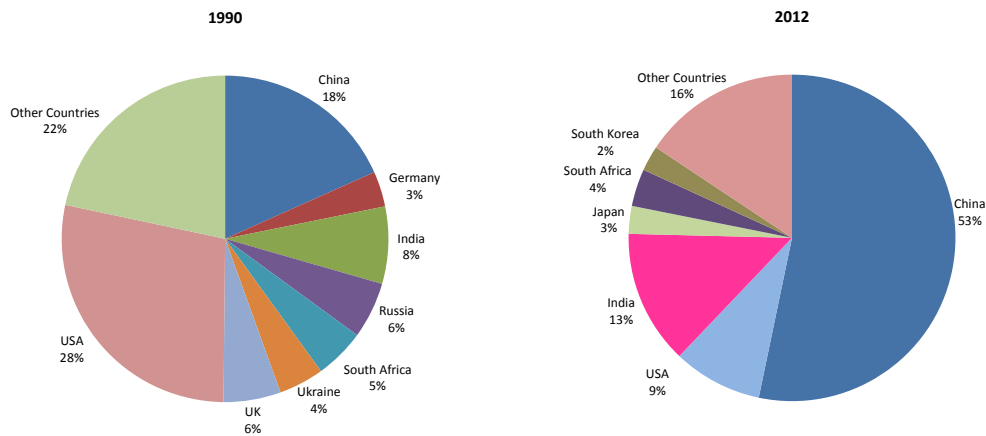
As 55 per cent of hard coal supply was used in electricity generation in 2012, it is a key driver of coal production and trade.

In 1990 global use of hard coal in electricity was 1,485 million tonnes. This had risen to 3,351 million tonnes in 2012.

In 1990 the USA was the largest user of hard coal for electricity generation (28 per cent), followed by China (18 per cent), India (8 per cent), the UK (6 per cent) and Russia (6 per cent).

In 2012 China was the largest user of hard coal for electricity generation (53 per cent), followed by India (13 per cent), the USA (9 per cent) and South Africa (4 per cent). Most of the main coal-fired electricity generators are also amongst the largest importers of coal. Most of the coal that the USA uses for electricity generation is home produced. **(Chart 8)**

Chart 8: Global Hard Coal Used in Electricity Generation



Chris Michaels
 Coal Statistics
 Tel: 0300 068 5050
 E-mail: Chris.Michaels@decc.gsi.gov.uk