

Chapter 2

Solid fuels and derived gases

Key points

- **In 2019, coal comprised 2.8 per cent of UK primary energy demand. This is down from 4.0 per cent the previous year** and 18 per cent in 2013. (Table 1.1)
- **Coal demand in the UK is at a record low because of falling demand for electricity generation. Demand fell by 33 per cent** from 11.9 million tonnes in 2018 to 8.0 million tonnes in 2019 (Table 2.4), with a 56 per cent decrease in the use of coal for electricity generation to a record low. In May 2019 electricity was generated from coal on only 5 days with the longest coal free spell (18 days and 6 hours) since the 1880's. **Just over a third - 36 per cent - of demand for coal was for electricity generation.** Overall demand has fallen by 87 per cent since 2013 as coal generation decreased following government initiatives that resulted in gas being favoured for generation. (Table 2.1)
- **Coal production fell by 16 per cent compared to last year**, down to an all-time low of 2.2 million tonnes, less than a fifth of the production recorded in 2013 (Table 2.4). This decrease was mainly due to lower demand for coal-fired electricity and coal mines closing and other collieries producing less coal as they near closure.
- **In 2019, 6.5 million tonnes of coal was imported, down by 36 per cent compared to 2018. Net imports accounted for 73 per cent of the UK's supply. Russia was the UK's largest supplier of coal imports** with a share of 37 per cent. The other main suppliers were the USA with a 27 per cent share and Colombia with a 17 per cent share. (Table 2B)
- **Total stock levels marginally fell** in 2019 to 5.3 million tonnes, compared to 2018. (Table 2.4)

Introduction

2.1 This chapter presents statistics on supply and demand for coal (tables 2.1 - 2.4) and manufactured solid fuels, including coke oven coke, coke breeze, patent fuel, coke oven gas, blast furnace gas, benzole and tar (tables 2.5 and 2.6). A full list of tables is available at the end of the chapter.

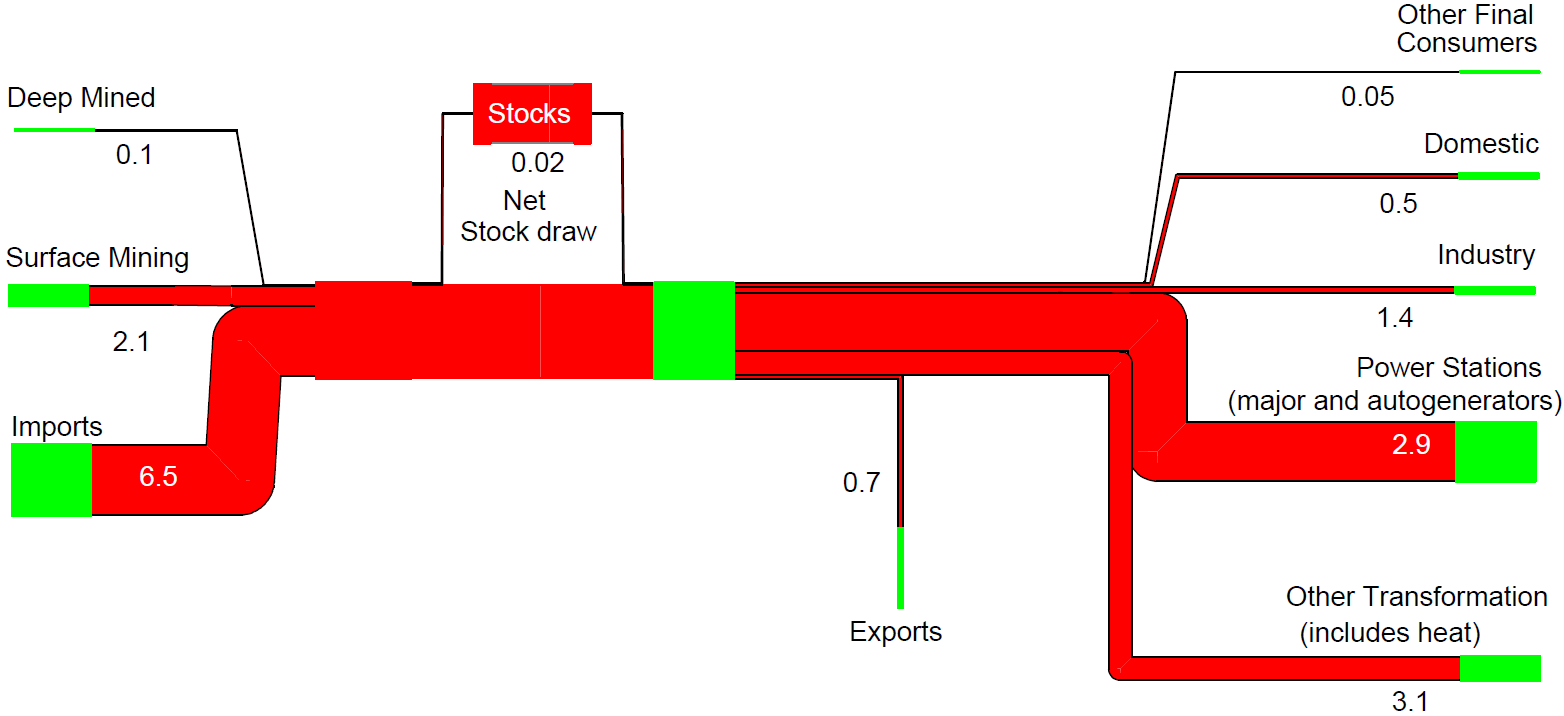
2.2 **In 2019, coal comprised 2.8 per cent of UK primary energy demand. This is down from 4.0 per cent the previous year** and 16 per cent since 2000. Most coal is used for electricity generation, coke manufacture, or in blast furnaces in the steel industry.

2.3 Below, an energy flow chart for 2019 shows the flows of coal from production and imports through to consumption. It is a way of simplifying the figures that can be found in the commodity balance for coal in Table 2.4. The chart illustrates the flow of coal from the point of supply (on the left) to its eventual final use (on the right).

Revisions

2.4 Splits of coal production by coal type for 2016-2018 have been revised in line with new data received from UK coal producers.

Coal flow chart 2019 (million tonnes of coal)

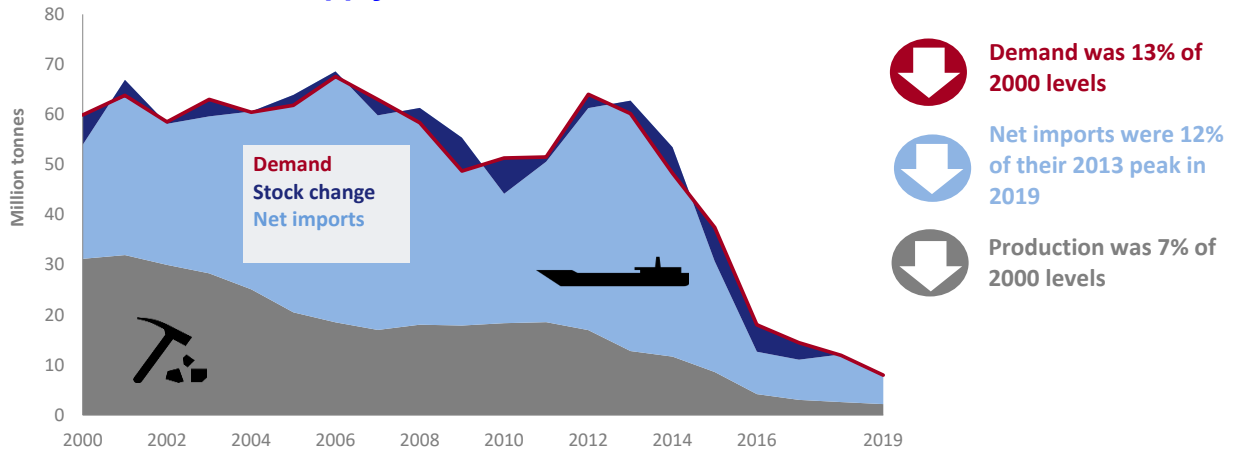


Notes: This flow chart is based on the data that appear in Tables 2.1 and 2.4.

Coal supply and demand (Table 2.1)

2.5 With reduced demand for coal, supply has contracted substantially with an abrupt fall in 2014 and following years. In 2019, coal production fell 16 per cent compared to 2018 to an all-time low of 2.2 million tonnes. Net imports fell 39 per cent to 5.8 million tonnes and accounted for 73 per cent of the UK's supply, but were 12% of the peak of 50.0 million tonnes in 2013, (Chart 2.1).

Chart 2.1: UK coal supply and demand 2000 - 2019



2.6 **Deep mined** production in the UK was only 4.6 per cent of production, despite quadrupling to 99 thousand tonnes due to Aberpergwm colliery increasing production. In 2015 deep mined production provided nearly a third of total coal production. This was the year that the last large deep mines in operation closed - Hatfield, Thoresby and Kellingley. **Surface mined** production decreased 19 per cent, to a new record low of 2.1 million tonnes due to lower demand for coal-fired electricity and coal mines closing and other collieries producing less coal as they near closure. Surface mined coal was 13 million tonnes in 2000.

2.7 **Steam coal**, mainly used by power stations, accounted for 45 per cent of total coal production in 2019, with 32 per cent **coking coal** and 23 per cent **anthracite** (Table 2.1). In 2015 steam coal accounted for 89 per cent of production, with 10 per cent anthracite and 1 per cent coking coal. No coal slurry has been produced since the last UK sites closed in 2013.

2.8 Table 2A shows how production of coal is divided between England, Wales and Scotland. In 2019, 54 per cent of coal output was in Wales, 26 per cent in England and 20 per cent in Scotland. Wales became the main producer of coal when the last remaining large deep mines, which were in England, closed in 2015. Only smaller deep mines remain in England and Wales. There is no longer any deep mining of coal in Scotland (Map 2A).

Table 2A: Output from UK coal mines and employment in UK coal mines ^{1, 2}

		Million tonnes			Number		
		Output			Employment		
		2017	2018	2019	2017	2018	2019
Deep mined	England	0.02	0.01	0.00	48	37	8
	Wales	0.00	0.01	0.10	4	90	134
	Total	0.02	0.02	0.10	52	127	142
Surface mining	England	1.0	0.9	0.6	115	110	144
	Scotland	0.8	0.6	0.4	159	73	87
	Wales	1.2	1.0	1.1	294	280	326
	Total	3.0	2.6	2.1	568	463	557
Total	England	1.0	0.9	0.6	163	147	152
	Scotland	0.8	0.6	0.4	159	73	87
	Wales	1.2	1.1	1.2	298	370	460
	Total	3.0	2.6	2.2	620	590	699

Source: The Coal Authority

1. Output is the tonnage declared by operators to the Coal Authority, including estimated tonnages. It excludes estimates of slurry recovered from dumps, ponds, rivers, etc.
2. Employment includes contractors and is as declared by licensees to the Coal Authority at 31 December each year.

2.9 Table 2A also shows how numbers employed in the production of coal have changed over the last three years. **During 2019 total employment, including contractors, was 18 per cent higher than in 2018.** As of 31 December 2019, 66 per cent of the 699 people employed in UK coal mining worked in Wales, while 22 per cent were employed in England and 12 per cent in Scotland. Deep mined employment in Wales increased from 90 in 2018 to 134 in 2019 as a result of Aberpergwm coming out of care and maintenance and producing again from September 2018. Surface mining employment rose in Wales from 280 in 2018 to 326 in 2019, mainly due to Nant Helen coming out of care and maintenance in January 2019. England's surface mining employment also showed a rise from 110 in 2018 to 144 in 2019, mainly due to Shotton taking on more staff as the main site went into restoration and the extension produced more coal.

2.10 **In 2019 UK imports at 6.5 million tonnes fell by 36 per cent compared to 2018 and has fallen by 72 per cent since 2000 as demand for coal has fallen.** Net imports comprise 73 per cent of the UK's demand, compared to 38 per cent in 2000. The proportion of net imports increased over the last 19 years as coal mine closures saw domestic production fall faster than imports.

2.11 The majority of UK coal imports came from four countries, as shown by the map below. In 2019, 37 per cent of the UK's total coal imports came from Russia (2.4 million tonnes), 27 per cent (1.8 million tonnes) came from the USA and 17 per cent (1.1 million tonnes) came from Colombia and 6 per cent (0.4 million tonnes) came from Australia.

Chart 2.2: UK Coal Imports in 2019 (thousand tonnes)

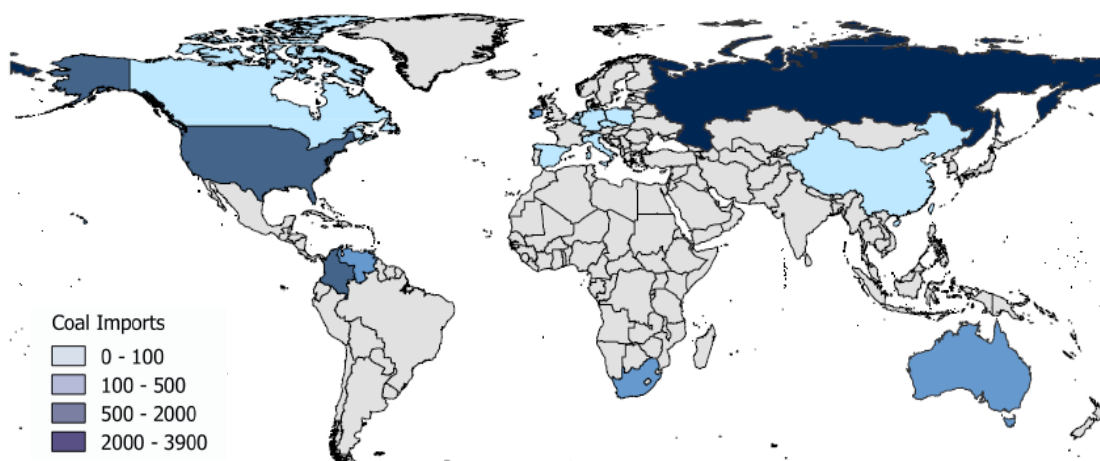


Table 2B: Imports of coal in 2019¹

	Thousand tonnes			
	Steam coal	Coking coal	Anthracite	Total
Russia	1,707	710	4	2,421
United States of America	799	970	-	1,769
Australia	-	423	-	423
Colombia	1,078	-	-	1,078
European Union ²	307	33	80	420
Republic of South Africa	158	-	-	158
Other countries	201	41	19	260
Total all countries	4,249	2,177	102	6,529

Source: HM Revenue and Customs, ISSB

1. Country of origin basis.

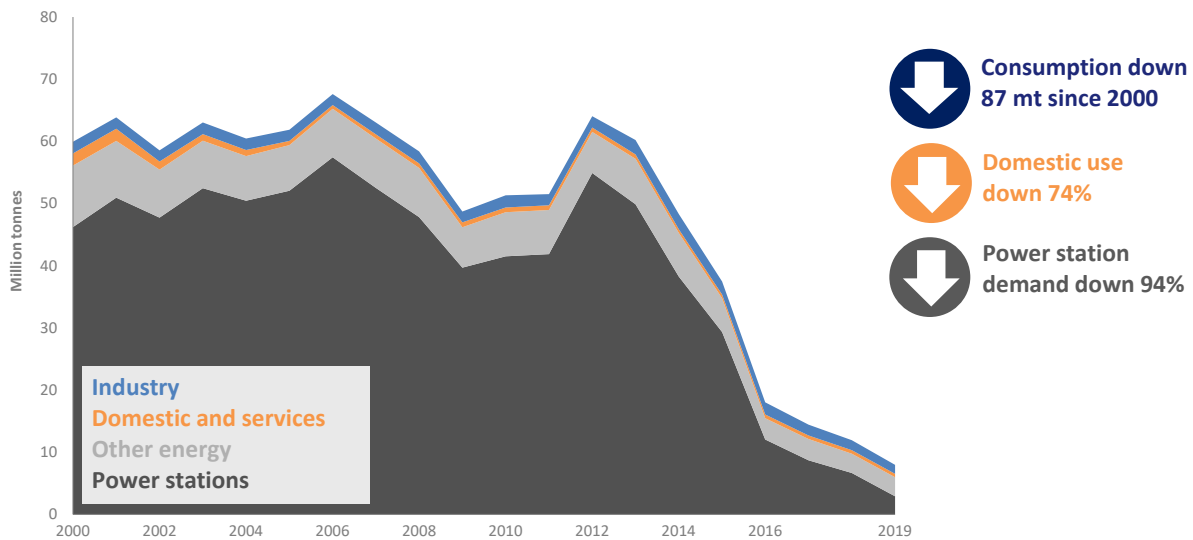
2. Includes non-EU coal routed through the Netherlands.

2.12 Steam coal accounted for 65 per cent of the total imports. Of the rest, 33 per cent was coking coal, with anthracite accounting for the remainder. In 2019, Russia accounted for 40 per cent of total steam coal imports. A further 25 per cent came from Colombia. The UK imported 45 per cent of coking coal from the USA with a further 33 per cent from Russia and 19 per cent from Australia. The small volume of imported anthracite was mainly from the European Union (78 per cent).

2.13 In 2018, the latest year for which EU data is available, the UK remained as the seventh largest importing country in the EU and accounted for 6 per cent of total EU imports (164 million tonnes). From 1999 to 2015 the UK had been in the top two largest importers with Germany but fell to the sixth largest in 2016 due to lower demand. In 2018, Germany was the top importing country in the EU accounting for 27 per cent, followed by Poland with a 12 per cent share and Spain with a 10 per cent share of the total.

Coal Consumption

Chart 2.3: Coal consumption, 2000 - 2019



2.14 **The transformation sector represented 75 per cent (6 million tonnes) of overall demand for coal in 2019.** Electricity generation accounted for 36 per cent of demand for all types of coal and 86 per cent of demand for steam coal. Most coking coal was used in coke ovens (61 per cent) and the rest in blast furnaces (39 per cent) in the UK iron and steel industry. Coking coal used in blast furnaces decreased from 1.2 million tonnes in 2018 to 1.1 million tonnes in 2019. An energy balance flow chart for manufactured fuel, similar to that at the start of this chapter, is included in annex H.

2.15 **Electricity generation use of coal by major power producers fell by 56 per cent from 7 million tonnes in 2018 to 3 million tonnes (a new record low) in 2019.** Coal use by autogenerators was broadly stable at 16 thousand tonnes in 2019. Electricity generation favoured gas, nuclear and renewables over coal. Additionally, generation capacity which had fallen in recent years continued to fall with the following power stations closing in the last year - Fiddlers Ferry unit 1 (March 2019), Cottam Power Station (September 2019) and Aberthaw B (December 2019). There were only 5 major power stations remaining at the end of 2019. In May 2019 electricity was generated from coal on only 5 days breaking the record for the longest coal free spell (18 days and 6 hours) since the 1880's. This was broken again in May 2020.

2.16 **Coal consumption by final consumers fell 8.7 per cent compared to 2019, to 2.0 million tonnes. This comprised 25 per cent of total demand (DUKES Table 2.4).** Final consumption mainly covers steam raising for industrial processes, space or hot water heating, or heat for processing. Steam coal accounted for 79 per cent of this final consumption (up marginally from 2018).

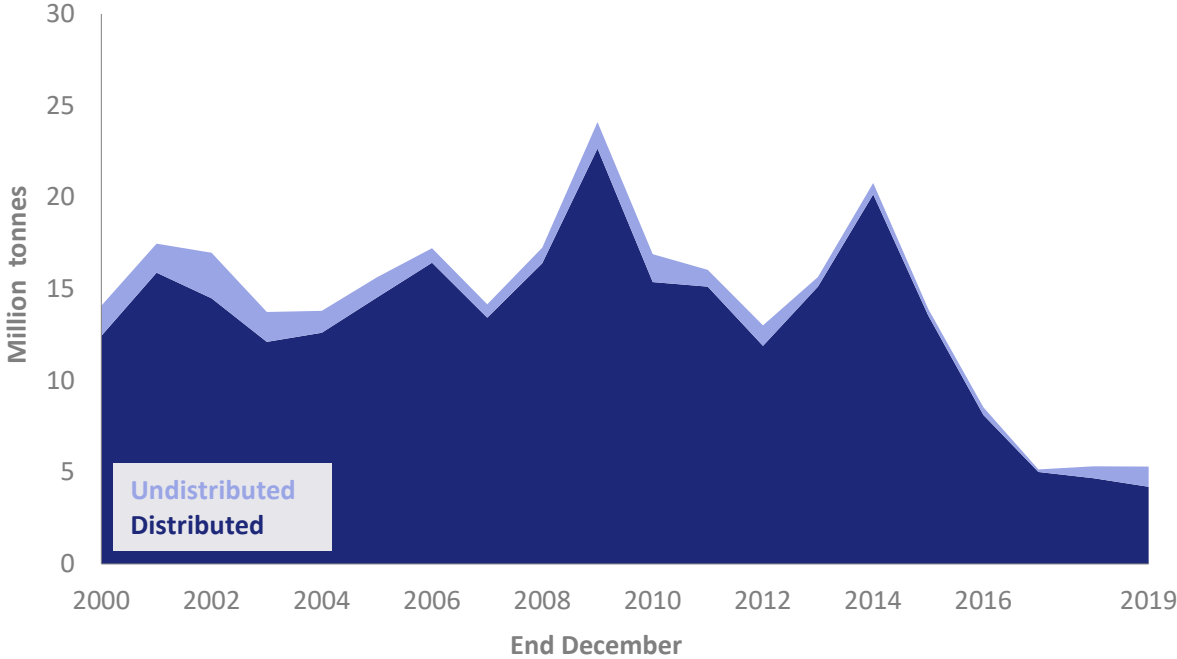
2.17 The industrial sector is the largest final consumer (accounting for 73 per cent of total final consumption in 2019). Eighty-four per cent of the coal used in the industrial sector was steam coal and manufacturers of mineral products (e.g. cement, glass and brick) were the largest users. The domestic sector accounted for 25 per cent of the final consumption of coal, with 63 per cent of this demand being for steam coal and the remainder for anthracite. Domestic consumption fell by 5.0 per cent in 2019 compared with 2018.

2.18 **In 2018, the UK was the seventh largest consumer of coal among the EU countries for the second year running. It had been the third largest in 2016.** The UK accounted for 5 per cent of total coal consumption in the EU. The top consumer was Poland accounting for 32 per cent of total EU consumption, while Germany was second accounting for 22 per cent.

Coal Stocks

2.19 In line with much of what we see with coal, the main changes to coal stocks came post 2014 when stocks began to decline year on year. Coal stocks fell to 5.3 million tonnes in 2019, which was 0.3 per cent lower than in 2018 (Chart 2.4). Stocks at major power stations fell 5.1 per cent from 3.9 million tonnes to 3.7 million tonnes, a record low in the published time series. Stocks held by coke ovens fell 1.8 per cent to 0.4 million tonnes.

Chart 2.4: Coal stocks in the UK 2000 – 2019



Coal Resources

2.20 As of June 2020, the Coal Authority estimates that overall there are 3,906 million tonnes of coal resources, including prospects (Table 2C), down marginally from 3,910 million tonnes assessed in June 2019. Of the economically recoverable and minable coal resource in current operations (including those in the planning or pre-planning process) 1,033 million tonnes is in underground mines and 46 million tonnes in surface mines. Overall England had a 77 per cent share of UK current mines and licenced resources, followed by Scotland with 14 per cent and Wales 9 per cent.

2.21 In prospects, there were 2,050 million tonnes suitable for underground mining and 777 million tonnes suitable for surface mining. Table 2C gives details of the resource assessment by England, Scotland and Wales as at 12 June 2020.

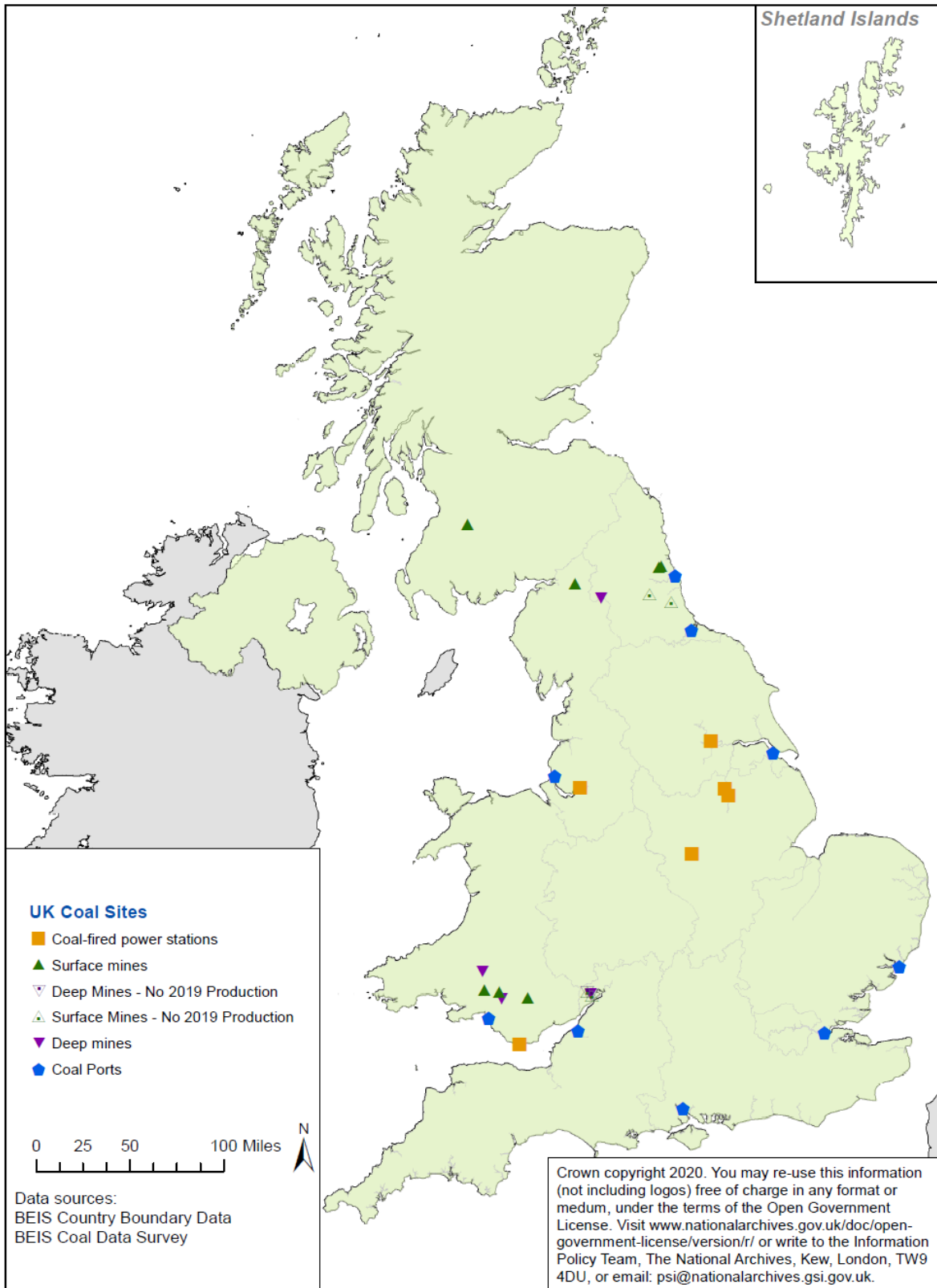
Table 2C: Identified GB coal resource assessment at 12 June 2020

UNDERGROUND MINING				
	Million tonnes			
	England	Scotland	Wales	Total
Operational mines	0	0	23	23
Planning granted	5	0	0	5
In planning process	340	0	0	340
Pre-planning	480	107	78	665
Prospects	2,000	0	50	2,050
Closed mines still in licence	0	0	0	0
Total	2,825	107	151	3,083

SURFACE MINING				
	Million tonnes			
	England	Scotland	Wales	Total
Operational mines	0	0	2	2
Planning granted	0	0	0	0
In planning process	4	0	0	4
Pre-planning	0	40	0	40
Prospects	516	115	147	777
Total	520	155	149	823

Source: Coal Authority

Map 2A: UK coal production sites and ports as the end of December 2019¹



¹ Includes non-coastal ports: Immingham (River Humber), Avonmouth (River Avon) and Tilbury (River Thames)

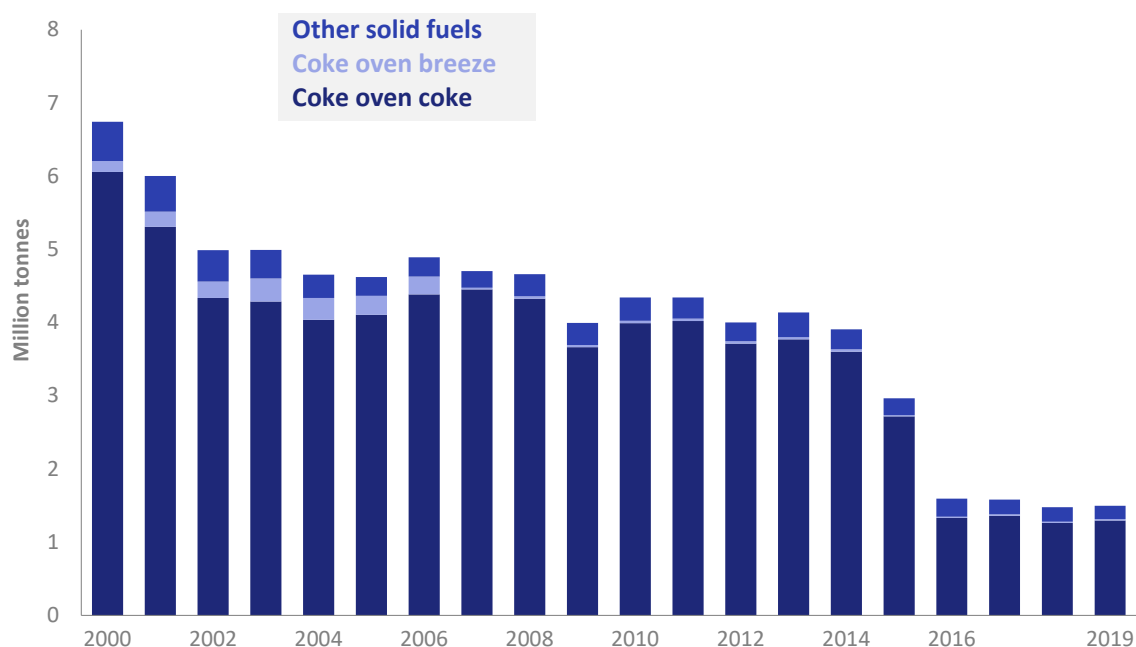
Manufactured Solid Fuels (Tables 2.5 and 2.6)

Production, Trade and Consumption

2.22 Manufactured Solid Fuels cover coke oven coke, coke oven breeze and patent fuels. Coke is a high-carbon, low impurity fuel produced by heating coal in an airless kiln. It is principally used in blast furnaces to smelt iron ore but is also burnt in stoves and forges as a low smoke fuel. Coke breeze consists of small pieces of coke (less than 19mm) separated by screening. Iron and steelworks use coke breeze in the sintering process whereby fine pieces of iron ore are agglomerated to a useable size for the main blast furnace. Patent fuels are mainly solid smokeless fuels for the domestic market for use in both open fires and in boilers.

2.23 In 2019, home produced coke oven coke rose to 1.3 million tonnes, which was 2.6 per cent higher than in 2018 (Chart 2.5). Monckton Coke and Chemicals, the only dedicated coke plant in the UK closed in December 2014. However, coke is still being produced and used at steelworks, mainly Port Talbot and Scunthorpe. In 2019, 67 per cent of the UK's supply of coke oven coke was domestically produced, with the remainder being imported.

Chart 2.5: Total manufactured solid fuels production in the UK 2000 - 2019

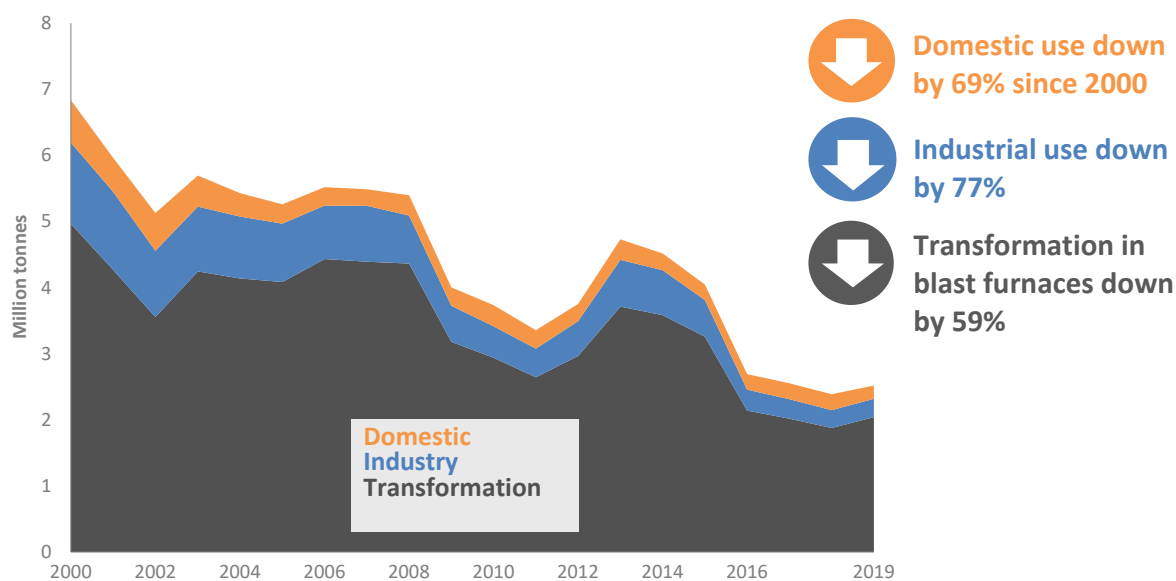


2.24 The main purpose of coke oven coke is for use in blast furnaces in the UK iron and steel industry. In 2019, blast furnace use had risen to 1.7 million tonnes, up 9.6 per cent from 2018. However, blast furnace use has fallen by 40 per cent since 2015. This is due to reduced steel production in the UK. Notably, SSI steelworks at Redcar ceased production in mid-September 2015 (with the subsequent closure in October).

2.25 Most of the supply of **coke breeze** is from re-screened coke oven coke, with direct production accounting for only 3.0 per cent of total supply in 2019. In that year, 55 per cent of coke breeze was used in blast furnaces (0.3 million tonnes) for transformation and 45 per cent used for final consumption.

2.26 Other manufactured solid fuels (patent fuels) are manufactured smokeless fuels, produced mainly for the domestic market. A small amount of these fuels (only 9 per cent of total supply in 2019) was imported.

Chart 2.6: Total manufactured solid fuels consumption in the UK 2000 - 2019



2.27 Overall, consumption of manufactured solid fuels (MSF) fell by 63 per cent from 2000 to 2019. Transformation of coke and coke breeze in blast furnaces remained the principal use, with an 81 per cent share of MSF demand in 2019. Final consumption of coke and coke breeze by industrial users saw the largest drop, by 77 per cent from 2000 to 2019. Final consumption of manufactured solid fuels by domestic users fell by 69 per cent over the same time period.

MSF by-products - Blast furnace & coke oven gas, benzole and tars (Table 2.6)

2.28 The carbonisation and gasification of solid fuels in coke ovens produces coke oven gas as a by-product. In 2019, production of coke oven gas was 3.6 TWh, 2.6 per cent higher than in 2018. Some of this (36 per cent) was used to fuel the coke ovens themselves. Another 26 per cent was used for electricity generation, 26 per cent for iron, and steel and other industrial processes (including heat production), 8 per cent in blast furnaces and 4 per cent was lost.

2.29 Blast furnace gas is a by-product of iron smelting in a blast furnace. A similar product is obtained when steel is made in basic oxygen steel (BOS) converters and “BOS” gas is included in this category. Most of these gases are used in other parts of integrated steel works. Production increased by 3.0 per cent in 2019 compared with 2018. The generation of electricity in 2019 used 53 per cent of total blast furnace gas and BOS gas, while 35 per cent was used in coke ovens and blast furnaces themselves, 9 per cent was lost or burned as waste and a further 3 per cent was used in the iron and steel industry.

2.30 Demand for benzole and tars increased by 4.3 per cent to 581 GWh in 2019, all of which was met by domestic production. From 2009, based on information from the EU-ETS, all consumption of these products has been allocated to non-energy use – see also paragraph 2.53 (d) and (e).

List of DUKES coal tables

Table	Description	Period
2.1-2.3	Commodity balances for coal – supply, demand & final consumption	1998-2019
2.4	Supply and consumption of coal	1996-2019
2.5	Supply and consumption of coke oven coke, coke breeze and other manufactured solid fuels	1996-2019
2.6	Supply and consumption of coke oven gas, blast furnace gas, benzole and tars	1996-2019
2.7	Deep mines and surface mines in production, December 2019.	2019

2.1.1	Coal production and stocks	1970-2019
2.1.2	Inland consumption of solid fuels	1970-2019

Technical notes and definitions

2.31 These notes and definitions are in addition to the technical notes and definitions covering all fuels and energy as a whole in Chapter 1. Additional guidance on the compilation of the solid fuels and derived gases statistics can be found in the document ‘Data Sources and Methodologies’, available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/coal-statistics. For notes on the commodity balances and definitions of the terms used in the row headings see Annex A.

Coal production

2.32 **Deep mined:** The statistics cover saleable output from deep mines including coal obtained from working on both revenue and capital accounts. All licensed collieries (and British Coal collieries prior to 1995) are included, even where coal is only a subsidiary product.

2.33 **Surface mines:** The figures cover saleable output and include the output of sites worked by operators under agency agreements and licences, as well as the output of sites licensed for the production of coal as a subsidiary to the production of other minerals. The term ‘surface mining’ has now replaced opencast production as defined in DUKES pre-2011. Opencast production is a particular type of surface mining technique.

2.34 **Other sources/ slurry:** Estimates of slurry etc recovered and disposed of from dumps, ponds, rivers, etc.

Steam coal, coking coal and anthracite

2.35 **Steam coal** is coal classified as such by UK coal producers and by importers of coal. It tends to have calorific values at the lower end of the range.

2.36 **Coking coal** is coal sold by producers for use in coke ovens and similar carbonising processes. The definition is not therefore determined by the calorific value or caking qualities of each batch of coal sold, although calorific values tend to be higher than for steam coal.

2.37 **Anthracite** is coal classified as such by UK coal producers and importers of coal. Typically it has a high heat content making it particularly suitable for certain industrial processes and for use as a domestic fuel. Some UK anthracite producers have found a market for their lower calorific value output at power stations.

Allocation of imported coal

2.38 Although data are available on consumption of home-produced coal, and also on consumption of imported coal by secondary fuel producers, there is only very limited direct information on consumption of imported coal by final users. Guidance on how BEIS allocate imports to final users is outlined in paragraph 3.2.5 of the ‘Data Sources and Methodologies’ document. This guidance can be

found on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/coal-statistics.

Coal consumption

2.39 Figures for actual consumption of coal are available for all fuels and power producers and for final use by the iron and steel industry. The remaining final users' consumption figures are based on information on disposals to consumers by producers and on imports.

2.40 Annex A of this Digest outlines the principles of energy and commodity balances and defines the activities that fall within these parts of the balances. However, the following additional notes relevant to solid fuels are given below:

Transformation: Blast furnaces: Coking coal injected into blast furnaces is shown separately within the balance tables.

Transformation: Low temperature carbonisation plants and patent fuel plants: Coal used at these plants for the manufacture of domestic coke such as Coalite and of briquetted fuels such as Phurnacite and Homefire.

Consumption: Industry: The statistics comprise sales of coal by the six main coal producers and a few small producers to the iron and steel industry (excluding those used at coke ovens and blast furnaces) and to other industrial sectors, estimated proportions of anthracite and steam coal imports, and submission made to the EU Emissions Trading Scheme. The figures exclude coal used for industries' own generation of electricity, which appear separately under transformation.

Consumption: Domestic: Some coal is supplied free of charge to retired miners and other retired eligible employees through the National Concessionary Fuel Scheme (NCFS). The concessionary fuel provided in 2019 is estimated at 22.9 thousand tonnes. This estimate is included in the domestic steam coal and domestic anthracite figures.

Stocks of coal

2.41 Undistributed stocks are those held at collieries and surface mine sites. It is not possible to distinguish these two locations in the stock figures. Distributed stocks are those held at power stations and stocking grounds of the major power producing companies (as defined in Chapter 5), coke ovens, low temperature carbonisation plants and patent fuel plants.

Coke oven coke (hard coke), hard coke breeze and other manufactured fuels

2.42 The statistics cover coke produced at coke ovens owned by Corus plc, Coal Products Ltd and other producers. Low temperature carbonisation plants are not included (see paragraph 2.38). Breeze (as defined in paragraph 2.43) is excluded from the figures for coke oven coke.

2.43 Breeze can generally be described as coke screened below 19 mm ($\frac{3}{4}$ inch) with no fines removed, but the screen size may vary in different areas and to meet the requirements of particular markets. Coke that has been transported from one location to another is usually re-screened before use to remove smaller sizes, giving rise to further breeze.

2.44 The coke screened out by producers as breeze and fines appears as transfers in the coke breeze column of the balances. Transfers out of coke oven coke have not always been equal to transfers into coke oven breeze. This was due to differences arising from the timing, location of measurement and the practice adopted by the iron and steel works. Since 2000, however, the Iron and Steel Statistics Bureau have been able to reconcile these data. Since 2007, most of the supply of coke breeze was reclassified to coke oven coke following better information received by the Iron and Steel Statistics Bureau.

2.45 Figures are derived from returns made to HM Revenue and Customs and are broken down in greater detail in Annex G on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes.

2.46 In Table 2.5, the export figures used for hard coke, coke breeze and other manufactured solid fuels for the years before 1998 (as reported on the BEIS web site) are quantities of fuel exported as reported to BEIS or its predecessor Departments by the companies concerned, rather than quantities recorded by HM Revenue and Customs in their Trade Statistics. A long-term trend commentary and tables on exports are on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes.

2.47 In 1998, an assessment using industry data showed that on average over the previous five years 91 per cent of imports had been coke and 9 per cent breeze and it is these proportions that have been used for 1998 and subsequent years in Table 2.5.

2.48 The calorific value for coke breeze has been set the same as for coke oven coke. This is following information from the iron and steel industry on the similarities between the two types of manufactured fuels.

2.49 Imports and exports of manufactured smokeless fuels can contain small quantities of non-smokeless fuels.

2.50 Other manufactured solid fuels are mainly solid smokeless fuels for the domestic market for use in both open fires and in boilers. A smaller quantity is exported (although exports are largely offset by similar quantities of imports in most years). Manufacture takes place in patented fuel plants and low-temperature carbonisation plants. The brand names used for these fuels include Homefire, Phurnacite, Ancit and Coalite.

2.51 Consumption of coke and other manufactured solid fuels: These are disposals from coke ovens to merchants. The figures also include estimated proportions of coke imports.

Blast furnace gas, coke oven gas, benzole and tars

2.52 The following definitions are used in the tables that include these fuels:

(a) Blast furnace gas: includes Basic Oxygen Steel furnace (BOS) gas. Blast furnace gas is the gas produced during iron ore smelting when hot air passes over coke within the blast ovens. It contains carbon monoxide, carbon dioxide, hydrogen and nitrogen. In a BOS furnace the aim is not to introduce nitrogen or hydrogen into the steel making process, so pure oxygen gas and suitable fluxes are used to remove the carbon and phosphorous from the molten pig iron and steel scrap. A similar fuel gas is thus produced.

(b) Coke oven gas: is a gas produced during the carbonisation of coal to form coke at coke ovens. In 2009, some coke oven gas was produced using a combination of gases other than natural gas and blast furnace gas. This total has been added to the production of coke oven gas rather than transfers because it is specifically defined as the mixture of natural gas, blast furnace gas and BOS gas. See the paragraph below on synthetic coke oven gas for a complete definition of this.

(c) Synthetic coke oven gas: is mainly natural gas that is mixed with smaller amounts of blast furnace and BOS gas to produce a gas with almost the same qualities as coke oven gas. The transfers row of Table 2.6 shows the quantities of blast furnace gas used for this purpose and the total input of gases to the synthetic coke oven gas process. There is a corresponding outward transfer from natural gas in Chapter 4, Table 4.1.

(d) Benzole: a colourless, liquid, flammable, aromatic hydrocarbon by-product of the iron and steel making process. It is used in the UK as a solvent in the manufacture of styrenes and phenols. All consumption of benzole has been allocated to non-energy use from 2009 onwards.

(e) Tars: viscous materials usually derived from the destructive distillation of coal, which are by-products of the coke and iron making processes. All consumption of tars has been allocated to non-energy use from 2009 onwards.

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