# Extractive Industries IN THE UK

The extractive industries comprise mining and quarrying, including oil and gas production. The sector has made a sizeable contribution to the UK economy for many years and remains an important sector, both directly and by supporting substantial added value in downstream industries and related supply chains. By far the largest economic contribution comes from oil and gas production.

In 2018, total UK extractive industry gross value added (GVA) is now estimated to have been £18.0 billion, with oil and gas production and associated support service activities accounting for 90% of the sector’s GVA.[[1]](#footnote-2) The oil and gas industry was directly responsible for 40,000 jobs in 2018, with many more supported in the industry’s wider supply chain. It is estimated that in total 260,000 jobs across the UK were supported by the offshore oil and gas industry in 2018.

Construction minerals, principally crushed rock and sand and gravel aggregates, represent the largest materials flow in the UK. The market for these minerals depends upon the level of UK construction activity and longer-term construction-related demand.

Ahead of collection and publication of information on extractive-related payments to the UK government in 2018, the UK EITI Multi-Stakeholder Group (MSG) decided to exclude payments made by coal mining companies to the Coal Authority from this year’s reconciliation. These payments are no longer material relative to overall government revenues and the MSG believes that their exclusion will not affect the comprehensiveness of UK EITI reporting. The continuing economic contribution of the coal sector is, though, still included in the background information set out below.

Figure 1. Extractive Industry Gross Value Added (GVA)[[2]](#footnote-3)

Figure 1. Extractive Industry Gross Value Added. Graph showing in billion pounds (2018 prices) extractive industry Gross Value Added (GVA) for the extraction of crude petroleum and natural gas, mining support service activities, mining of coal and other mining and quarrying for the years 1990-2018.

Source: ONS, UK GDP(O) low level aggregates, published 30 September 2019.

In some of the summary information below, coal is grouped with oil and gas (for example where data are available for fossil fuels but not for other parts of the sector). However, for most of this chapter, oil and gas are treated separately from mining and quarrying, including coal. In addition, it should be noted that the phrase “mining and quarrying” as used in UK national statistics embraces the whole UK extractive sector including oil and gas production as well as coal production. Mining support services are also included in this sector. Some of the data reported below include those activities while other data exclude them.

## Value of the sector

Table 1 below shows GVA for the main components of the mining and quarrying sector as reported in UK national statistics. As noted above, this sector includes fossil fuel production, other mining and quarrying and mining support service activities, but excludes the value of products manufactured with extracted minerals. The table gives for each subsector its percentage share of total UK GVA for the most recent year. It also shows the whole sector’s GVA as a percentage of national gross domestic product (GDP) for each year.[[3]](#footnote-4)

**Table 1. Gross Value Added (GVA) (£ million)**[[4]](#footnote-5)

Table 1. Gross Value Added (GVA) in million pounds. Table showing the GVA for the extraction of crude petroleum and natural gas, mining support service activities, mining of coal and other mining and quarrying. Also Total UK GDP for each area and the percentage extractives share of total GDP for the years 2014-2018.

The following tables give a finer breakdown of the sector in the latest recent year for which data are available to give a sense of the scale of activity in each subsector. Although the GVA data in the first table and the one above are sourced from official Office of National Statistics (ONS) data, they are not identical. Note that in value terms support service activities are almost entirely related to extraction of petroleum and natural gas.

Table 2. Mining and Quarrying (including Oil and Gas) – number of enterprises, GVA and employment costs in 2017[[5]](#footnote-6)



Note: SIC = Standard Industrial Classification (in which, in the 2007 edition which is still used to classify UK industries, mining and quarrying including oil and gas make up Section B which comprises Divisions 05–09).

Table 3. Number of businesses in the private sector and their associated employment and turnover, by number of employees and industry division, UK, start 2019[[6]](#footnote-7)

Table 3 showing the number of businesses in the private sector and their associated employment and turnover (in million pounds), by number of employees (thousands) and industry division, UK, start 2019

## Government revenues

UK Government accounts cover a financial year running from April–March rather than a calendar year, so most of the data on government revenues are of necessity on a financial year basis. Where possible, calendar year data have (also) been provided. Oil and gas companies have a distinct tax regime, allowing identification of their extractive-related tax payments (and repayments), whereas mining and quarrying companies pay mainstream corporation tax. This means the data for extractive-related tax receipts from mining and quarrying companies cannot be separated out. Details on tax revenues can therefore be found in the separate upstream oil and gas standalone chapter.

Section 106[[7]](#footnote-8) payments are made (in England, plus equivalent payments made elsewhere in the UK) to local authorities relating to the granting of planning permission for mining operations to cover, for example, local road and infrastructure improvements. These are the only mandated social expenditure by extractive companies.

There are no non-monetary arrangements between extractive companies and the government in the UK.

Forecasts of UK Government oil and gas revenues are published by the independent Office for Budget Responsibility (OBR).[[8]](#footnote-9) The OBR also publishes details of its underlying forecasts of oil and gas production, prices and expenditure broken down between exploration and appraisal, development capital expenditure, operating costs and decommissioning costs.

The table below includes environmental taxes paid by the UK extractive industries. These are not extractive-related so are not included in the reconciliation of payments and receipts.

**Table 4**

Table 4 showing environmental tax payments by the mining and quarrying sector (including oil and gas) in million pounds for energy, transport and pollution and resource taxes for 2012-2018.

## Exports

The UK both imports and exports all types of mining and quarrying production but is generally a net importer of each type. Information on trade flows is given in the relevant sectoral sections.

Gross extractives exports in 2018 as reported by ONS amounted to 3.7% of total UK gross exports by value.

## Employment

Table 5, below, gives estimates of the total UK workforce jobs directly supported by the UK mining and quarrying sector including its major sub-sectors. It also shows the industries are typically capital- rather than labour-intensive and correspondingly represent a significantly smaller share of workforce jobs than of GVA.

Table 5. Workforce jobs estimates (thousands)[[9]](#footnote-10)

Table 5 showing workforce jobs estimates in thousands for extraction of crude petroleum and natural gas, mining of coal, mining of metal ores and other mining and quarrying and mining support service activities for 2014-2018.

*Sources*: ONS, BEIS

Table 6 shows estimates of extractive industry employment in Great Britain (GB) (i.e. the UK excluding Northern Ireland) at a finer level of disaggregation than is available for the workforce jobs estimates for the UK. Table 7 shows the gender split of employment in recent years for the mining and quarrying sector as a whole. Although the proportion of women in the workforce has declined slightly since 2014 the longer-term trend is more positive; the female share in 1996 was only 7%, less than half the share in 2019. All extractive employment shown in this and subsequent tables is in the private sector.

Table 6. Extractive Industry Employment in Great Britain and United Kingdom (in thousands)



**Table 7**

Table 7 showing the split of male/female workforce jobs in thousands from 2014-2019.

## Regional location of extractive industries

Extractive industry employment levels have fallen markedly from their historic peak decades ago, mainly due to the decline of the coal industry, but extractive-related activities still contribute significantly to local employment in a number of regions.

The broad geographic spread of employment in the UK extractive sector (including oil and gas and mining support service activities) is illustrated in Table 8, below. The concentration of employment in Scotland reflects the dominance of the Aberdeen area in terms of oil and gas-related activity. While the importance of the sector for the Scottish economy is well known, the relatively high share of activity in the East Midlands is also noteworthy.

**Table 8**



Almost all UK oil and gas production comes from fields located offshore. Maps showing the location of oil and gas fields in GB and on the UK Continental Shelf (UKCS) are published online by the Oil and Gas Authority (OGA).[[10]](#footnote-11) These maps also show which areas are under licence offshore and onshore in Great Britain. A map showing which areas are under licence in Northern Ireland is published by the Northern Ireland Department for the Economy (DfE)[[11]](#footnote-12) but there is as yet no production there.

The majority of coal production comes from sites in Scotland, England and South Wales, as mapped by the Coal Authority.[[12]](#footnote-13) The mining and quarrying of non-hydrocarbon minerals are widely distributed across the UK. There are no significant hard-rock aggregate deposits in the South and East of England, so these materials are transported for use in these regions from further afield in the Midlands and South West in particular.

## UK fossil fuel production and UK energy demand

UK production of fossil fuels has been, and continues to be, significant in terms of meeting UK energy demand. This is particularly true of oil and gas but, nowadays, much less so for coal. While the share of total demand represented by fossil fuels has been declining, they still account for around four fifths of total primary energy demand and are currently forecast by BEIS to account for nearly 70% of total primary energy demand even in 2035.[[13]](#footnote-14)

The two charts below show the evolution of UK energy demand and production since 2000. The recent decline in coal use and growth in renewables are shown clearly.

Figures 2 and 3. UK energy demand and production[[14]](#footnote-15)

Figure 2A showing UK energy demand from 2000-2018 in million tonnes of oil equivalent for oil, coal, gas, renewables and other energy.

Figure 2B showing energy production from 2000-2018 in million tonnes of oil equivalent for oil, gas, coal, renewables and other energy.

Source: UK Energy in Brief 2019 dataset (BEIS, August 2019), Aggregated Energy Balances showing proportion of Renewables (BEIS, September 2019) and DUKES 2019 (BEIS, July 2019).

# Glossary of abbreviations FOR EXTRACTIVE INDUSTRIES BACKGROUND INFORMATION

|  |  |
| --- | --- |
| BEIS | Department for Business, Energy & Industrial Strategy |
| billion | one thousand million or 109 |
|  |  |
|  |  |
| DfE | Department for the Economy |
| DUKES | Digest of United Kingdom Energy Statistics |
| EITI | Extractive Industries Transparency Initiative |
| GB | Great Britain |
| GDP | Gross Domestic Product |
| GVA | Gross Value Added |
| MSG | Multi-Stakeholder Group |
| OBR | Office for Budget Responsibility |
| OGA | Oil and Gas Authority |
| ONS | Office for National Statistics |
|  |  |
|  |  |
| SIC | Standard Industrial Classification |
| UK | United Kingdom |
| UKCS | UK Continental Shelf |

1. GVA is a measure of economic output – capturing the value of goods and services produced by a sector – and is often used to indicate a sector’s contribution to the economy. It should be noted that the sectoral GVA data published here are very different from (and often much lower than) those previously published by the ONS. The revised estimates of GVA reflect methodological changes introduced for Blue Book 2019 (October 2019). [↑](#footnote-ref-2)
2. <https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/ukgdpolowlevelaggregates> [↑](#footnote-ref-3)
3. Generally, in this chapter, unlike in the ONS table and some other official sources, a terminological distinction is made between “oil and gas” and “[other] mining and quarrying”, the latter comprising the extraction of coal and of all non-hydrocarbon minerals. We have included mining support service activities in the total for the sector when calculating its contribution to GDP. [↑](#footnote-ref-4)
4. <https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/ukgdpolowlevelaggregates>; <https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/datasets/unitedkingdomeconomicaccountsmainaggregates> [↑](#footnote-ref-5)
5. <https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/bulletins/uknonfinancialbusinesseconomy/2017provisionalresults> [↑](#footnote-ref-6)
6. <https://www.gov.uk/government/statistics/business-population-estimates-2018> [↑](#footnote-ref-7)
7. Section 106 of the Town and Country Planning Act 1990. [↑](#footnote-ref-8)
8. OBR, <https://obr.uk/> [↑](#footnote-ref-9)
9. <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/regionallabourmarket/september2019> and DUKES 2019 (BEIS, July 2019) [↑](#footnote-ref-10)
10. <https://www.ogauthority.co.uk/data-centre/interactive-maps-and-tools/> [↑](#footnote-ref-11)
11. <https://www.economy-ni.gov.uk/publications/petroleum-licence-map> [↑](#footnote-ref-12)
12. Coal Authority, Interactive Map, <http://mapapps2.bgs.ac.uk/coalauthority/home.html> [↑](#footnote-ref-13)
13. <https://www.gov.uk/government/collections/energy-and-emissions-projections> [↑](#footnote-ref-14)
14. <https://www.gov.uk/government/statistics/total-energy-section-1-energy-trends> [↑](#footnote-ref-15)