

Statistical bulletin

UK environmental taxes: 2022

The value and composition of UK environmental taxes between 1997 and 2022, by type of tax and economic activity, with other European country comparisons.



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1 . Main points

- Environmental taxes, using an internationally agreed framework, raised £47.4 billion in the UK in 2022, up 6.9% from £44.3 billion in 2021.
- Environmental tax revenue was 1.9% of gross domestic product (GDP) in 2022, the lowest level since 1997 having been broadly stable through this period.
- Environmental taxes provided 5.3% of all UK tax and social contribution revenue in 2022, down from 5.6% in 2021 and the lowest share since 1997.
- Average environmental taxes paid by households in the UK decreased to £575 per household in 2020.
- Energy tax revenue comprised 74.7% of all UK environmental tax revenue in 2022, followed by transport (22.3%), and pollution and resource (3.0%) taxes.
- Hydrocarbon oil duties (or Fuel Duty) remains the largest energy tax, comprising around 70% of energy taxes in 2022.
- The Plastics Packaging Tax raised £207 million, 15% of pollution and resources taxes, in 2022 – the first year for which revenue was received.
- In 2020, the Electricity and Gas sector overtook the Transportation and Storage sector as being the largest environmental tax revenue industry contributor.

2 . Total environmental tax revenue

Environmental taxes are those whose base is a physical unit, for example, a litre of petrol or a passenger flight, that has a proven negative impact on the environment. These taxes should reduce the activity, and therefore reduce negative environmental impacts. Increases in tax revenue can occur from either rising tax rates, increased activity, or both.

Other initiatives may promote environmentally-positive behaviour but are not considered an environmental tax under this definition. For example, charges on single-use plastic bags by retailers are not classified as a tax. Retailers are expected, but not required, to donate proceeds to good causes and this charge has an impact on consumer behaviour.

More information on this environmental taxes measure can be found in our [Environmental accounts on environmental taxes QMI](#).

UK environmental tax revenue increased in 2022

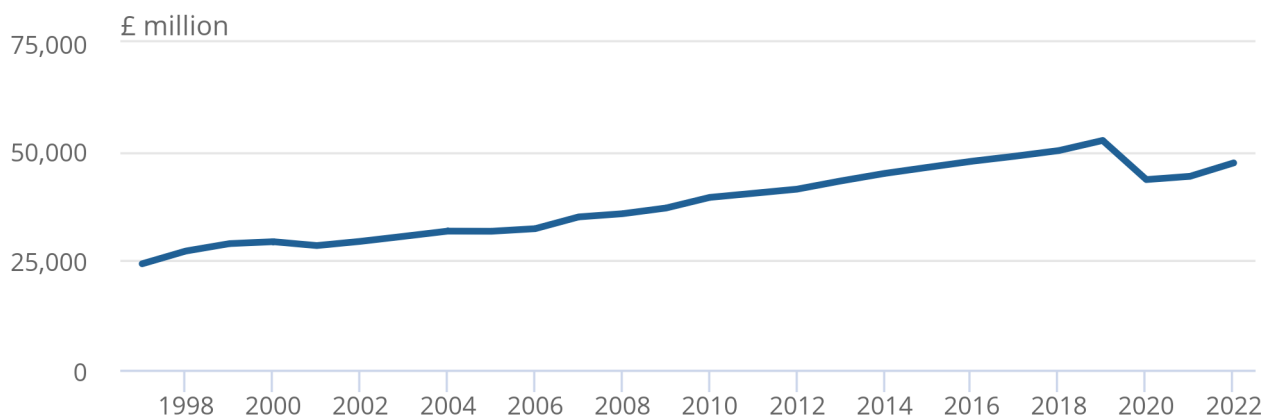
In 2022, UK environmental tax revenue was £47.4 billion, a 6.9% increase from 2021. This is a larger annual increase than the 1.7% in 2021, but while increasing, environmental tax revenue remains 9.8% lower than the pre-pandemic peak of £52.5 billion in 2019.

Figure 1: Environmental tax revenue fell in 2020 but has increased in 2021 and 2022

UK, 1997 to 2022

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UK, 1997 to 2022



Source: Environmental taxes from the Office for National Statistics

Notes:

1. Data are presented in current prices and have not been adjusted for inflation.

Environmental tax revenue for the UK as a percentage of GDP is low compared with EU countries

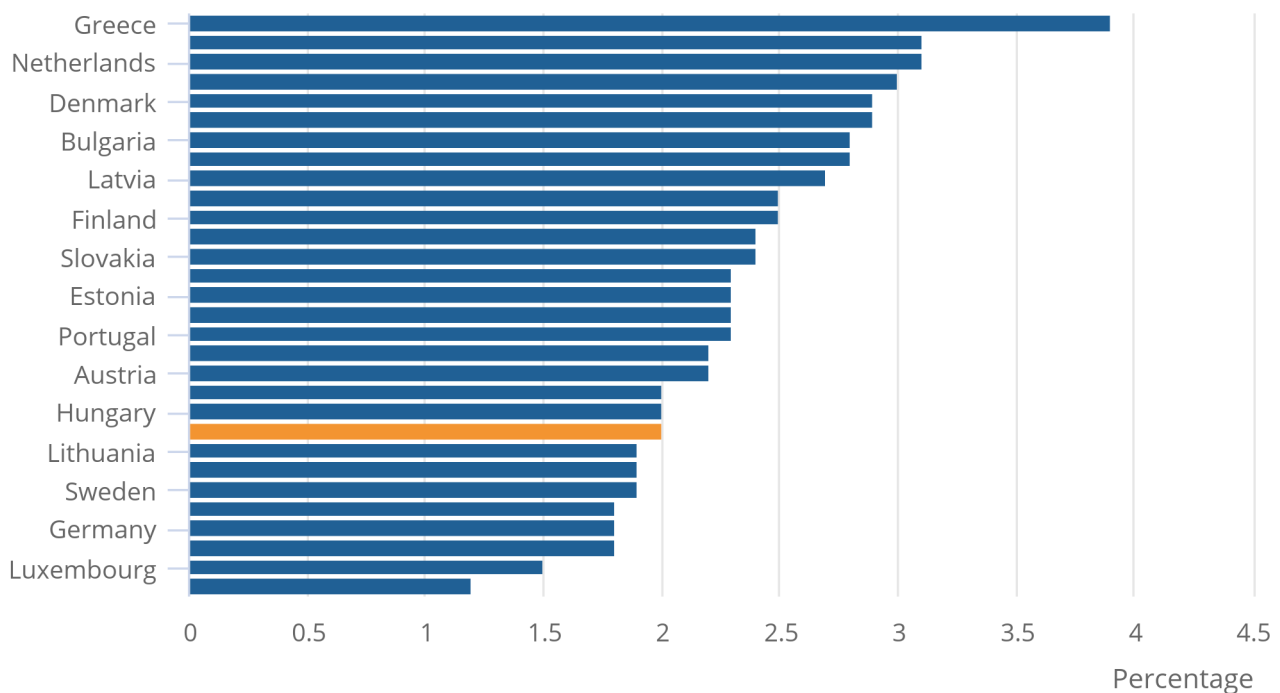
UK environmental taxes as a proportion of gross domestic product (GDP) have historically been below the EU average, standing at 2.0% in 2021 compared with the EU average of 2.4%. In 2022, the UK's proportion decreased further to 1.9% of UK GDP, for which international comparisons are not yet available.

Figure 2: As a percentage of GDP, UK environmental tax revenue is lower than for most EU countries

UK and EU-27, 2021

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UK and EU-27, 2021



Source: Environmental taxes from the Office for National Statistics and Eurostat

The OECD also publishes [environmental taxes statistics for other countries](#).

Environmental tax revenue has been gradually decreasing as a percentage of total taxes and social contributions

As a percentage of total taxes and social contributions, UK environmental tax revenue has decreased from 7.7% in 2002 to 5.6% in 2021. UK proportions fell by 1.7 percentage points from 2019 to 2022, at 5.3%.

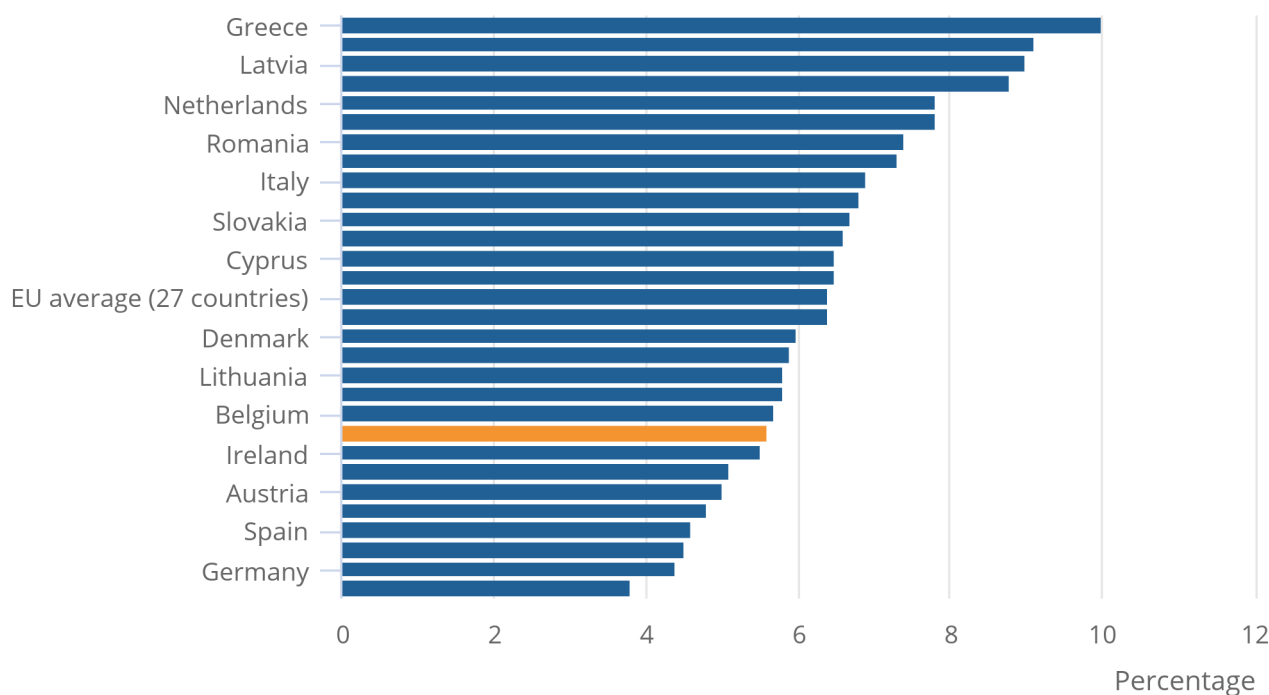
In 2021, the UK's proportion was 0.8 percentage points below the EU average, the largest difference observed since 2006.

Figure 3: UK environmental tax revenue as a share of all taxes and social contributions is lower than for most EU countries

UK and EU-27, 2021

Figure 3: UK environmental tax revenue as a share of all taxes and social contributions is lower than for most EU countries

UK and EU-27, 2021



Source: Environmental taxes from the Office for National Statistics and Eurostat

Energy taxes continue to contribute the most UK environmental tax revenue in 2022

Energy taxes accounted for 75% of total UK environmental tax revenue in 2022, at £35.4 billion, down from almost 79% in 2020 and 2021. This shows a return to levels seen from 2007 to 2019, with higher proportions in 2020 and 2021 largely because of a transport tax revenue decrease during the coronavirus pandemic.

3 . Environmental tax revenue by sector

Households' contributions to environmental tax revenue have decreased

In 2018 we published [Five facts about environmental taxes](#), explaining how almost half of all environmental tax revenue comes from households. Since then, this proportion has continued to decline with a further drop during the coronavirus (COVID-19) pandemic, where households' contributions decreased from 40.2% in 2019 to 36.9% in 2020.

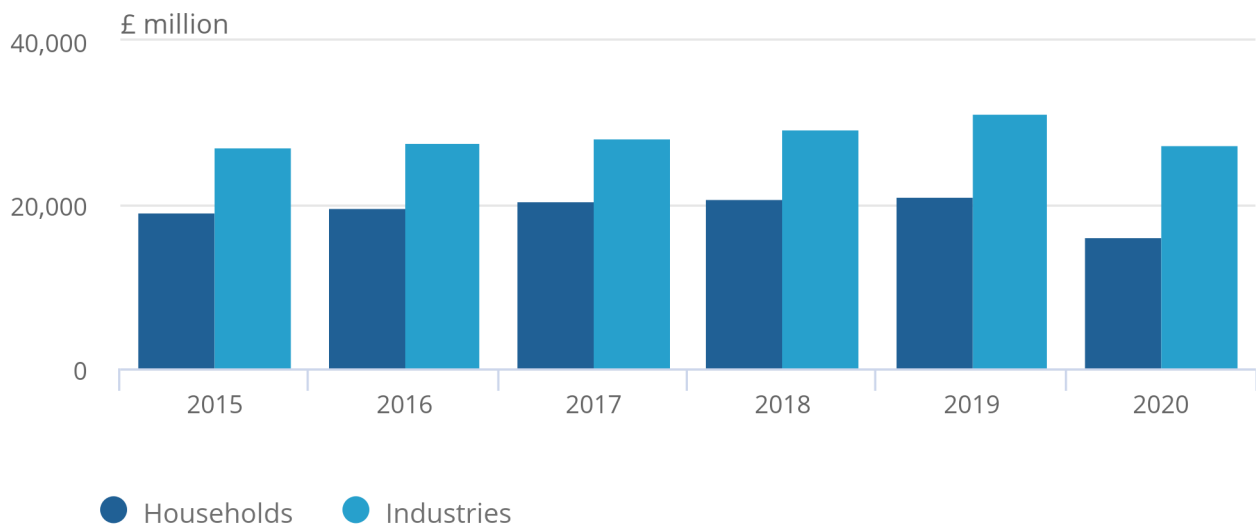
Pre-pandemic, industrial and household environmental tax revenue levels were rising, but both fell in 2020 compared with 2019; households' and industry contributions decreased by 24% and 12%, respectively.

Figure 4: Both business and household contributions fell in 2020, after reaching recent highs in 2019

UK, 2015 to 2020

Figure 4: Both business and household contributions fell in 2020, after reaching recent highs in 2019

UK, 2015 to 2020



Source: Environmental taxes from the Office for National Statistics

Notes:

1. Data are presented in current prices and have not been adjusted for inflation.

Average environmental taxes paid by households fell to its lowest recorded level

Average environmental taxes paid by households in the UK has dropped from an average of £741 from 2015 to 2019, to £575 in 2020, its lowest level since 1997.

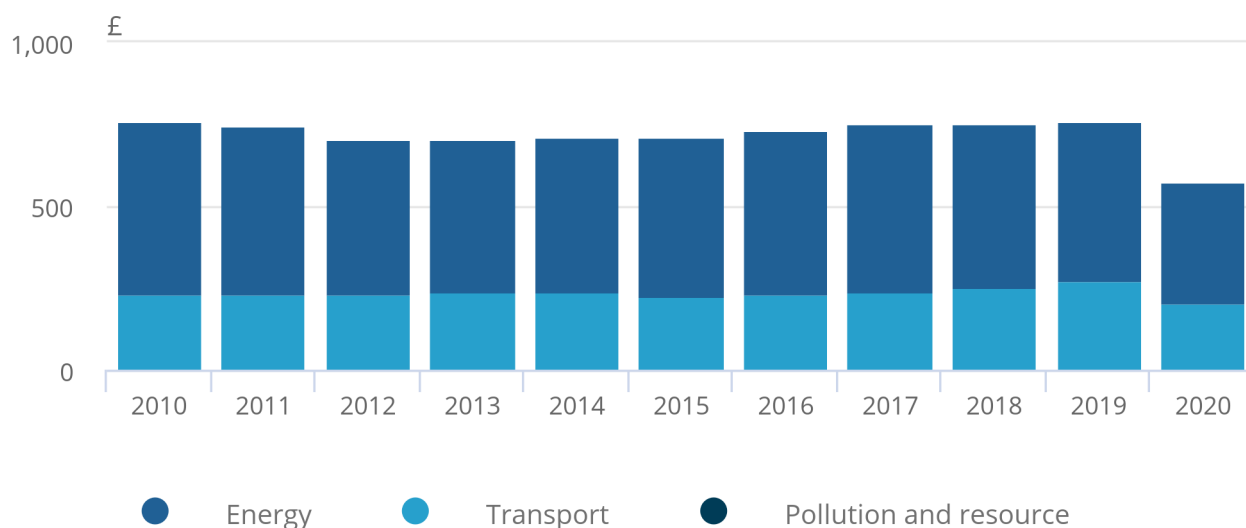
From 2019 to 2020, while the number of UK households increased by 0.3%, environmental taxes paid by them decreased by 23.9%. Energy taxes were the largest contributor to this decline (falling by £3.2 billion), though transport taxes also contributed (falling by £1.9 billion).

Figure 5: Both energy and transport taxes paid by households fell in 2020

UK, 2010 to 2020

Figure 5: Both energy and transport taxes paid by households fell in 2020

UK, 2010 to 2020



Source: Environmental taxes and the Labour Force Survey, from the Office for National Statistics

Notes:

1. Data are presented in current prices and have not been adjusted for inflation.

Electricity, gas, steam, and air conditioning supply is now the largest contributing industry to environmental tax revenue

In 2020, the largest industry proportion of environmental tax revenue was collected from Electricity, Gas, Steam and Air Conditioning Supply (17%) and Services (12%) industries.

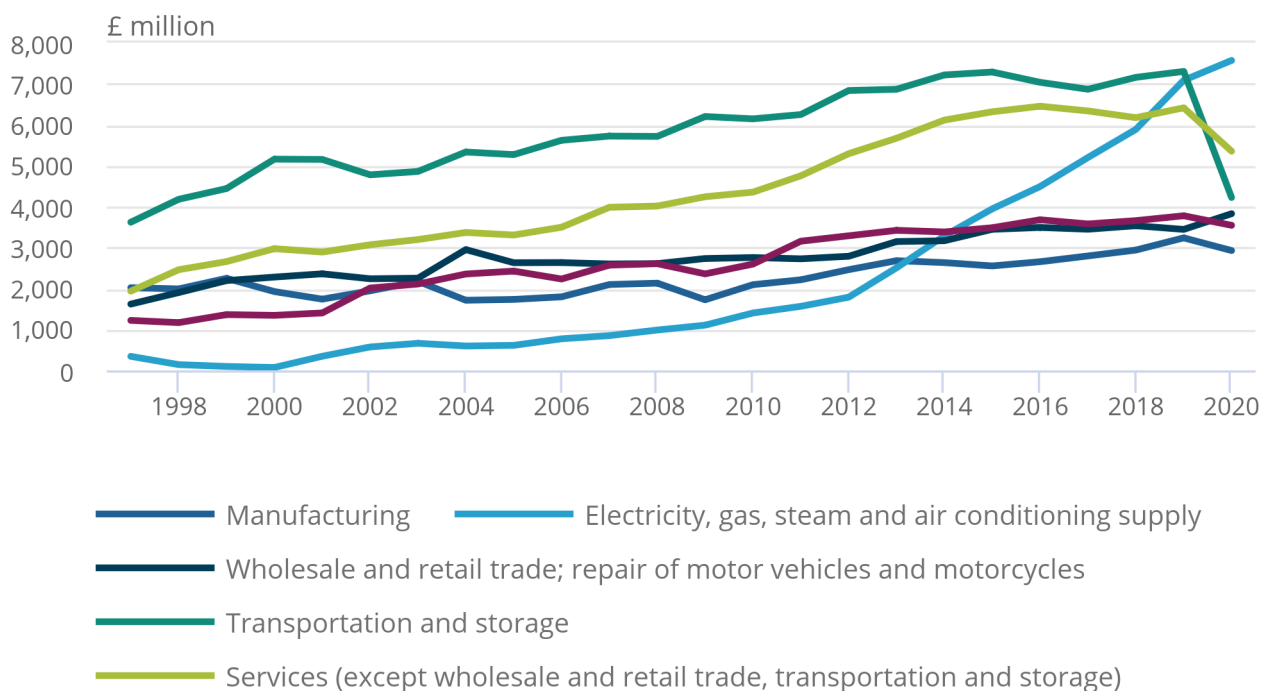
From 2012, revenue from the Electricity, Gas, Steam and Air Conditioning Supply industry increased substantially after being the lowest contributor from 1997 to 2012. This sector tends to have high energy use and, in Great Britain, domestic electricity and gas consumption increased in 2020, by 5.6% and 3.3%, respectively, according to the [Department for Business, Energy and Industrial Strategy's Subnational Electricity and Gas Consumption Statistics publication \(PDF, 9.682KB\)](#). Certain applicable tax rates to this sector, such as the Climate Change Levy, have also increased over time. In 2020, this sector passed the previous largest industry contributor, Transport and Storage, during pandemic travel restrictions.

Figure 6: Transport and Storage, and Services both fell in 2020 amid pandemic restrictions

UK, 1997 to 2020

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UK, 1997 to 2020



Source: Environmental taxes from the Office for National Statistics

Notes:

1. Data are presented in current prices and have not been adjusted for inflation.

In the UK in 2022, taxes on hydrocarbon oils (or Fuel Duty) remained the largest contributor to revenue from energy taxes (around 70%), despite the 18.5% decrease in 2020. Air Passenger Duty and Rail Franchise Premia were the taxes most affected by the pandemic across all environmental taxes.

For further analysis on the falls seen in transportation types in 2020, see our [Effects of the coronavirus \(COVID-19\) pandemic on "high-contact" industries article](#).

4 . Environmental taxes data

[Environmental taxes](#)

Dataset | Released 4 May 2023

Data on the UK revenue from environmental taxes (including energy, transport and pollution or resource taxes), 1997 to 2022 (where available).

5 . Glossary

Environmental taxes

[Environmental taxes](#) are based on a physical unit that has a proven negative impact on the environment. The tax also needs to be defined as a tax and not another type of payment in the [System of National and Regional Accounts 2008 \(PDF 9,299KB\)](#). The data are based on System of Environmental Economic Accounting guidance.

Taxes on hydrocarbon oils (or Fuel Duty)

Paid on motor and heating fuels produced, imported or used in the UK. Data are included from the start of the time series.

Climate Change Levy

This is a tax on non-domestic use of energy, introduced in April 2001. Data are therefore included for 2001 onwards, and Carbon Price Floor taxes from 1 April 2013.

Fossil fuel levy

This was effectively replaced by the Climate Change Levy. Fossil fuel levy rates have been zero since April 2002 in England and Wales, and since November 2002 in Scotland. Data are therefore included up to 2002.

Renewable Energy Obligations

Introduced in 2002 to provide incentives for the deployment of large-scale renewable electricity in the UK. Data are therefore included for 2002 onwards.

Emissions Trading Scheme (EU-ETS and UK-ETS)

EU-ETS is a multi-country, multi-sector greenhouse gas emissions trading scheme. Data are included for 2009 onwards, though from 1 January 2021 the UK Emissions Trading Scheme replaced the UK's participation in the EU-ETS.

Air Passenger Duty

A duty on the carriage from a UK airport of chargeable passengers on chargeable aircraft. The amount due is dependent on the final destination and class of travel of the chargeable passenger. This is included from 1995, the first full year of data for this particular duty.

Rail franchise premia

The process of rail franchising was first introduced by the Railways Act 1993. The first franchises came into effect in 1996 and data are included from this year.

Plastic Packaging Tax

Introduced in 2022, this tax is intended to encourage the use of recycled plastic. It applies to the manufacture or import of plastic packaging components or packaged goods that does not contain at least 30% recycled plastic.

6 . Measuring the data

Quality

Most taxes in the UK are collected by HM Revenue and Customs (HMRC). HMRC provide monthly data to the Office for National Statistics (ONS), detailing each individual tax collected and the amount of revenue associated with that tax. The ONS then uses supply and use data (and several other sources) to apportion tax revenue to different industries. More information is available in our [Environmental accounts on environmental taxes QMI](#).

Data are subject to revisions, more information is available in our [Revisions policies](#).

7 . Strengths and limitations

Our data are compatible with the boundaries and definitions used in the national accounts.

Levels of environmental tax revenues do not necessarily indicate the relative importance or the success of environmental policy. High environmental tax revenues can result either from high rates of taxes or from high levels of environmental problems, for example pollution, leading to a large tax base. The broad measure of revenues can also fail to capture the effect of variable rates that encourage a shift away from higher-impact behaviour, such as the use of leaded petrol.

To provide a complete picture of the UK's environmental accounts, taxes and subsidies would be provided together. While our accounts do not provide data on subsidies, we are exploring data and methodologies on this area.

Industry and household level data utilise a combination of our national accounts data at varying degrees of timeliness. Because of this, data at the industry and household level are only available on a year-three basis (up to 2020).

More information is available in our [Environmental accounts on environmental taxes QMI](#).

8 . Related links

[UK Environmental Accounts: 2022](#)

Bulletin | 9 June 2022

Measuring the contribution of the environment to the economy, impact of economic activity on the environment, and response to environmental issues.

[Environmental protection expenditure, UK: 2020](#)

Bulletin | 8 June 2022

Estimates of environmental protection expenditure by UK industries for 2015 to 2020, based on the environmental protection expenditure survey, and estimates of the environmental protection expenditure accounts for 2010 to 2019.

[UK environmental goods and services sector \(EGSS\): 2019](#)

Bulletin | 21 March 2022

Estimates of output, gross value added, employment and exports for the UK environmental goods and services sector (EGSS).

9 . Cite this statistical bulletin

Office for National Statistics (ONS), released 4 May 2023, [ONS website, statistical bulletin, UK environmental taxes: 2022](#)