

Statistical bulletin

# UK environmental taxes: 2023

The value and composition of UK environmental taxes from 1997 to 2023, by type of tax and economic activity, and comparisons with other European countries.



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# 1 . Main points

- Environmental taxes, using an internationally agreed definition, raised £52.5 billion in the UK in 2023, up 4.9% from £50.1 billion in 2022.
- Revenue from energy taxes accounted for 75.0% of all UK environmental tax revenue in 2023, followed by transport (22.5%) and pollution and resource (2.4%) taxes.
- Fuel Duty accounted for 63.2% of UK energy taxes in 2023, while the UK Emissions Trading Scheme and Renewable Energy Obligations together accounted for 33.5% of taxes in this category.
- Total pollution and resources taxes have fallen since 2022, caused by a fall in revenue from Landfill Tax and the Aggregates Levy, but Plastics Packaging Tax revenue increased, raising £279 million in 2023.
- UK environmental tax revenue as a proportion of both gross domestic product (GDP) and total taxes and social contributions have remained relatively stable in recent years, following a decline from levels seen from 2009 to 2019.
- On average, environmental taxes increased from £575 for each UK household in 2020 to £623 in 2021.
- The electricity, gas, steam and air conditioning supply sector remains the largest industry contributor to environmental tax revenues (25.5%), despite this contribution falling in 2021 compared with 2020.

The most recent data for different measures in this release vary because of source data availability. Total environmental tax revenue by tax type is most timely, available to 2023, while international comparisons are available to 2022 and sector breakdowns to 2021.

## 2 . Total environmental tax revenue

Following international definitions (section 4.4.3 of the United Nations's (UN) [System of Environmental-Economic Accounting Central Framework \(PDF, 2.6MB\)](#)), 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.

While other initiatives may promote environmentally positive behaviour, they may not currently be considered an environmental tax under this definition. For example, clean air zone charges and charges on single-use plastic bags by retailers are not currently classified as taxes. Environmental taxes yet to be classified for economic statistics purposes may be reviewed as part of our [economic statistics classification forward work plan](#).

Environmental taxes are grouped into three main tax categories: energy, transport, and pollution and resource taxes.

Data throughout this release are presented in current prices and have not been adjusted for inflation. More information on our environmental taxes measures can be found in our [Environmental accounts on environmental taxes Quality and Methodology Information \(QMI\) report](#).

## UK environmental tax revenue continued to increase in 2023

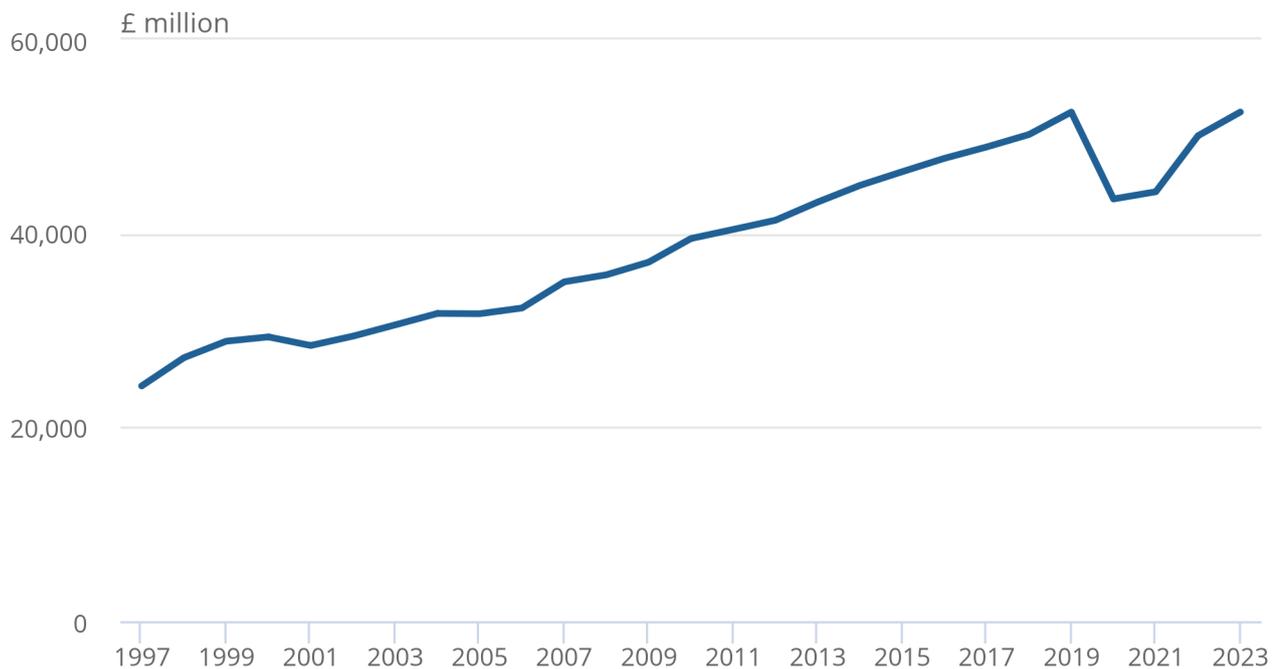
In 2023, UK environmental tax revenue was £52.5 billion, a 4.9% increase from 2022 and is now back in line with the pre-coronavirus (COVID-19) pandemic peak in 2019 (also £52.5 billion).

**Figure 1: Environmental tax revenue fell in 2020 but has increased since 2021, returning to pre-coronavirus (COVID-19) pandemic levels**

UK, 1997 to 2023

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UK, 1997 to 2023



**Source: Office for National Statistics**

We see increases between pandemic-affected 2020 and 2023 for all three tax categories.

The largest contributor to this increase was the UK Emissions Trading Scheme, which [replaced the EU Emissions Trading Scheme in 2021](#). This scheme contributed £5.8 billion of environmental tax revenue in 2023, equivalent to 64.7% of the total net revenue increase since 2020.

Following the easing of pandemic restrictions, Fuel Duty and Air Passenger Duty together contributed £5.1 billion to the total environmental tax revenue increase from 2020 to 2023. This is the equivalent of 56.9% of the net revenue increase.

Total net revenue includes negative contributions, such as the Contracts for Difference scheme in 2023, so percentage contributions may not sum to 100%. Contracts for Difference is classified as an environmental tax and aims to support low carbon electricity generation. For more information, see [Contracts for Difference on GOV.UK](#).

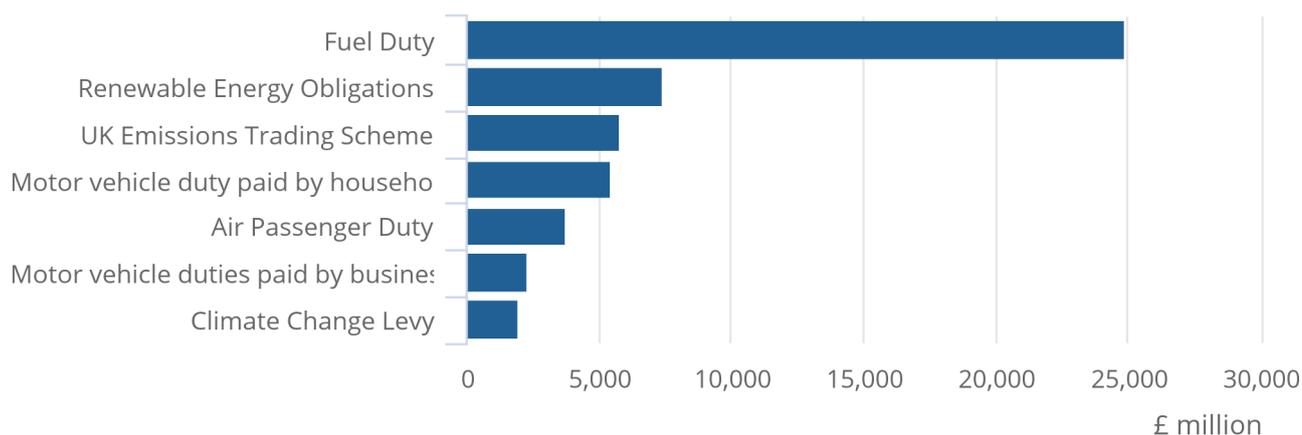
Fuel Duty remains the largest contributor to UK energy taxes, at 63.2% in 2023, with the UK Emissions Trading Scheme and Renewable Energy Obligations together contributing 33.5% in 2023. Combined, these three amounted to 96.7% of energy tax revenue and 72.6% all environmental tax revenue in 2023.

**Figure 2: Fuel Duty provided the most revenue among environmental taxes in 2023**

Contributors to environmental tax revenue by tax type, UK, 2023

Figure 2: Fuel Duty provided the most revenue among environmental taxes in 2023

Contributors to environmental tax revenue by tax type, UK, 2023



Source: Office for National Statistics

Notes:

1. The remaining contributors include some taxes with negative contributions, such as the Contracts for Difference scheme.

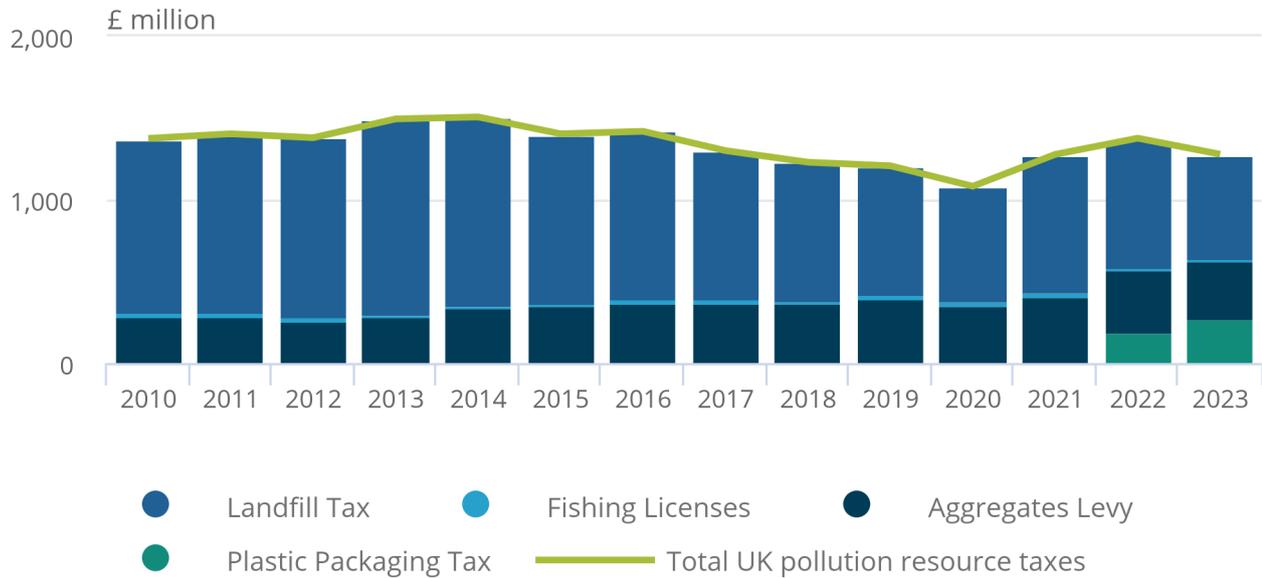
Although environmental tax revenue from the Plastics Packaging Tax increased in 2023, to £279 million, pollution and resources taxes overall decreased from a peak of £1.5 billion in 2014 to below £1.3 billion in 2023, caused by a fall in Landfill Tax and Aggregates Levy revenues.

### Figure 3: Pollution and resources tax revenue fell in 2023, despite increased Plastic Packaging Tax revenue

Pollution and resources tax revenue, UK, 2010 to 2023

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Pollution and resources tax revenue, UK, 2010 to 2023



Source: Office for National Statistics

## **UK environmental tax revenue as a percentage of GDP is lower compared with the EU average**

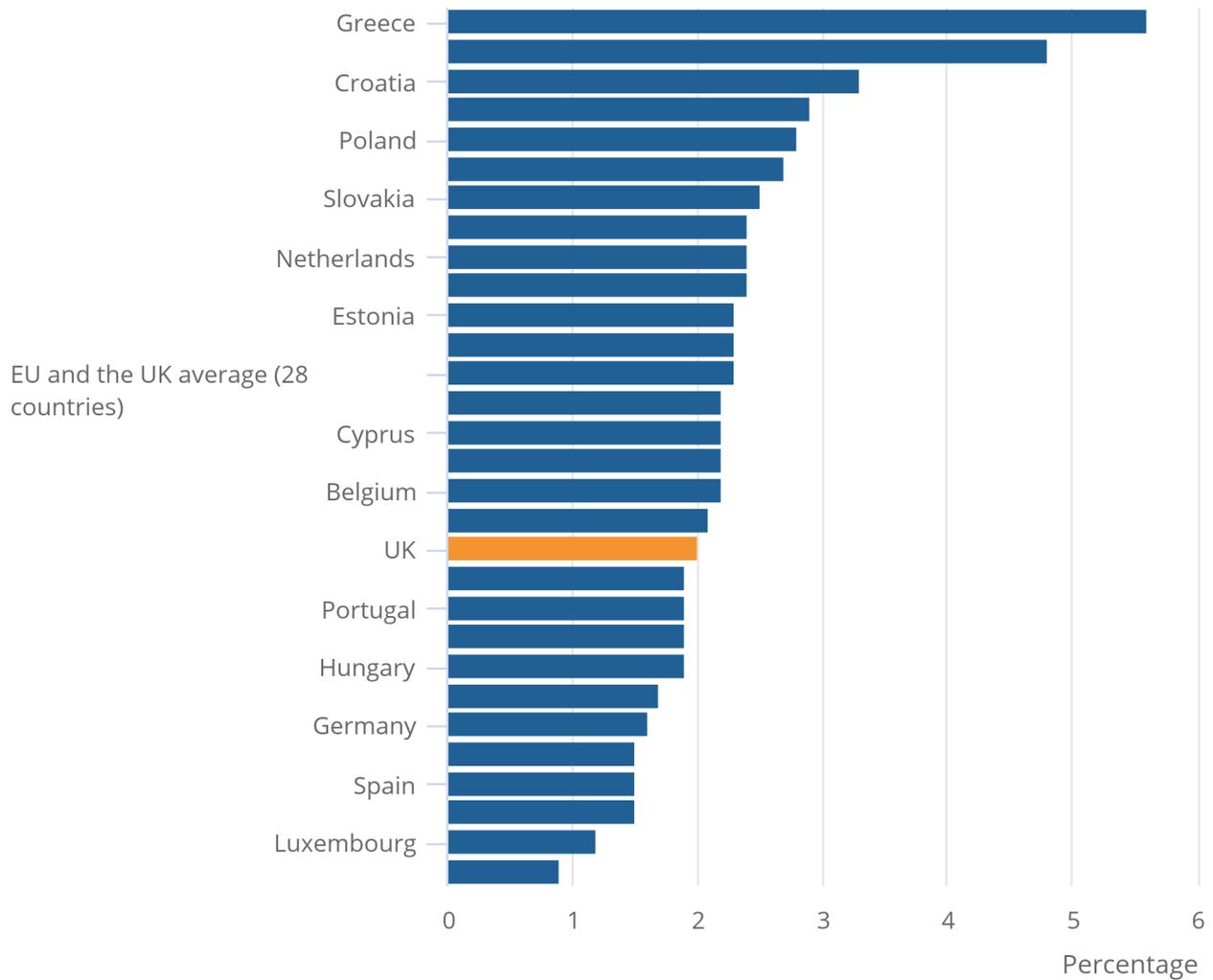
UK environmental taxes as a proportion of both gross domestic product (GDP) and total taxes and social contributions has historically been below the EU countries' average. In 2022, these proportions were 2.0% and 5.5% respectively, compared with averages for EU countries of 2.3% and 6.4%, respectively. UK proportions on both bases have remained relatively stable in recent years, following a decline from 2009 to 2019 levels, where environmental tax revenue as a proportion of GDP averaged 2.4% and as a proportion of total taxes and social contributions averaged 7.3%. This decline has been observed across EU countries in this time too, where from 2009 to 2019 the average proportions were 2.7% and 7.6%, respectively.

**Figure 4: UK environmental tax revenue as a percentage of GDP is lower than for most EU countries**

UK and EU-27, 2022

Figure 4: UK environmental tax revenue as a percentage of GDP is lower than for most EU countries

UK and EU-27, 2022



Source: Office for National Statistics and Eurostat

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

### 3 . Environmental tax revenue by sector

## Household contributions to environmental tax revenue increased in 2021 from 2020

Environmental tax revenue from households made up 39.5% of all environmental tax revenue in 2021. Although this was an increase from 36.8% in 2020, this proportion has gradually declined since 1997, when households contributed 55.3% of the total.

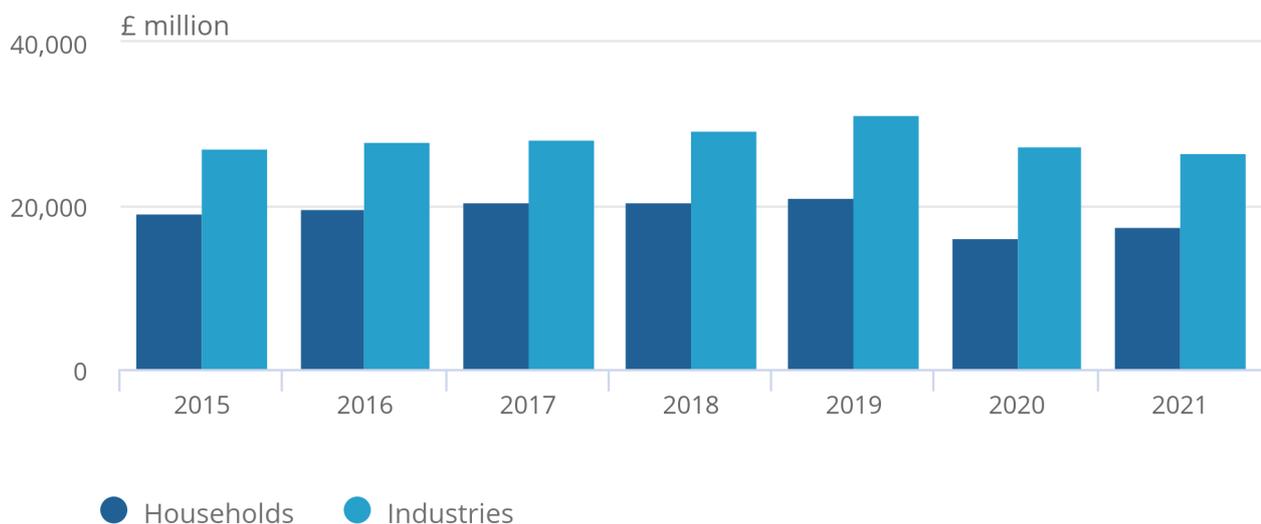
After a sharp 24.1% decrease in environmental tax revenue from households in 2020, during coronavirus (COVID-19) pandemic restrictions, this increased by 9.2% to £17.5 billion in 2021, while the number of UK households increased by 0.8%. Households' energy taxes were the largest contributor to this revenue rise, increasing by £1.4 billion.

**Figure 5: Households' contributions increased and industries' contributions fell in 2021 after reaching recent highs in 2019**

UK, 2015 to 2021

Figure 5: Households' contributions increased and industries' contributions fell in 2021 after reaching recent highs in 2019

UK, 2015 to 2021



Source: Office for National Statistics

Average environmental taxes paid by households in the UK increased from £575 each in 2020 to £623 each in 2021, but remains lower than all years since 2006, where average environmental taxes paid by households was £617.

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

In 2021, by industry, the largest proportion of environmental tax revenue was collected from electricity, gas, steam and air conditioning supply (15.4% of all environmental tax revenue) and services (11.5%) industries.

Environmental tax revenue for the electricity, gas, steam and air conditioning supply industry fell by £640 million in 2021 compared with 2020. Our [Low carbon and renewable energy economy estimates dataset](#) estimated a £2.0 billion increase in turnover in this industry in 2021, while revenue from Contracts for Difference decreased 63.6% in this year.

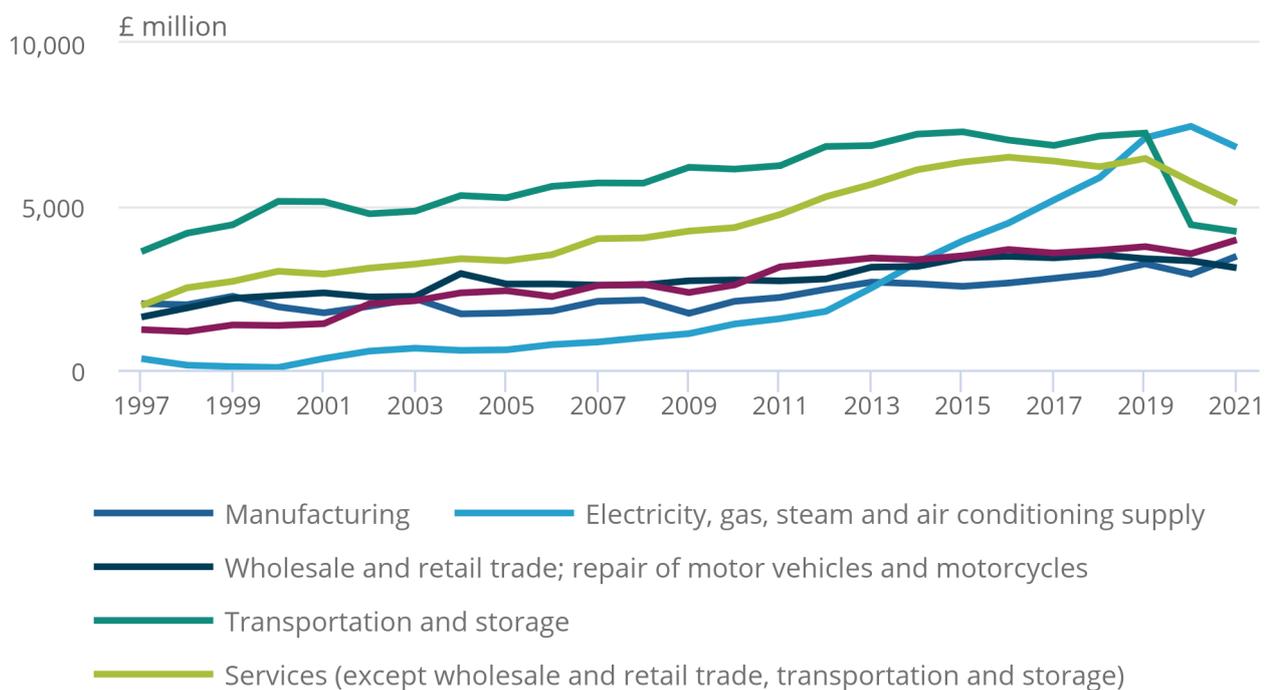
Environmental tax revenue for the transportation and storage industry saw a further decrease in 2021 compared with 2020 of £205 million, with pandemic restrictions remaining in place in that year. Decreases in environmental tax revenue occurred across services industries.

**Figure 6: Environmental tax revenue by industry movements varied in 2021 amid further coronavirus (COVID-19) pandemic restrictions**

UK, 1997 to 2021

Figure 6: Environmental tax revenue by industry movements varied in 2021 amid further coronavirus (COVID-19) pandemic restrictions

UK, 1997 to 2021



Source: Office for National Statistics

## 4 . Environmental taxes data

### [Environmental taxes](#)

Dataset | Released 4 May 2024

Data on the UK revenue from environmental taxes (including energy, transport and pollution or resource taxes), 1997 to 2023 (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 \(SNA 2008\) \(PDF, 9.1MB\)](#). 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.

### Renewables 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.

### Contracts for Difference

The Contracts for Difference scheme was introduced in 2014 and was previously included within the renewables energy obligation data. The scheme's aim is to incentivise investment in renewable energy generation.

### Emissions Trading Scheme

The Emissions Trading Scheme (EU-ETS) is a multi-country, multi-sector greenhouse gas emissions trading scheme. Data are included for 2009 onwards, through from 1 January 2021 when the UK Emissions Trading Scheme (UK-ETS) 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. Data are included from 1995, the first full year of data for this particular duty.

### Landfill Tax

Landfill Tax applies to any and all waste disposed of through landfill, unless the waste is specifically exempt. There are two charge bands.

### Plastic Packaging Tax

Introduced in 2022, this tax is intended to encourage 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 us, at the Office for National Statistics (ONS), detailing each individual tax collected and the amount of revenue associated with that tax. We then use 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 Quality and Methodology Information \(QMI\) report](#).

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, such as 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 utilises a combination of our National Accounts data at varying degrees of timeliness. Because of this, data at the industry and household level is only available on a year three basis (up to 2021).

More information is available in our [Environmental accounts on environmental taxes Quality and Methodology Information \(QMI\) report](#).

## 8 . Related links

### [UK Environmental Accounts: 2023](#)

Bulletin | Released 5 June 2023

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

### [Environmental protection expenditure: accounts](#)

Dataset | Released 5 June 2023

Estimates for the UK's environmental protection expenditure, output and use by general government, businesses, and households. Data for 2010 (and from 2006 in some cases) to 2020.

### [UK environmental goods and services sector \(EGSS\): 2023](#)

Dataset | Released 5 June 2023

First estimates of the UK environmental goods and services sector (EGSS) for 2020 and revised estimates for 2010 to 2019. Included are estimates of output, gross value added, employment and exports.

## 9 . Cite this statistical bulletin

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