

Green taxes: Combating climate crisis

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With the climate crisis intensifying, finding effective solutions is more crucial than ever. Environmental taxes have emerged as powerful tools to combat this global challenge. These taxes, levied on activities and products that contribute to pollution and greenhouse gas (“GHG”) emissions, aim to incentivize greener practices and reduce the ecological footprint of businesses and individuals. With the American withdrawal from the Paris Agreement under Trump’s administration, there are various environmental regulations being reduced at a time when it is most needed. This article delves into the significance of environmental taxes, exploring their history, effectiveness, and potential to drive the transition toward a sustainable future. By examining key examples and empirical evidence, we will uncover how these fiscal measures can play a part in shaping a cleaner, healthier planet for future generations.

The beginning of green taxes

Environmental taxes are designed to curb activities and products that harm our planet. These taxes aim to penalise undesirable practices and incentivize businesses and individuals to adopt more environmentally friendly practices by making it more costly to engage in activities that contribute to pollution and GHG emissions.

In 1920, A. C. Pigou suggested using taxation to battle the Great Smog of London, becoming the UK’s first environmental tax. It was stated that to be most efficient, the tax level must be the difference between the “private marginal benefit of the polluter and the social marginal benefit at the optimum”¹. Since the 1990’s, OECD countries have begun to carry out green tax reform, which stemmed from the United Nations Framework Convention on Climate Change (“UNFCCC”) conference in Stockholm with the developed “polluters pay” principle², requiring polluters to bear the cost of discharging pollutants³. Economists have been promoting environmental taxes as a key environmental policy instrument since 1990 with Poland and Finland being the first to implement⁴. In 1993, the UK Government committed, as part of its CO₂ reduction programme, to increase road fuel duties, which was the start of modern environmental taxes in the UK.

Following international definitions, environmental taxes are those whose base is a physical unit, that has proven negative impact on the environment⁵. Examples of environmental taxes include the climate change levy, levy on industrial electricity, gas, fuels, carbon price floor tax on fossil fuel use, landfill tax for waste, aggregate levy for any sand, gravel, rock, plastic packaging tax and carbon credits. Incentives include capital allowances for low carbon tech and zero-rating for VAT for energy saving materials. Other initiatives may promote environmental benefits, but may not be classed as environmental tax – such as clean air zones, charges on single use plastic bags, etc. The environmental taxes have shown significant growth so far.

1 Adarsh Varma, ‘UK’s Climate Change Levy: Cost Effectiveness, Competitiveness and Environmental Impacts’ (2003) 31(1) Energy Policy 51.

2 Centre for Climate Engagement, ‘Tax Law and Climate Change’ (Climate Hughes, 2025) <https://climatehughes.org/law-and-climate-atlas/tax-law-and-climate-change/> accessed 10 February 2025.

3 Ibid.

4 Angela Köppl and Margit Schratzenstaller, ‘Carbon Taxation: A Review of the Empirical Literature’ (2022) 37(4) Journal of Economic Surveys 1059-1525.

5 Office for National Statistics, ‘UK Environmental Taxes: 2023’ (7 May 2024)

<https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/ukenvironmentaltaxes/2023> accessed 10 February 2025.

From 2002 to 2019, revenues increased by 18%. In 2023, the UK's environmental taxes raised GBP52.5 billion, a 4.9% increase from the previous year⁶. Energy taxes (the transfer of money to government due to consumption or production of energy), were the largest contributor, accounting for 75% of all UK environmental tax revenue in 2023⁷, followed by transport, pollution and resource taxes. Fuel duty accounted for 63% of the UK energy taxes in 2023 at just over GBP25 billion.

While revenue from pollution and resource taxes has fallen since 2022, due to decreases in landfill tax and aggregates tax, the plastic packaging tax has seen a notable rise, generating GBP279 million in 2023⁸. On a global scale, as of May 2022, 46 jurisdictions have introduced carbon pricing schemes, which cover 23% of the greenhouse gas emission worldwide⁹.

These statistics underscore the effectiveness of environmental taxes in raising revenue and promoting greener practices. The statistics also show the variation of effectiveness depending on which green tax is being evaluated. With so many environmental concerns – biodiversity loss, climate change, plastic pollution, mineral depletion and more, each tax has aimed to focus on one matter, as we will discuss below.

Environmental taxes

Since 2021, there are still only four specifically designed environmental taxes: landfill tax, CCL, aggregates levy and renewable obligations¹⁰. There are implicit environmental taxes, such as fuel duty, VAT on fuels, air passenger duty etc.¹¹. The CCL and AL were introduced in 2001 and 2022, whilst the UK was setting up the Emissions Trading System (“ETS”)¹². This targets energy suppliers and the most energy-intensive companies, who are subject to carbon emission caps¹³.

Climate Change Levy (“CCL”)

The 1997 Kyoto Summit on Climate Change led to a groundbreaking agreement to cut GHG emissions by 20% from 1990 levels by 2020¹⁴ which was successfully completed¹⁵. The result of this agreement was CCL which can be found in the Finance Act 2000, Chapter 17, section 30 and Schedule 6.

6 Ibid.

7 Ibid.

8 Ibid.

9 Köppl and Schratzenstaller (n 4)

10 Paul Bridgen and Milena Büchs, *The Climate Crisis and Taxation* in Andy Lymer, Margaret May, and Adrian Sinfield (eds), *Taxation and Social Policy* (Bristol University Press 2023) 238-266.

11 Ibid.

12 Ibid.

13 Ibid.

14 Rees Matthew, *The Climate Change Levy: Budgeting for Bad Weather* (Allen & Overy, Practical Law UK Articles 9-101-1507).

15 European Environment Agency, *Total Net Greenhouse Gas Emission Trends and Projections in Europe* (31 October 2024) <https://www.eea.europa.eu/en/analysis/indicators/total-greenhouse-gas-emission-trends> accessed 10 February 2025.

16 Bridgen and Büchs (n 10)

17 Practical Law Environment, *Climate Change Levy (CCL), Climate Change Agreements (CCAs) and Carbon Price Floor (CPF)* (Practical Law, 2025) [https://uk.practicallaw.thomsonreuters.com/Document/I2cc9bcc0e67f11e398db8b09b4f043e0/View/FullText.html?transitionType=SearchItem&contextData=\(sc.Search\)](https://uk.practicallaw.thomsonreuters.com/Document/I2cc9bcc0e67f11e398db8b09b4f043e0/View/FullText.html?transitionType=SearchItem&contextData=(sc.Search)) accessed 10 February 2025.

18 Ibid.

19 HM Revenue & Customs, *Climate Change Levy* (GOV.UK, 2025) <https://www.gov.uk/green-taxes-and-reliefs/climate-change-levy> accessed 10 February 2025.

20 Ralf Martin, Laure B de Preux and Ulrich J Wagner, *The Impacts of the Climate Change Levy on Business: Evidence from Microdata* (20 August 2009) Centre for Climate Change Economics and Policy Working Paper No 7, Grantham Research Institute on Climate Change and the Environment Working Paper No 6.

21 Practical Law Environment (n 17)

22 Future Connect Training and Recruitment, *Understanding Climate Change Levy (CCL) in the UK: A Comprehensive Guide* (Future Connect, 2025) <https://www.fctraining.org/taxhub/understanding-climate-change-levy-ccl-in-the-uk.php> accessed 10 February 2025.

The CCL is a tax on energy delivered to non-domestic users in the UK. It is seen as less of a tax on carbon, and more of a price-based incentive for energy efficiency¹⁶ to reduce GHG emissions. It is levied on non-domestic consumers of certain energy supplies for fuel purposes¹⁷, applying to electricity, gas, and solid fuels, with exemptions for renewable energy and certain combined heat and power schemes. The CCL adds approximately 15% to the energy bill of UK businesses¹⁸, applying to industrial, commercial, agricultural or public services businesses¹⁹ – making it arguably the most crucial climate change tax imposed on the business sector²⁰.

The rates of CCL from 6 April 2026 will be GBP0.00801 per kilowatt hour for electricity and gas. This is a GBP0.00026 increase from 2025, which hasn't changed since 2022. In the Autumn Budget 2024, it was announced that the main CCL rates for gas, electricity and solid fuel will be increased in line with the retail price index, but the main rate for liquefied petroleum gas will remain frozen²¹.

CCL funds are not just carried into government funding. The revenue generated from the tax is used to fund initiatives that promote energy efficiency and reduce carbon emissions²². The CCL alone is expected to save around 2 million tonnes of carbon annually, with studies showing that the CCL has been effective in reducing energy consumption without significantly impacting economic performance.

For fear of adverse effects, a Climate Change Agreement (“CCA”) scheme was set up for negotiated agreements, wherein businesses could reduce their tax liability drastically if they adopt a binding target on their energy usage. Once the businesses held “reduce-rate” certificates and an umbrella agreement, they entered into an underlying agreement with DEFRA, for a tax discount. Due to the mass discounts that were issued after the CCA was introduced, the comparison of carbon emissions was not as large as first thought – therefore reducing CCL's impact.

The CCL and CCA have clearly the same objectives but take completely different paths. The CCL aims to increase the price to entice businesses to opt into the carbon efficient energy. In contrast the CCA holds targets and regulation, which relies on the promise of targets to reduce carbon intensive emissions. However, there is evidence that CCA participation had a strong positive impact on the growth in energy intensity and energy expenditures in terms of the analysis

of fuel choices at the plant level. The article concluded that if CCA had been implemented at a full rate for all businesses, further cuts in energy use could have achieved substantial decrease of emissions whilst maintaining their economic performance.

Introduced in the UK in 2013, the Carbon Price Floor (“CPF”) is a policy that imposes a tax on fossil fuels used in electricity generation^{23 24}. It encourages the generation of low carbon electricity by increasing the price paid for emitting CO₂²⁵. It aims to provide an incentive for investment in low-carbon power generation. Since its implementation, the CPF has contributed to a significant reduction in coal-fired electricity generation, encouraging a transition to cleaner energy sources.

Additionally, the Carbon Price Floor has led to substantial declines in coal electricity generation, highlighting its role in the UK’s transition to a low-carbon economy²⁶.

Landfill Tax (“LFT”)

The Landfill Tax (LFT) targets waste disposal at landfill sites, aiming to discourage landfill use and boost recycling and waste reduction efforts. The tax is charged by weight, with higher rates for non-inert waste^{27 28}. This tax has been effective in reducing landfill use and promoting alternative waste management practices.

In 2021, the government launched a call for evidence on the effectiveness of the LFT²⁹. One of the survey questions asked the public how the current LFT criteria align with the government’s evolving environmental goals to which the respondents suggested the structure could be reformed to better align but highlight the change of the rates may increase waste crime rates.

Environmental groups argued within this survey that construction and demolition waste, slags and incinerator ash should not be lowered, as they could be pushed up the waste hierarchy. Including them in standard rate could incentivise more sustainable building practices. The current lower rate is acting as a barrier to managing materials more sustainably³⁰.

In response to this evidence, DEFRA published the new environmental improvement plan to minimise waste, as well as the government introducing new legally binding targets aiming to reduce waste by 2042. Due to the large gap between the lower and standard rate of landfill, respondents urged a reform to reduce misclassification of waste³¹.

Aggregates Levy (“AGL”)

The AGL is a tax on the commercial exploitation of rock, sand, and gravel³². It aims to reduce the extraction of virgin aggregates and encourage the use of recycled materials³³. While its impact on the overall market for construction aggregates has been debated, it has led to some replacement of primary aggregates with recycled alternatives.

Currently, the tax rate of AGL is GBP2.03 per tonne of sand/gravel/rock. Producers of recycled aggregate argue that the levy is important in incentivising the use of these alternatives to virgin aggregate³⁴. The Mineral Production Association felt that the levy has had little to no impact on the overall market for construction aggregates, although they expressed the view that it has led to some replacement of primary aggregates by untaxed alternatives – such as the by-product from clay extraction. It is unclear if this has been a net environmental benefit³⁵.

Plastic Packaging Tax (“PPT”)

The PPT targets plastic packaging with less than 30% recycled content, so aiming to drive down virgin plastic use and promote recycling³⁶. The introduction of this tax has led to a significant reduction in the use of single-use plastic bags, demonstrating its effectiveness in changing consumer behaviour³⁷.

The charge to PPT arises when a chargeable plastic component is produced in the UK by a person acting in the course of business or imported into the UK. Currently the manufacturer must pay GBP217.75 per tonne of finished plastic packaging components that contain less than 30% recycled plastics³⁸.

23 David Hirst and Matthew Keep, ‘Carbon Price Floor (CPF) and the Price Support Mechanism’ (House of Commons Library, 8 January 2018) <https://commonslibrary.parliament.uk/research-briefings/sn05927/> accessed 10 February 2025.

24 HM Revenue & Customs, ‘Carbon Price Floor’ (2013) https://assets.publishing.service.gov.uk/media/5a7ab68fed915d670dd7e120/carbon_price_floor.pdf.pdf accessed 10 February 2025.

25 Practical Law Environment (n 17)

26 Hirst and Keep (n 23)

27 Non-inert waste is waste that is capable of some form of reaction, while not being dangerous itself.

28 HM Revenue & Customs, ‘Excise Notice LFT1: A General Guide to Landfill Tax’ (1 November 2024) <https://www.gov.uk/government/publications/excise-notice-lft1-a-general-guide-to-landfill-tax/f933d9c2-3fe1-4692-ad52-ab1af926e36e> accessed 10 February 2025.

29 HM Revenue & Customs, ‘Landfill Tax Review: Summary of Responses to the Call for Evidence on Aspects of Landfill Tax’ (23 March 2023) https://assets.publishing.service.gov.uk/media/6410a02ee90e076cc76a8e58/FINAL_-_FORMATTED_LfTR_SOR.pdf accessed 10 February 2025.

30 Ibis.

31 Ibis.

32 HM Revenue & Customs, ‘Aggregates Levy’ (GOV.UK, 2025) <https://www.gov.uk/green-taxes-and-reliefs/aggregates-levy> accessed 10 February 2025.

33 HM Treasury, ‘Review of the Aggregates Levy: Summary of Responses to the Discussion Paper and Government Next Steps’ (July 2020) https://assets.publishing.service.gov.uk/media/5f15db5f3a6f405c00b44567/2020.07.20_Review_of_the_Aggregates_Levy_summary_of_responses_to_the_discussion_paper_and_government_next_steps.pdf accessed 10 February 2025.

34 Ibis.

35 Ibis.

36 HM Revenue & Customs, ‘Plastic Packaging Tax’ (GOV.UK, 2025) <https://www.gov.uk/green-taxes-and-reliefs/plastic-packaging-tax> accessed 10 February 2025.

37 Rizwana Yasmeen, Xuhui Zhang, Rui Tao, and Wasi Ul Hassan Shah, ‘The impact of green technology, environmental tax and natural resources on energy efficiency and productivity: Perspective of OECD Rule of Law’ (2023) 9 Energy Reports 1308

38 HM Revenue & Customs (n 36)

Since 2015, the use of single use supermarket plastic bags has fallen by 98%³⁹ and environmental groups urge the government to follow the success of this tax. In 2014 the annual distribution of plastic carrier bags by 7 of the leading grocery chains was 7.6 billion, and it was down to 133 million in 2023⁴⁰.

The government confirmed in the 2020 PPT consultation that the aim of the tax is to provide a clear economic incentive for businesses to use recycled materials in the production of plastic packaging⁴¹. When asked if they agree with the proposed guidance to help businesses determine their rate, the majority disagreed, on the basis that it undermines these objectives⁴².

Carbon credits

A carbon credit represents the reduction, removal or prevented release of GHG by natural or technological processes, measured in tonnes of carbon dioxide equivalent (tCO₂e)⁴³. There are three main outcomes for carbon credits: avoided emissions (preventing deforestation and forest degradation); reduced emissions (restoring peatlands); and removal and storage of CO₂ (direct air capture or restoring forests). Businesses and individuals can purchase credits on the voluntary carbon market, and may use them to offset their own emissions⁴⁴.

There are three types of carbon markets that trade carbon credits. The first are regulated compliance markets, such as the EU or UK emissions trading schemes. This is where credits can be claimed by businesses, regions or countries as “offsets”, and can count towards Nationally Determined Contributions and national net zero targets. The second market is the unregulated voluntary carbon market, where individuals or companies claim the credits towards their voluntary climate commitments. And finally, the proposed Article 6 framework under the Paris Agreement, which enables countries to contribute to other countries NDCs.

Within the mandatory schemes a carbon budget limit is set, limiting total amount of GHG that can be emitted by companies covered by the scheme⁴⁵. The cap is reduced over time, so that the total permitted emissions fall.

Within the cap, companies buy or receive emissions permits, which they can trade with one another as needed⁴⁶.

At the end of each year, companies must surrender enough allowances to fully cover their emissions. The EU ETS is the largest mandatory scheme, covering over 1/3rd of EU’s GHG emissions⁴⁷.

There is a proposed corporate sustainability reporting directive, which will expand reporting requirements to 50,000 firms from 2024⁴⁸, as well as a “Fit for 55” initiative, where the EU set out a list of changes to the ETS, aiming to drive a reduction of 61% in overall emissions by 2030.

Due to the United Kingdom’s departure from the EU, the UK ETS implemented the Directive into UK regulations. Within UK, we have the GHG trading scheme regulations. The department for business, energy and industrial strategy is the lead government department for setting UK’s policy in relation to EU ETS⁴⁹. Through a governmental evaluation, the ETS regulations are influencing emissions abatement. Reported emissions in 2022 were 111 million tCO₂e, with 12 entities accounting for 50% of the total emissions⁵⁰. Through the consultation, operators were asked if the UK ETS was influencing abatement of GHG emissions. The majority of the operators (90%) reported having a plan to reduce carbon emissions. 44% stated that the UK ETS influenced their awareness of carbon reduction opportunities. The most common barrier to abatement was the uncertainty around future carbon reduction technologies with 31%⁵¹.

There are however some worries about carbon credits. Baseline-and-credit mechanisms are largely voluntary and have typically grown organically to meet the demand from organisations which seek to manage their carbon footprint⁵². These schemes allow the purchase or sale of “carbon credits”, which represent a standardised unit of carbon, being either removed or not produced at all⁵³.

39 Damien Gayle, ‘Supermarket Plastic Bag Charge Has Led to 98% Drop in Use in England, Data Shows’ (The Guardian, 31 July 2023) <https://www.theguardian.com/environment/2023/jul/31/government-urged-to-repeat-success-of-plastic-bag-charge> accessed 10 February 2025.

40 Ibis.

41 HM Treasury, ‘Plastic Packaging Tax: Summary of Responses to the Consultation on Policy Design’ (November 2020) https://assets.publishing.service.gov.uk/media/5fabf8778fa8f56d9e36081a/Plastic_packaging_tax_-_summary_of_responses_to_the_consultation_on_policy_design.pdf accessed 10 February 2025.

42 Ibis.

43 Helen Hooker and Jonathan Wentworth, ‘Carbon Offsetting’ (POSTnote 713, Parliamentary Office of Science and Technology, 24 January 2024) <https://researchbriefings.files.parliament.uk/documents/POST-PN-0713/POST-PN-0713.pdf> accessed 10 February 2025.

44 Ibis.

45 KPMG, ‘Regulating Carbon Markets’ (KPMG, 2025) <https://kpmg.com/xx/en/our-insights/regulatory-insights/regulating-carbon-markets.html> accessed 10 February 2025

46 Ibis.

47 Ibis.

48 Ibis.

49 The Greenhouse Gas Emissions Trading Scheme Regulations 2012, SI 2012/3038

50 CAG Consultants, Winning Moves and University College London, ‘Evaluation of the UK Emissions Trading Scheme Phase 1 Report’ (2023) <https://assets.publishing.service.gov.uk/media/657c4d9595bf65001071908c/evaluation-of-uk-ets-phase-1-report.pdf> accessed 10 February 2025

51 Ibis.

52 KPMG (n 45)

53 KPMG (n 45)

Do environmental taxes work to reduce emissions?

Through empirical studies, carbon taxes are shown to effectively reduce carbon emissions, whilst not negatively affecting economic growth^{54 55}. The main concern with viewing empirical evidence to ascertain if the taxes are reducing CO₂, is the fact that a lot of other prevention techniques and increased awareness started at the same time the taxes were introduced. This therefore suggests that a variety of environmentally conscious efforts have been reducing carbon emissions, and the taxes could have no influence at all. This article will proceed to show why that assumption is wrong.

Within the countries that first implemented environmental taxes, empirical evidence shows that when the tax was implemented, CO₂ emissions reduced⁵⁶. When the carbon tax reductions in 1993 occurred, this resulted in a CO₂ increase – therefore implying that the tax is the leading influence of this rise and fall, and not other environmental efforts. Empirical evidence shows that the demand reacts more to long-lasting carbon taxes, rather than short-term price fluctuations, which again shows the CO₂ emissions being influenced by these fluctuations primarily⁵⁷.

Through data acquired through 23 different empirical studies, spanning 50 years, a more detailed understanding of the impact of these environmental taxes have been identified⁵⁸. As you can see through the diagram below, a synthetic control method was used in the most peer reviewed journals, as well as having the highest carbon reduction calculations.

Empirical evidence of carbon tax benefits



54 Köppl and Schratzenstaller (n 4)

55 Pinglin He, Shuhao Zhang, Lei Wang, and Jing Ning, 'Will environmental taxes help to mitigate climate change? A comparative study based on OECD countries' (2023) 78 Economic Analysis and Policy 1440

56 M S Andersen 'Vikings and virtues: A decade of CO₂ taxation' (2004) Climate Policy 4(1) 13–24

57 Köppl and Schratzenstaller (n 4)

58 Köppl and Schratzenstaller (n 4)

Empirical results show that the environmental taxes on the whole are conducive to reducing the frequency of abnormal temperature weather, playing a positive role in reducing CO₂ emission⁵⁹. Taxes were an effective tool to control excessive fossil fuel energy consumption and decrease pollution, showing this first hand in 1990's reforms⁶⁰ OECD countries depend on environmental levies and technology advancements to affect consumer behaviours and environmental costs⁶¹. This study concluded that environmental taxes are significantly important in increasing energy efficiency and productivity. Government administrators use environmental rules as a key tool for controlling the environment. This study evaluates the efficacy of total environmental tax, economic growth and renewable energy, in curbing ecological footprint in the UK, for the period 1995 to 2018, by using WLMC methodology and R coding software⁶². There is a positive correlation between total environmental taxes, and renewable energy consumption – therefore showing benefits of tax⁶³. This is due to environmental tax being a levy on polluters to deter them from consuming non-renewable energy, shifting the UK to clean energy. There is also a positive correlation between Environmental taxes and SGP⁶⁴.

Through this study, it held the hypotheses that environmental taxes cause a decrease in energy intensity in OECD countries, and that the development of green technology positively increases energy efficiency. After producing empirical data, these two hypotheses were met⁶⁵. The impact of environmental tax is stronger than green technology. It implies that tax levies are stronger to limit energy intensity and improve energy efficiency⁶⁶.

Revenues from environmental taxes could support the transition to a climate neutral economy by 2050 to achieve the objectives of the European Green Deal reaching a net reduction of GHG emissions by 55% by 2030⁶⁷. However, environmental tax implementation has been very slow.

Revenues from environmental taxes also provides the foundation for tax shifting policies – environmental fiscal reform⁶⁸. Environmental budget and technologies play a positive role in the process of environmental taxes. When the taxes are enhanced by investments, there is a higher effectiveness of said taxes⁶⁹. Because of this, there is a need to focus on increasing investments, aiming to advance the technologies of alternative energy supplies⁷⁰.

It therefore leads to the conclusion that environmental taxes do work, but the transition needs to be smoother. At the moment, the taxes are necessary. The alternatives need to be cheaper and more efficient for a quicker transition to clean energy⁷¹.

What do we need to do?

Across 72 countries covered in carbon rates reports, 58% of the greenhouse gas emissions are still unpriced, and only 7% are subject to a carbon price equivalent to the costs of CO₂ emissions⁷², and only 16% of the emissions exceeded the EUR 30 per tonnes benchmark⁷³. There can therefore be more done to align energy taxes with environmental goals. Environmental tax work feeds into the Inclusive Form of Carbon Mitigation Approaches, (“**IFCMA**”)⁷⁴.

With expanding mechanisms, there is an estimated 15 new carbon pricing schemes currently in development⁷⁵. The coverage of emissions by a carbon tax will rise from 27% to 34% over the next 5 years, bringing the total coverage close to 50% of greenhouse gas emissions across 79 countries⁷⁶.

The results show that more investments in greener and cleaner energy sources may be necessary to meet the 2030 Sustainable Development Goals (“**SDG's**”)⁷⁷. The outcome of the multivariate methods show that environmental tax plays a dominant role among the regressors.

59 Centre for Climate Engagement (n 2)

60 H George 'Progress and Poverty: An Inquiry Into the Cause of Industrial Depressions, and increase of want with increase of wealth, the remedy' (1884)

61 Yasmeen and others (n 37)

62 Yuanxiang Zhou, Tomiwa Sunday Adebayo, Weichuan Yin, and Shujaat Abbas, 'The co-movements among renewable energy, total environmental tax, and ecological footprint in the United Kingdom: Evidence from wavelet local multiple correlation analysis' (2023) 126 Energy Economics 106900

63 Ibis.

64 Ibis.

65 Yasmeen and others (n 37)

66 Yasmeen and others (n 37)

67 European Environment Agency, 'The role of environmental taxation in supporting sustainability transitions' (7 February 2022) <https://www.eea.europa.eu/publications/the-role-of-environmental-taxation> accessed 10 February 2025.

68 Ibis.

69 Pinglin He, Shuhao Zhang, Lei Wang, and Jing Ning, 'Will environmental taxes help to mitigate climate change? A comparative study based on OECD countries' (2023) 78 Economic Analysis and Policy 1440.

70 Ibis.

71 Yasmeen and others (n 37)

72 OECD, 'Tax and the environment' <https://www.oecd.org/en/topics/policy-issues/tax-and-the-environment.html#:~:text=Taxing sources of environmental pollution,to revenue mobilisation and redistribution> accessed 10 February 2025.

73 Ibis.

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75 OECD, 'Pricing Greenhouse Gas Emissions 2024: Gearing Up to Bring Emissions Down', OECD Series on Carbon Pricing and Energy Taxation, OECD Publishing, Paris, 2024 <https://doi.org/10.1787/b44c74e6-en> accessed 10 February 2025.

76 Ibis.

77 Zhou and others (n 62)

Policy makers in the UK should take into account three criterias when deciding potential policy initiatives. One, the extent of the effect. Two, the economic characteristics of the specified subperiod of time, and three, the time horizon of the intervention. They should focus on those periods when drafting policies regarding environmental tax and environmental sustainability⁷⁸.

Economic policies like economical taxes must be designed to foster environmental protection by conforming to the polluter-pays principle. Governments should be compelled to direct the use of environmental tax funds for initiatives focused on minimising harms brought on by using a taxed source, rather than generic public⁷⁹.

However, OECD countries need to focus on their reach and development sector. Environmental taxes can raise environmental consciousness, encouraging firms to cut emissions and optimise energy, but without energy efficient technologies, the industry cannot reach its reliance on energy intensive infrastructure⁸⁰. Advancements in environmental technology are a key source of lowering carbon emissions. As innovation leads to new and better renewable energy technologies⁸¹.

Without increased taxation and public spending it would be difficult to implement environmental policies⁸². The importance of front-loading public investment through green sovereign bonds is ignored, but could be issued by national governments, public green investment banks, or municipal authorities⁸³. Costs will decrease on carbon efficient methods whilst taxes increase in the fossil fuel alternatives, therefore pushing the attractive costs to higher sells. The study argues that the proposed financial reforms would require supranational co-ordination and agreement, as would an upstream carbon tax⁸⁴.

Final thoughts

Environmental taxes in the UK play a crucial role in addressing the climate crisis. By incentivizing reductions in pollution and GHG emissions, these taxes help drive the transition to a sustainable, low-carbon economy. The effectiveness of taxes like the Climate Change Levy and Carbon Price Floor demonstrate their potential to significantly impact environmental outcomes.

However, the journey doesn't end here. The effectiveness of these taxes hinges on continuous refinement and expansion of our environmental tax policies. Policymakers must remain vigilant, ensuring that these taxes are not only fair but also impactful. Additionally, the revenue generated from environmental taxes should be reinvested into green technologies and initiatives that further promote sustainability.

As we look to the future, it's clear that more can and should be done. The transition to a low-carbon economy requires a collective effort, with governments, businesses, and individuals all playing their part. By embracing and enhancing environmental taxes, we can pave the way for a cleaner, greener, and more sustainable world. The real question is, are we ready to take the necessary steps to secure our planet's future?

78 Zhou and others (n 62)

79 Zhou and others (n 62)

80 Yasmeen and others (n 37)

81 Yasmeen and others (n 37) Yasmeen and others (n 37)

82 Donal Brown, Marie-Claire Brisbois, Max Lacey-Barnacle, Tim Foxon, Claire Copeland, and Giulia Mininni, *The Green New Deal: Historical insights and local prospects in the United Kingdom (UK)* (2023) 205 *Ecological Economics* 107696.

83 Ibis.

84 Ibis.

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3. CAG Consultants, Winning Moves and University College London, 'Evaluation of the UK Emissions Trading Scheme Phase 1 Report' (2023) <https://assets.publishing.service.gov.uk/media/657c4d9595bf65001071908c/evaluation-of-uk-ets-phase-1-report.pdf> accessed 10 February 2025.
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6. David Hirst and Matthew Keep, 'Carbon Price Floor (CPF) and the Price Support Mechanism' (House of Commons Library, 8 January 2018) <https://commonslibrary.parliament.uk/research-briefings/sn05927/> accessed 10 February 2025.
7. Donal Brown, Marie-Claire Brisbois, Max Lacey-Barnacle, Tim Foxon, Claire Copeland, and Giulia Mininni, 'The Green New Deal: Historical insights and local prospects in the United Kingdom (UK)' (2023) 205 *Ecological Economics* 107696.
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