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RENEWABLE ENERGY VIEW 2025

2025 REVIEW

RENEWABLE ENERGY VIEW

Renewable & Clean Tech Jobs, Investment and Deployment in the UK and Europe

The authorative annual report on the UK renewable energy and clean technology sector.

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IF YOU believe, as we do, that renewable energy and clean technology is central to the UK's future growth, prosperity and energy security . . .

IF YOU know, as we do, that the potential economic benefits on offer from a green economy points to tens of thousands of new jobs, and billons in added value . . .

IF YOU are serious, as we are, about tackling climate change, and mitigating the impacts of environmental, social and economic disaster, and know that accelerating the roll-out of renewable energy and clean technology has a vital part to play . . .

JOIN US and together, we will work towards a zero carbon future and a greener, more prosperous economy.

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CONTENTS

Introduction

Welcome to the annual report from the Renewable Energy Association (REA). As one of the UK's most authoritative assessments of the renewable energy and clean technology sector, this report provides a clear picture of the progress being made in the energy transition, this report covering the most recent full year's data available (2024, except for certain international comparisons) and looking ahead to 2035 and beyond. For the first time, this edition combines an International comparison to the UK's progress.

Since the last report, the energy policy and regulatory landscape has shifted – with increasing pressure on Net Zero from different political parties and while the Government has made some progress on Clean Power 2030, grid infrastructure, planning, Simpler Recycling and established GB Energy, many tricky areas remain, not least decarbonising the heat and transport sectors.

Foreword

Time for Renewable Energy Action

Trevor Hutchings, REA CEO

This year's report again looks at deployment, employment and investment for our sector ([1]) – and includes international comparisons for the first time. The UK's growth in certain areas is again evident from the latest statistics set out here. It was a breakthrough year for power, with renewables providing over half (50.8%) of the UK's electricity for the first time, while 9.4% of heat, and 6.2% of transport demand came from renewables, the latter two sectors remaining persistently difficult to decarbonise. In terms of the circular bioresources sector, composting sites across the UK produced over 1.96 million tonnes per annum (tpa) of certified compost and the 105 Biofertiliser Certification Scheme (BCS),certified biofertiliser production sites produced 5 million tpa of biofertiliser.

The total market value of the sector reached £25.54 billion in 2023/24, marking a considerable 4.8% increase from the previous year. Employment in the sector also rose, reaching 145,281 Full Time Equivalents (FTEs), an increase from 142,760 FTEs the previous year and the first time the sector exceeded the 145,000 level.

The highest growth technology in market value was solar PV, driven by a surge in large scale solar and home installations, with market values climbing 13.7% to £1.24 billion and the second strongest economic growth area of biofuels increasing by 9% to £3.1 billion. Employment in solar PV also saw a notable rise of 11.7%, bringing the total to 9,324 FTEs, while offshore wind employment grew to 33,400 FTEs. These figures underscore the sector's central role in driving economic growth and job creation in the UK.

Our modelling shows that the right investment environment for our sector could mean up to 265,317 full-time jobs in the sector in the UK by 2035 and over 300,000 by 2050 while the market value of the sector could more than double to around £54bn by 2035.

For international comparison, renewables were the largest single source of international Foreign Direct Investment (FDI) across the globe - and the UK was ranked as the second highest in the world for attracting FDI in the sector ([2]). In terms of international jobs comparisons – while information is not available for the whole sector, we are currently behind other European countries in per capita jobs in certain renewables. In – AD, hydro, solar and wind sub sectors combined, the UK has 0.11 renewables jobs per capita compared to 0.19 on average in the EU and 0.26 in Germany and Denmark due to higher deployment and supply chain manufacturing. This illustrates how greater deployment and supply chain capability could allow us to catch up and reap even further economic benefits.

> "THE INDUSTRY IS CURRENTLY ON TRACK TO SUPPORT MORE THAN 180,000 JOBS BY 2035. WITH THE RIGHT ENVIRONMENT, THE GOVERNMENT CAN ENSURE THAT THESE FIGURES ARE EXCEEDED, AND THE UK CAN BE A WORLD-LEADER."

In terms of deployment internationally, those countries with the right policy and market environment surged forward while others stalled – renewable power generation grew 17% in the EU, to 44% of the total demand (compared to the UK at 50.8%) whereas EV sales in 2024 in the EU fell by 5.9% to c.1.4million cars - while the UK's increased 21.4% in the same period, to 381,970 cars. In 2025, EV sales in the EU were up 33% on 2024 (according to European sources) at 1.9 million units for a 17.4% market share while 473,348 battery electric vehicles (BEVs) were sold in the UK, representing 23.39% of all new cars.

However on renewable heat, the UK lags behind the rest of Europe, despite some progress on heat pump sales – with renewables still contributing less than 10% of total consumption, compared to the EU where renewable heating and cooling rose by 0.5% on average, to supply 26.7% of all heat demand.

This report illustrates that a renewable energy system is within our grasp and the economic benefits can be reaped. We will continue to serve our members' interests operating across the entire sector and in our 'pillars' covering power and flexibility, heat and cooling, transport, green finance and circular bioresources.

With conflict in the Middle East once again highlighting the need to move to renewables and political attention like never before, this is a pivotal time for our sector and meaningful climate action driving jobs and investment – REA will continue to support our members and grow the industry to deliver tangible benefits for all.

Together, we can deliver an energy secure, low carbon future for the UK with renewables and clean technologies at its heart.

Trevor Hutchings

Chief Executive, REA

1. Our definition of the sector includes the following technologies: air and ground source heat pumps, AD, biofuels, biomass boilers, biomass CHP, dedicated biomass power, Energy from Waste (EfW), geothermal, hydro power, landfill gas, offshore wind, onshore wind, solar PV, solar thermal, wave and tidal, and the production of biomass.

2. FDI, 2025, 'fDi's Global Renewable Energy Leaders ranking', fDi Intelligence – Your source for foreign direct investment information - fDiIntelligence.com

Executive Summary

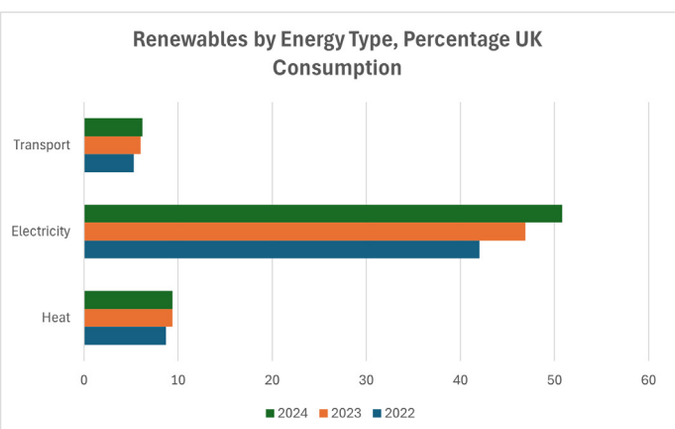
Deployment

Overall, the percentage of the UK's total energy consumption from renewables was 16.2% in 2024, the most recent year of full data, up from 15.5% in 2023. The breakdown shows renewables providing 50.8% of power (continuing strong growth), 9.4% of heat (virtually unchanged), and 6.2% of transport demand (a marginal increase).

Renewables and Organics deployment

Looking at power and flexibility, renewables' share of total electricity generation increased, now accounting for 50.8% of all generation, up for each of the past 5 years. This continues a significant upward trend, with renewable energy's contribution growing from less than 15% of total generation in 2013 to over half within a decade.

Wind (combined offshore and onshore) is the largest source of renewable power in the UK, contributing almost 30% of renewable power generation in 2024. Offshore wind is the larger of the two, and its share of power generation is set to grow even further as further projects come online. Given the lift of the de facto ban on onshore wind and inclusion in the CfD mechanism, we expect to see growth in this area too. Bioenergy (including biomass power, anaerobic digestion and energy from waste) remains the second most important category of renewable power generation, providing 11% of power.



Share of Renewables by Heat, Electricity and Transport Sectors 2022 - 2024

In terms of heat and cooling, low-carbon heat has increased from providing only 3.7% of the UK's heat demand in 2013, to 9.4% in 2024. The bulk of renewable heat generation continues to come from biomass and wood heat combustion, reflecting the success of modern biomass boilers for businesses and households. While there has been a pick-up in heat pump installations, these are still tracking at far below Government expectations and targets – recently downgraded in the Warm Homes Plan to 450,000 per year by 2030.

In terms of the circular bioresources sector, composting sites in England produced over 1.6 million tonnes per annum (tpa) of certified compost and represented 80% of total certified output, Northern Ireland produced 180,000 tpa (9%), Scotland produced 120,000 tpa (6%) and Wales produced 62,000 tpa (3%). The most common end market was agriculture and soil-grown horticulture across all four countries of the UK, accounting for around half or more of certified composts. In terms of biofertiliser, there were 105 certified operators on the Biofertiliser Certification Scheme (BCS), processing 6 million tpa and producing 5 million tpa of biofertiliser (quality and end-of-waste certified digestate).

Looking at the transport sector, overall, renewables supplied 6.2% of the UK's transport energy demand in 2024, up marginally from 6% in 2023.

The number of new zero emissions vehicles (ZEVs) continues to rise, to around 473,000 new vehicles registered in 2025, up from 381,000 new vehicles registered in 2024, and with the ZEV Mandate mandating 28% of new car sales to be electric, up from 22%. This year (2026) sees a review of the ZEV Mandate and this will dictate future sales. As with the past few years, the number of electric vehicle charging points also continues to increase rapidly. In early 2026, there were around 88,000 public chargepoints in the UK, up by almost 14,000 in the last 12 months, from 74,000. The deployment rate has slowed slightly, but this is largely due to the delay in LEVI project deployment, with those deferred installations starting in earnest in 2026.

For transport fuels, in 2024 renewable fuels made up 8% of total road fuels supplied, which was unchanged from the year before, saving on average 77% in GHG emissions compared to the use of fossil fuel supplies (inc ILUC considerations). Biodiesel and bioethanol form the largest components consumed with HVO and other 'development fuels' growing strongly.

Economic value of the sector

We estimate in 2023/24 the value of the sector stood at £25.54bn, up from £24.38bn in 2022/23. In terms of employment, we estimate the sector employed 145,281 full-time equivalents in 2023/24, an almost 3,000 increase since 2022/23. Solar PV has shown the highest growth in employment (up by 1,000 FTEs), followed by offshore wind (800 more employees) also performing strongly.

International Comparisons

For the first time, this edition of REview includes data from a range of European and other countries, to enable a comparison across countries in the light of the changed geopolitical context.

Renewable Electricity

- EU capacity increased from 41.7% to 59.9% from 2015 to 2024 – a change of 17.8% - generation increased from 29.5% to 44.3%
- World capacity increased from 29.5% to 46.2% - generation increased from 22.7% to 29.9%
- The biggest shift among European nations was for the Netherlands - capacity increasing from 18.2% to 59.4% and generation increasing from 12.4% to 46.8%
- The UK has been keeping pace with the EU on deployment while deploying quicker than most of the rest of the world

The Circular Bioresources sector

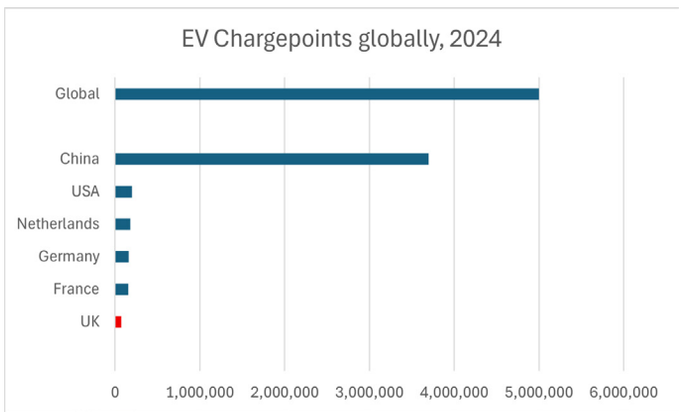
International data for this sector is tricky to compare, however the European Compost Network (ECN) estimate that:

- 71 million tonnes per annum (tpa) of separately collected bio-wastes were treated through composting and anaerobic digestion in the EU in 2022 (the most recent full year of data). These estimates include both municipal and commercial/industrial bio-wastes. Municipal biowaste was approximately 47 million tonnes.
- Considering the total 71 million tpa, approximately 42 million tpa (59%) was sent to composting and 29 million tpa (41%) sent to anaerobic digestion.
- In 2022 there were an estimated 5,800 bio-waste treatment facilities in the 27 EU Member States, Switzerland, Norway and the UK, of which 3,800 (66%) were composting and 2,000 (34%) were Anaerobic Digestion facilities. On average, each composting facility treated 8,000 tpa of bio-waste, whilst each AD facility treated 13,000 tpa.
- An estimated 21.1 million tpa of compost was produced. Agriculture was found to be the dominant market segment for both compost and anaerobic digestate.

Renewable Heat

For data availability reasons we concentrate on overall figures and select technologies.

- Overall, while the UK saw a flatlining in growth from 2023 to 2024 at 9.4%, the EU increased its share of renewable heating and cooling by 0.5% to 26.7% of total consumption on average. This is up from an 11.4% total in 2004.
- Solar thermal capacity globally is worth noting - there has been a 50% decrease in sales of solar thermal technologies from 2015 to 2024, and the installed capacity in the UK is 1% of the European total. Denmark with a population less than 10% of the UK has twice the installed capacity.



International EV Chargepoints, 2024

Renewable Transport

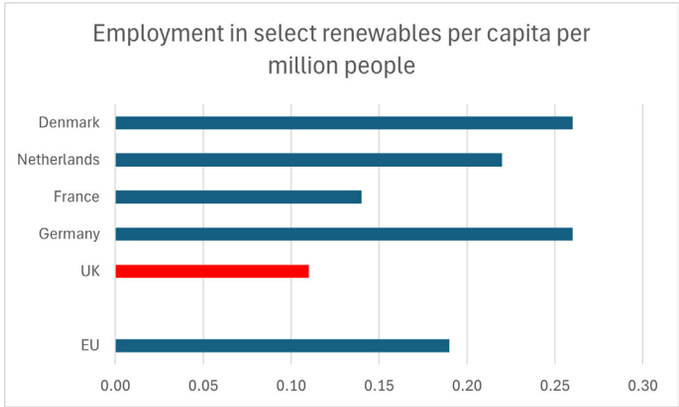
The EV sector is growing rapidly worldwide and in 2024, the UK electric car market was the largest in Europe, with an overall decline in EU sales of Battery Electric Vehicles (BEVs).

- Globally, 17 million EVs were sold in 2024, with China by far the largest market for EV sales at 11.3 million followed by the USA at 1.5 million. 50% of car sales were EVs in China but only 10% in the USA.
- In the UK the percentage of EV sales overall was 27% whereas in Germany it was 20% and in the Netherlands a relatively high 51%. Norway has the highest percentage of EV sales at 95% of all car sales – Denmark and Sweden also have high levels of EV car sales at 56% and 60% respectively.
- In 2024 there were 1.3 million new EV Chargepoints installed. China has the highest number installed globally at 3.7 million in total. The Netherlands had the highest number of publicly available chargers installed in Europe with 180,000 – this is over twice the number ff

International Jobs

In terms of international jobs comparisons – while information is not available for the whole sector, data from Innovas highlights that we are currently behind other European countries in per capita jobs in renewables – specifically the AD, hydro, wind and solar PV sub-sectors combined. The UK has 0.11 renewables jobs per capita in these sectors, compared to 0.19 on average in the EU and 0.22 in Germany and Denmark.

This gap is due to a combination of higher deployment and greater supply chain manufacturing in these European countries, and therefore illustrates how greater deployment and supply chain capability could allow the UK to increase employment and reap even further economic benefits.



UK jobs per capita, in selected renewable technologies (AD, hydro, onshore and offshore wind, solar PV), illustrating scope to increase jobs in the UK with greater deployment and supply chain manufacturing

UK renewables and cleantech-deployment, investment and DLL's strategic role

Introduction

The UK's clean tech economy has undergone a significant evolution over the past two years. Despite persistent challenges, such as grid bottlenecks, delays in planning approvals and the continued underperformance of the heat decarbonisation sector, the broader trajectory remains one of steady growth and maturing capability.

Among the standout areas, renewable electricity generation has cemented itself as a central pillar of the UK's transition, with strong momentum across wind, solar and bioenergy. Meanwhile, electric vehicles (EVs), associated charging infrastructure, energy storage solutions and circular bioresources are expanding at a pace that signals increasing industrial maturity and market confidence.

Finance providers such as DLL have become vital enablers of this transition. By providing flexible financing solutions tailored to capital-intensive clean-tech assets, solar PV systems, battery energy storage systems (BESS), EV fleets and charging infrastructure, energy efficiency measures such as LED lighting and Building Management Systems, and more, DLL helps accelerate the conversion of projects from proposal to operation. This helps businesses and organisations to reduce energy consumption, generate clean energy and reduce reliance on grid, and provide infrastructure to enable EV deployment and support decarbonisation.

As deployment pipelines grow, the ability to bridge the gap between ambition and delivery becomes ever more central to the UK's decarbonisation success.

Renewable power: Strong growth across key technologies

Renewable electricity remains the strongest performance area within the UK's energy transition. In 2024, renewables supplied 50.8% of total UK electricity, an increase from 47.2% in 2023, marking the first time renewables consistently exceeded the halfway threshold across the full year.

Across the wider energy system, total renewable energy consumption rose to 16.2% of overall energy use, compared with 14% in 2022. The rise demonstrates progress, but it also highlights the scale of the journey ahead; electrification of heat, transport and industry will need to accelerate further if the UK is to align with long term carbon budgets.

Heat decarbonisation: The weakest link

Despite strong momentum in electricity, the heat sector remains the most stubborn bottleneck in the transition. In 2024, low-carbon heat supplied just 9.4% of total heat demand, effectively unchanged year on year, and far behind the EU average of 26.7%.

This stagnation reflects ongoing challenges in scaling heat pumps, upgrading older housing stock and providing clarity around long term policy direction for decarbonising buildings and industrial processes.

The slow progress in renewable heat is one of the most significant risks to achieving the UK's medium term emissions targets. Without radical acceleration, even strong progress in electricity and transport will not be enough to compensate.

Transport: EV and renewable fuel expansion

Transport, including commercial and fleet EV adoption, continues to show encouraging forward momentum. In 2024, renewables accounted for 6.2% of transport energy, supported by strong consumer uptake of electric vehicles. The registration of 381,000 zero-emission vehicles demonstrates demand resilience and the increasing affordability of EVs in the mainstream market.

At the same time, public charging infrastructure expanded beyond 73,000 charge points, supporting the growing EV fleet. Although the pace of rollout will need to increase in future years to meet projected demand, the UK's EV ecosystem is clearly transitioning from early adoption to scaled deployment.

The UK stands at an inflection point. With renewables supplying more than half of the nation's electricity and strong growth in transport electrification, the foundations for a low-carbon economy are firmly in place. Yet critical gaps in heat, workforce development and supply chain capacity remain.

As the world accelerates toward a cleaner, more energy-efficient future, the need for accessible, dependable and scalable solutions has never been greater.

Mark McLoughlin
Country Commercial Manager -
Uk & Ireland, Energy Transition
www.dllgroup.com/gb/en--gb

Conclusion

For DLL, our ambition is clear: to become a leading enabler of the global energy transition.

We fulfil this by staying true to our mission, supporting the shift to cleaner energy and high-efficiency technologies, and by removing barriers to adoption through innovative asset finance solutions. Backed by a global team of specialists, proven risk and asset management expertise, and a deeply collaborative go-to-market culture, we make it easier for partners and customers to invest in the sustainable technologies that will define tomorrow's economy.

That means identifying the right financing opportunities, helping customers move away from fossilbased systems, and supporting every organisation we work with along its unique energy transition journey.

Our approach is rooted in the full energy value chain, ensuring we can deliver impact where it matters most. From renewable power generation to energy infrastructure and storage, to advanced efficiency systems and low-emission equipment across agriculture, construction, industry and transport, we finance the technologies that keep the world moving toward net zero.

In short, we combine financial innovation, sector expertise and partnership-focused execution to accelerate the move to cleaner, smarter energy systems. Together with our partners, we are not just supporting the energy transition; we are enabling it.

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Power & Flexibility

Renewable Power Generation Summary

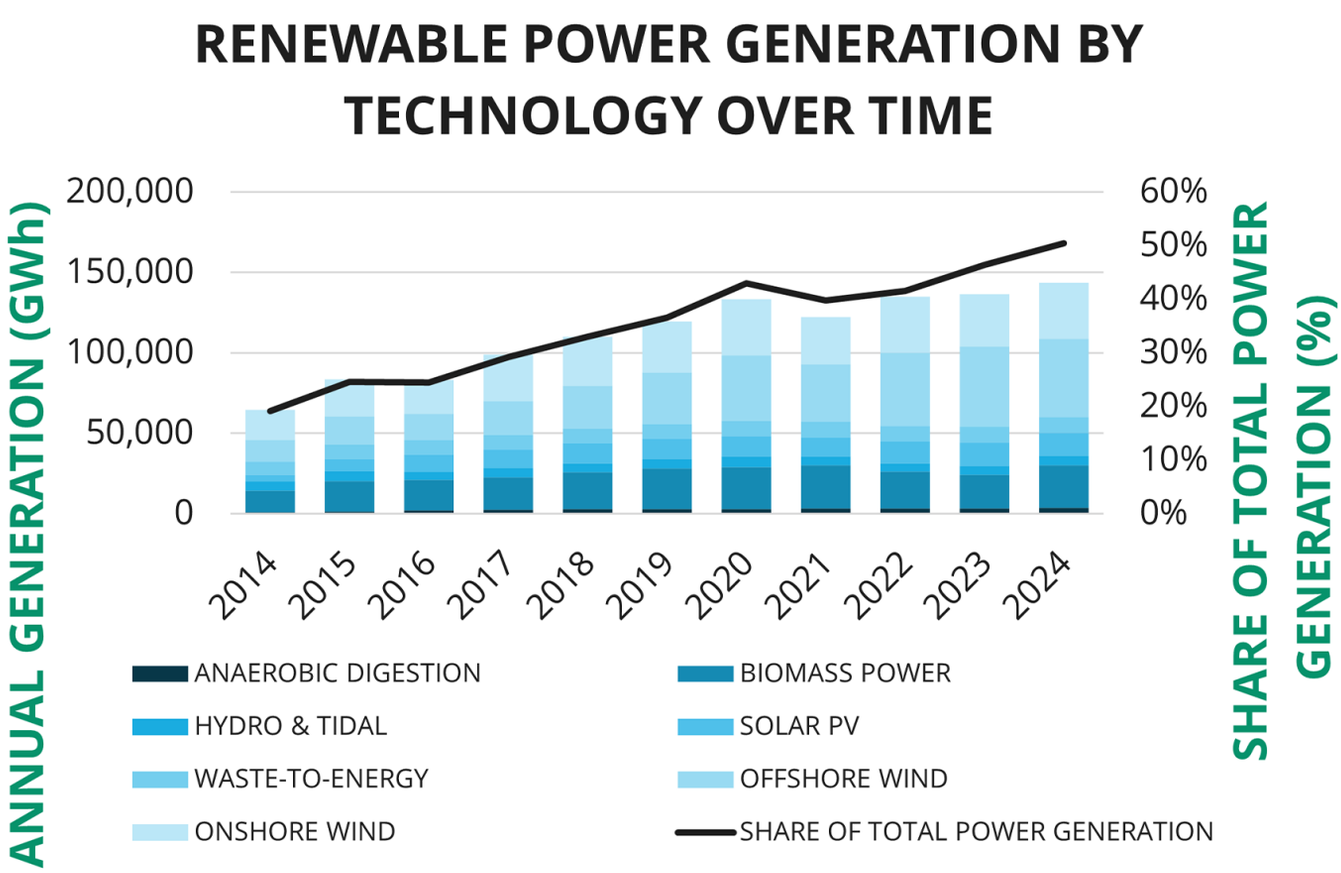
In 2024, total renewable electricity generation grew, with just under 144,000 GWh produced from renewable sources.

In a landmark moment, renewables' share of total electricity generation increased, now accounting for over 50% of all generation, up from 47.2% in 2023. This continues a significant upward trend, with renewable energy's contribution growing from less than 15% of total generation in 2013.

Offshore wind remains the largest contributor to renewable generation in the UK, accounting for 29% of all power generation. With an additional 1.3 GW of offshore wind built out in 2025, a successful CfD auction, and the easing of planning regulations for onshore wind, substantial growth in this sector is anticipated.

Bioenergy continues to be the second-largest source of low-carbon generation, despite modest declines in output over the past two years due to market factors. In 2024, biomass power generated 9% of the country's power, while anaerobic digestion and waste-to-energy saw slight increases.

Solar power saw good growth, generating around 5% of total electricity production, making it the third-largest source of renewable energy.

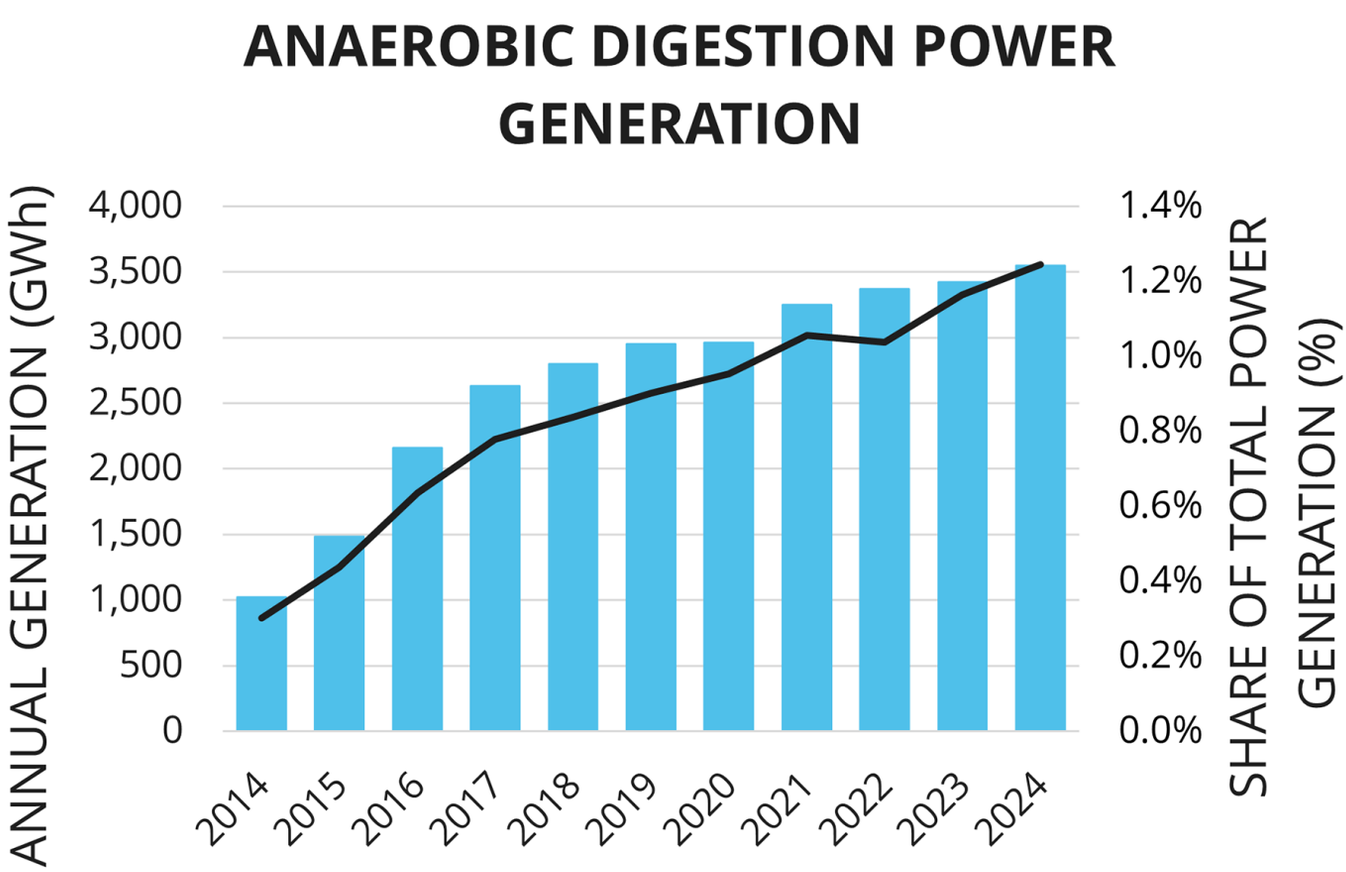


Renewable power generation in the UK 2014 - 2024

Deeper Insight: Anaerobic Digestion

Higher gas prices have supported increased generation, alongside modest increases in biogenic waste availability which provides more feedstock.

We are likely to continue to see steady increases in generation as rules around Simpler Recycling take affect - increasing the amount of biogenic waste collected separately which will increase feedstocks going to AD sites. That being said, given support schemes for AD are focused on decarbonising the gas grid, and the present absence of routes to market for AD power sites, we are unlikely to see future increases in AD power capacity in the near term in the current policy landscape. On-Farm AD may be able to play a greater role in this sector utilising large amounts of currently untreated animal manures. This would have the double benefit of producing consistent renewable power and reducing methane emissions from animal manures. Additionally long-term visibility and certainty around SEG rates would support greater deployment in this sector.



The chart shows the increasing amount of power generation from anaerobic digestion over the past decade.

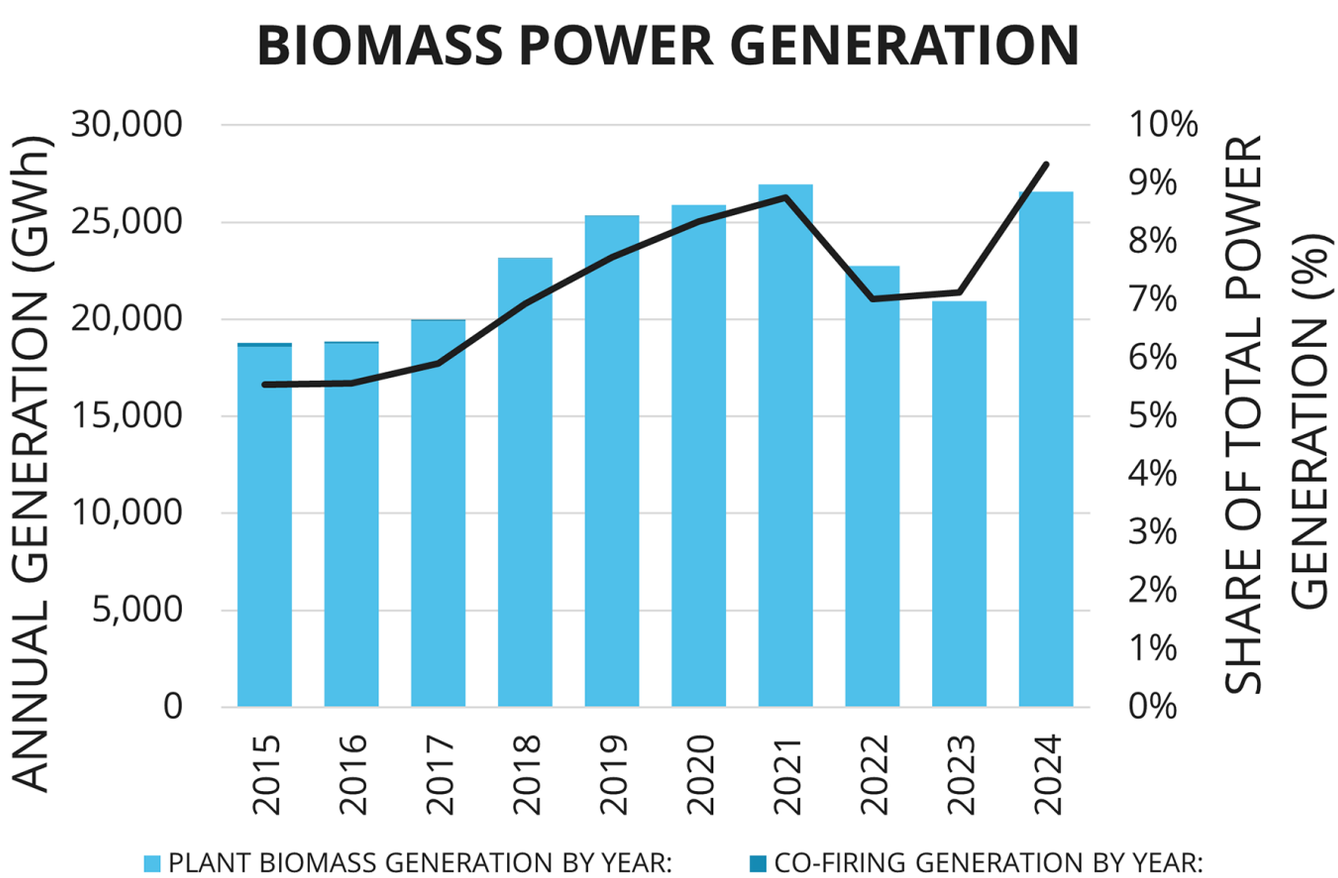
Biomass Power

In 2024, biomass power generated around 9% of the country's electricity, providing low carbon, consistent power which complements other forms of low carbon and renewable energy.

We need sustainable biomass for BECCS which has been identified as being critical to delivering carbon removals by leading climate scientists and governments alike. That is why Biomass UK – the REA's member forum for biomass power – has been busy pushing for political certainty and support for biomass generation beyond 2027, to move towards delivering carbon removals and meeting our net zero targets.

The Cross Sector Biomass Sustainability Framework consultation is currently open at time of press, and this is critical for further boosting confidence in the production and use of biomass. We also need to see much needed progress on carbon capture and Bioenergy Carbon Capture and Storage (BECCS). The biggest risk for the sector is likely to be the ongoing lack of certainty around future generation, particularly for small to medium size sites, many of whom will begin to see their Renewables Obligation contracts coming to an end from 2027.

As well as responding to key consultations, and pushing on the above issues, we are also proactively engaging with parliamentary and media stakeholders about the value and role of sustainable biomass. We have also been working with the Department for Energy Security and Net Zero to progress the work on Power BECCS and Greenhouse Gas Removals business models – something that will continue to be a focus.



The chart shows biomass power generation reached a new high in 2024 at almost 27,000 GWh. It steadily declined until 2023, in which year it produced 20,790 GWh. Biomass power's share of total power generation was just under 9% in 2024, up from 7.9% in 2023.

Hydro & Tidal

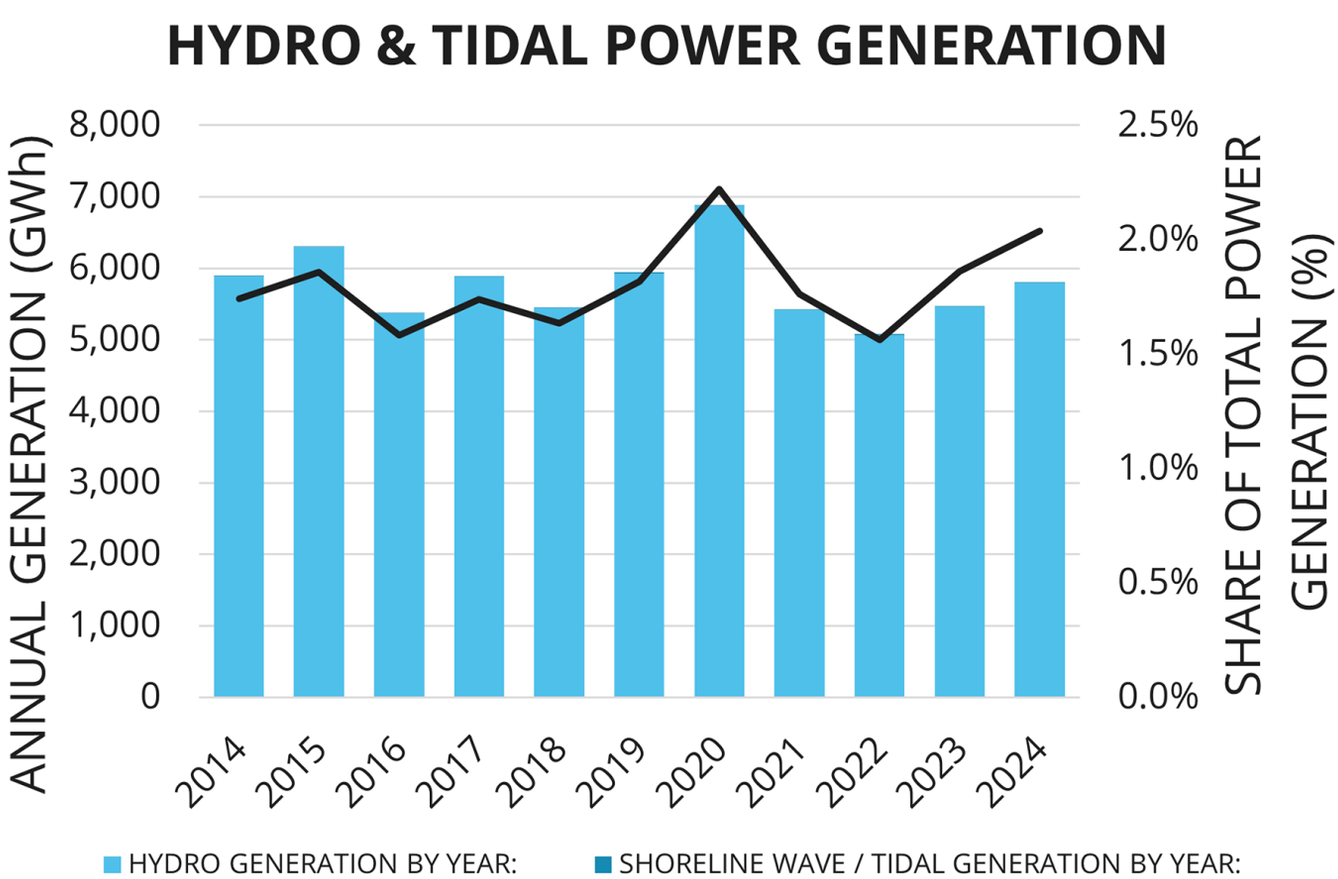
In 2024, overall hydropower generation increased - from 5,194 GWh the previous year, to 5,795 GWh while tidal and wave increased slightly to 13.01 GWh. Weather conditions are likely to have been the main driver for this change.

In 2024, overall hydropower generation increased - from 5,194 GWh the previous year, to 5,795 GWh while tidal and wave increased slightly to 13.01 GWh. Weather conditions are likely to have been the main driver for this change.

Hydropower capacity has remained stable at just over 2 GW since 2018, with most sites concentrated in the Scottish Highlands, with clusters also in North Wales and Northwest England.

There is renewed potential for growth in hydropower now that the Government has launched the support mechanism for Long Duration Energy Storage (LDES), with pumped hydro storage projects given a new route to market due to this mechanism.

Wave and tidal energy generation remains minimal, with only 13.01 GWh produced in 2024 – albeit an increase from the previous year, this is because, despite the UKs significant potential in this area, the high development and maintenance costs have limited installed wave and tidal capacity to around 12 MW. However in 2023, 53 MW of new tidal stream projects secured contracts in the CfD Allocation Round 5, and a further 28 MW were contracted in Allocation Round 6 in 2024. These projects, scheduled for delivery between 2026 and



The chart shows shoreline wave and tidal and hydro generation since 2014. Wave and tidal generation is still very small in the UK, at 13 GWh in 2024. Hydropower generation was 5,795 GWh in 2024, up slightly from 5,194 GWh in 2023. Hydropower represented just over 2% of total power generation in 2024, up from 1.7% 2023.

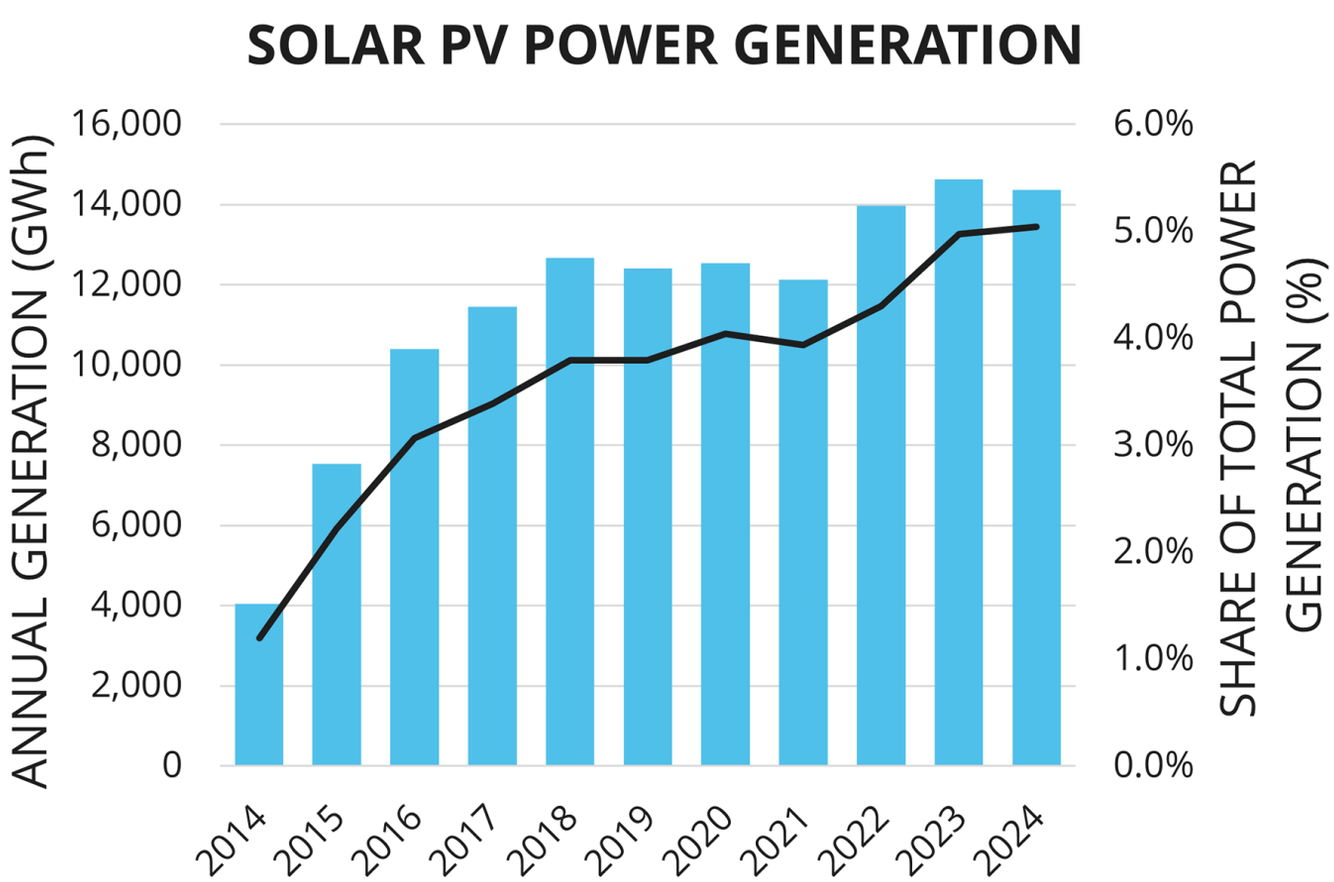
Solar PV

The growth in UK solar photovoltaic (PV) power has been considerable, with cumulative installed capacity increasing from 14.1 GW in 2021, to 18.9 GW in 2024. Solar PV power has increased its share of overall electricity generated in the UK from 3.9% in 2021, to 4.1% in 2022, and to just over 5% in 2024.

There may be many unrecorded installations in addition to this growth - data sources often omit installations below 150 kW which are not accredited under a Government scheme such as the Smart Export Guarantee (SEG). The surge in capacity is largely driven by increased domestic installations and projects exceeding 5 MW, supported by favourable public opinion, lower costs, and the lingering effects of the 2021 energy crisis. Currently, around 3,000 solar installations are completed each week, up from 1,000 in 2020.

The public are increasingly understanding the wider benefits of generation from solar PV beyond providing a sustainable source of power. This includes reducing emissions, greater energy security by lowering dependence on imported energy sources, cheaper energy production, benefits to local economies, job creation and improved air quality.

The Government has now adopted a target of 70 GW of solar PV deployment by 2035 and this comprises a considerable opportunity for the sector, although several barriers must be removed.



The chart shows the surge in solar PV power generation in the UK. As a share of total power generation, solar PV reached power 5% in 2024, with almost 19GW installed capacity.

Waste-to-energy

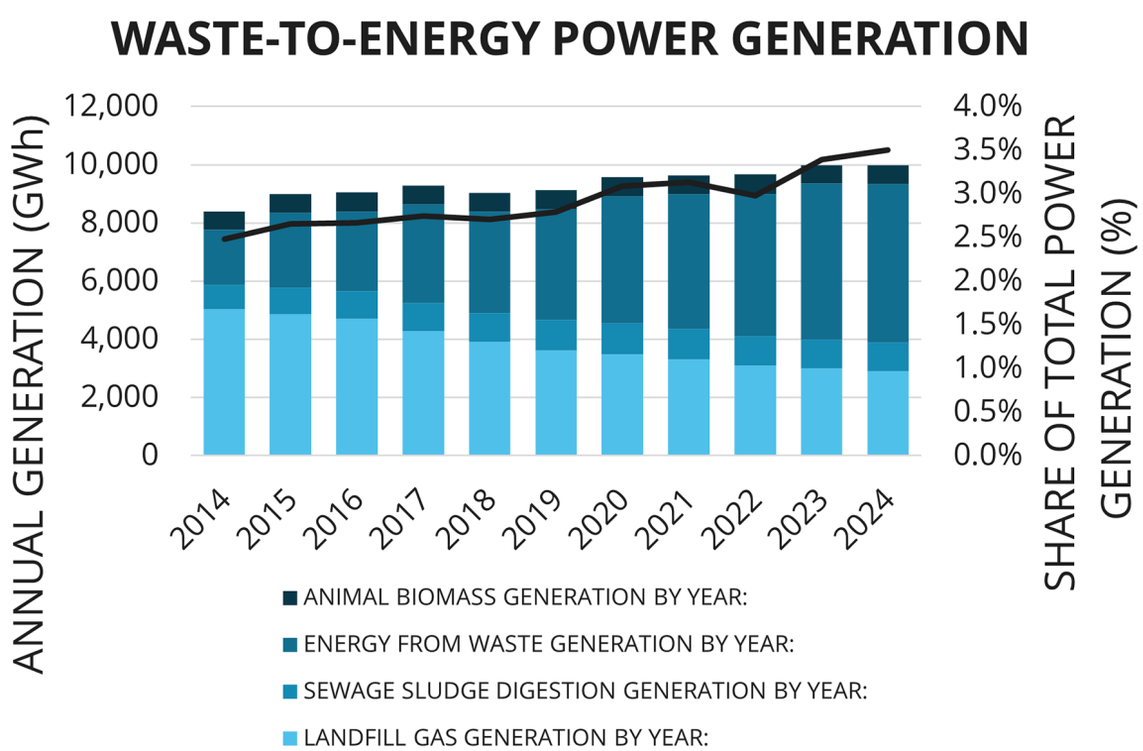
For waste to energy (WtE), including energy from waste (EfW, mostly from incineration), sewage sludge and landfill gas, output has remained largely stable due to a large increase in incineration EfW power which has tripled over the last 10 years, counteracting the shrinking of landfill gas power generation over the same period. WtE now represents 3.5% of the UK's total power generation, with EfW making up the majority (55%) of this power.

In 2024, EfW saw its highest year yet for generation, at 5,462 GWh. Growth in EfW has been strong in recent years, rising by over 40% over the past 5 years - but the next 5 years for EfW may differ, as an effective moratorium on new plants was put in place by the previous Government and as the end of support schemes combined with the sector being brought under the UK Emissions Trading Scheme (ETS) from 2028 will increase operating costs for many plants. However, opportunities are present for the UK to benefit from negative emissions from the sector, as for projects looking to retrofit carbon capture technology, as EfW represents one of the pathways for negative emissions.

Landfill gas generation reached a new low at 2,899 GWh of generation in 2024, down from 2,994 GWh in 2023, now representing just under 30% of all WtE power. Landfill gas has seen a sustained decrease over the past decade, falling by mor than 40%. This is due to expected declines in naturally occurring landfill gas generation, as gas is collected from closed landfill sites which do not receive any new waste. However, around 80% of landfill gas sites are set to see their Renewables Obligation contracts expire from 2027, which could cause a loss in capture efficacy at sites with a more rapid decline in generation in the coming years in the absence of further support. REA are working urgently with industry and Government to address this.

Sewage sludge (988 GWh) and animal biomass generation (625 GWh) have both remained stable, smaller modes of generation.

NB: animal waste derived biomass includes poultry litter, meat and bone. Energy from waste includes waste (including waste wood), tyres and hospital waste, primarily incinerated. Waste-based does not include anaerobic digestion (AD) as this is treated



The chart shows the output from and mix of waste-to-energy power by source over the past decade. Together, there was an almost unchanged combined total of around 10,000 GWh of generation in 2024.

Wind Power Generation

Wind generation continues to be the UK's leading source of renewable energy, contributing almost a third of the country's total power in 2024. Total wind generation rose to 83,282 GWh, marking only a 1.4% increase from the previous year but has grown by around a quarter since 2021. This was partly due to generation from offshore wind actually falling by 2.2% due to lower wind speeds.

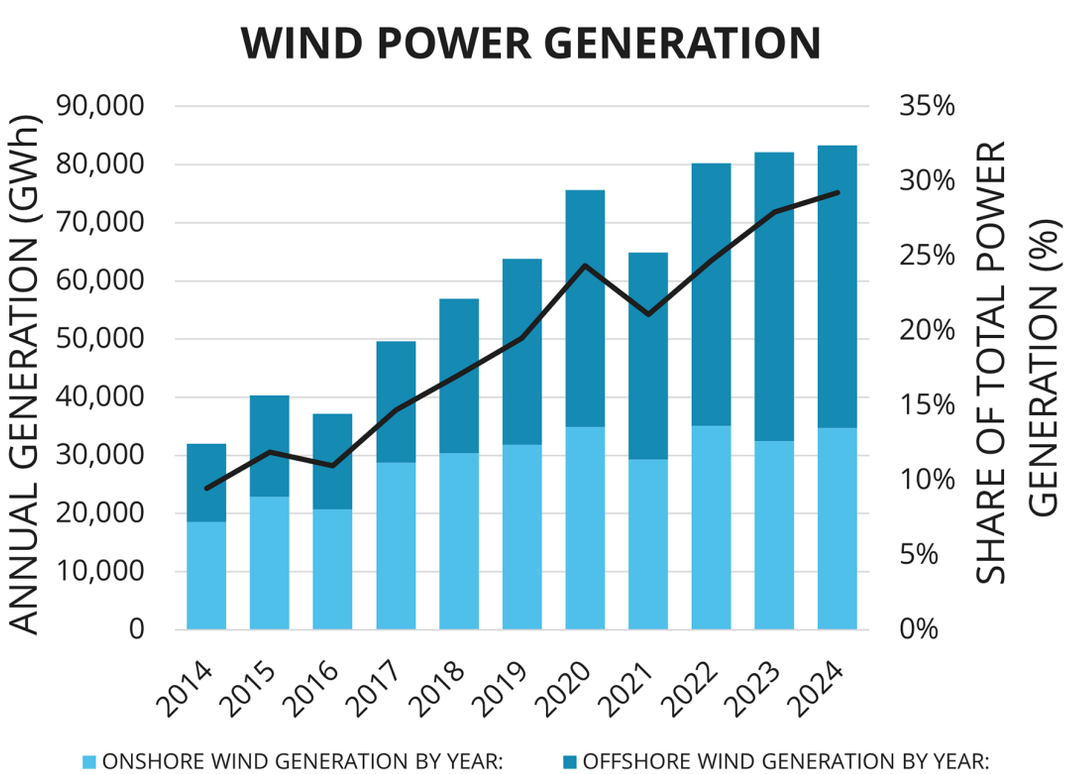
For offshore wind, capacity grew by 4.8%, reaching 15.8 GW and this is poised for significant further expansion, with 1.3GW of capacity contracted through previous Contracts for Difference (CfD) allocation rounds expected to have come online in 2025. In 2024, the CfD Allocation Round 6 (AR6) resulted in a further 3.7 GW being contracted for delivery in 2028/29. [1] In early 2026, a further 8.4 GW offshore wind (fixed bottom and floating) – all for delivery before 2030 in a major boost to the Clean Power 2030 target. [2] This will provide enough power for 10 million homes.

In terms of onshore wind, 742 MW of new onshore wind capacity was added in 2024, and the Government approach to the technology should see this continue to grow, with 990 MW worth of projects contracted in AR6 for delivery between 2026 – 2028 [1] and 1.3 GW in Allocation Round 7 for delivery before 2030. [2]

As with previous years, despite progress on planning, grid-related constraints are causing delays in new connections and so addressing grid infrastructure is therefore a critical priority for the continued growth of wind energy in the UK.

DESNZ, 2023, Contracts for Difference (CfD) Allocation Round 6: results, https://www.gov.uk/government/publications/contracts-for-difference-cfd-allocation-round-6-results

DESNZ, 2026, Contracts for Difference (CfD) Allocation Round 7 and 7a: results, Contracts for Difference (CfD) Allocation Round 7: results - GOV.UK, and Contracts for Difference (CfD) Allocation Round 7a: results



The chart shows wind power generation from 2014 to 2024. In 2024, offshore wind generated 48,539 GWh of power, and onshore wind generated 34,743 GWh of power, meaning a total of 83,282 GWh for the year, up from 81,989 GWh in 2023. Overall, wind represented 29.23% as a share of total power generation in 2024, up from 25% in 2022.

International, Power

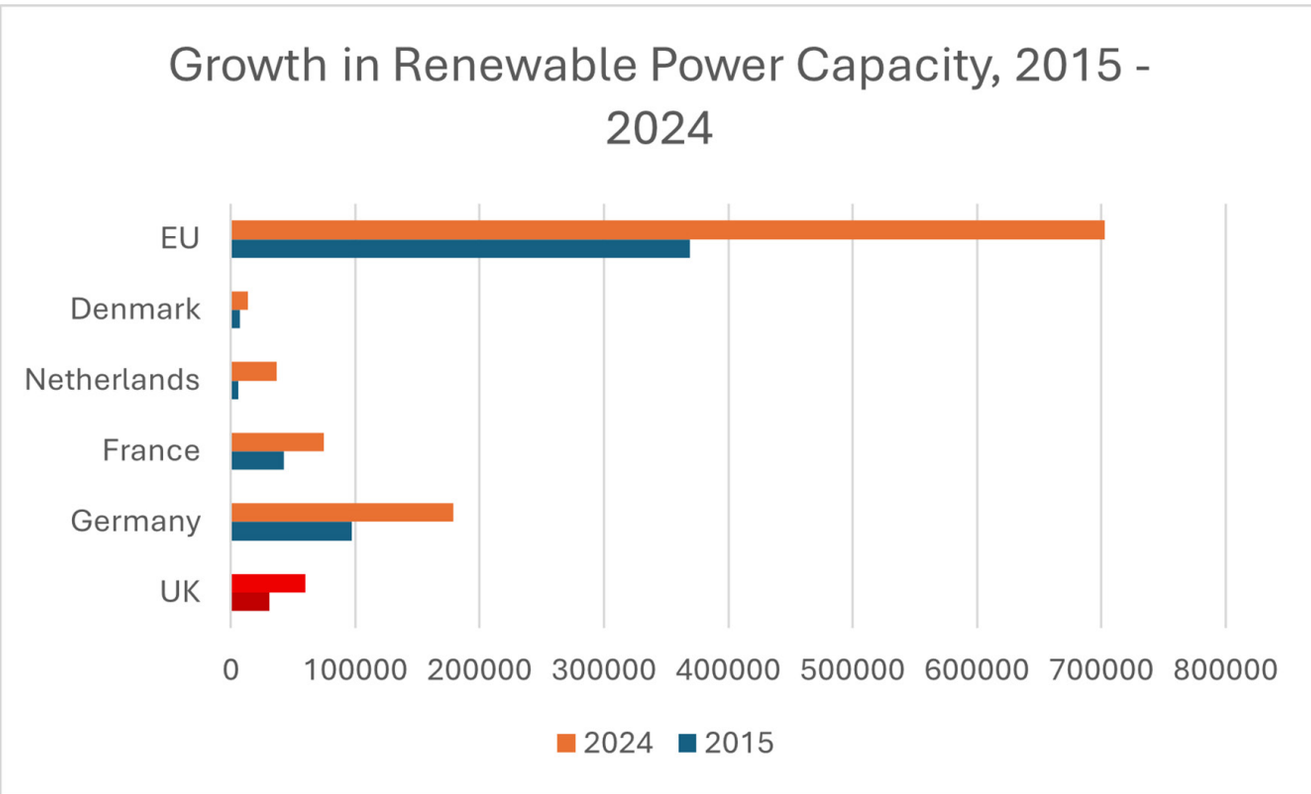
International Comparisons – Power

Introduction

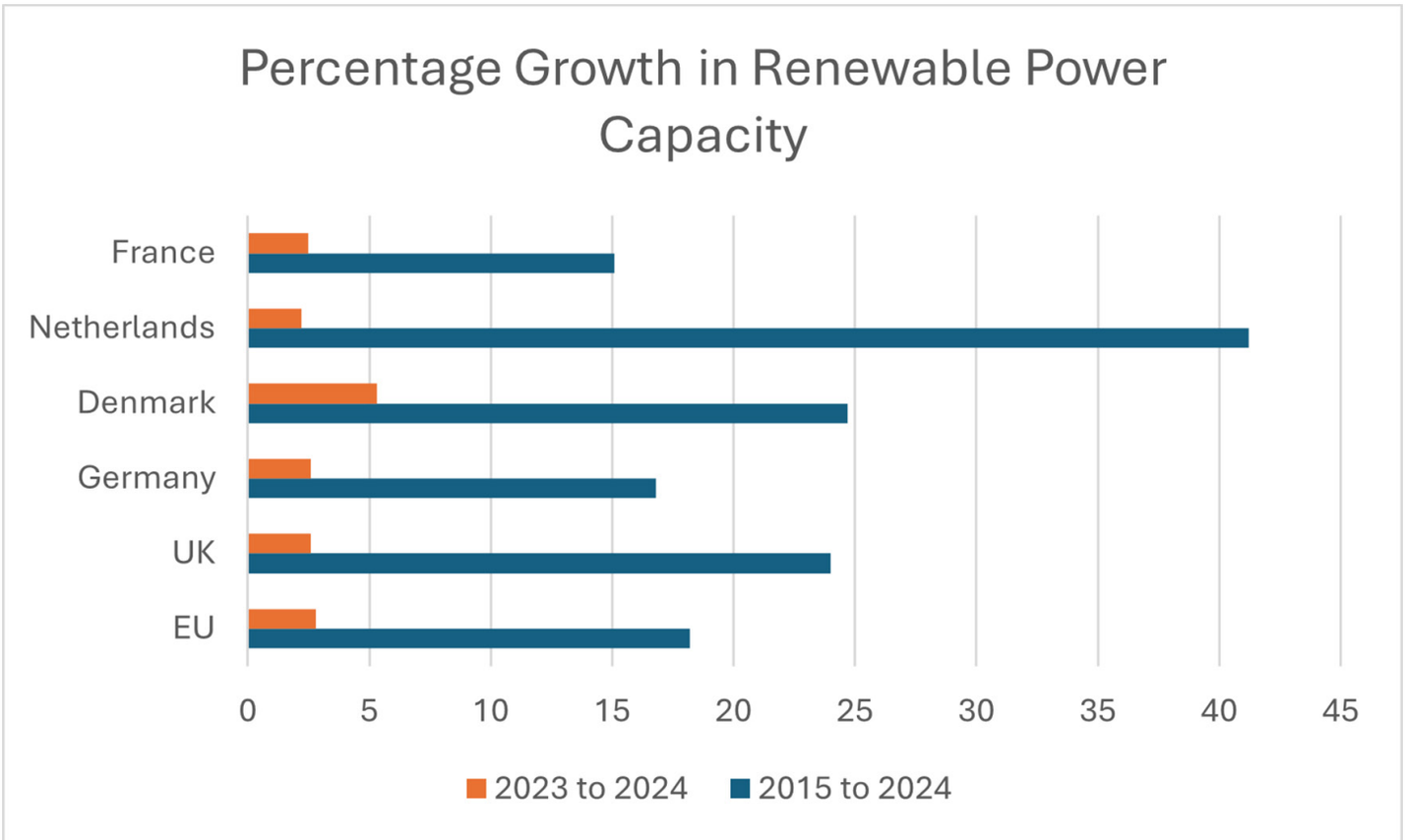
Much of the world, especially but not limited to Europe, have made great strides in moving to renewable power in the past decade, with considerable growth. The UK has been keeping pace with overall EU deployment while deploying quicker than most of the rest of the world.

UK installed capacity (a different metric to generation) increased from 32% to 56% over the period 2015 to 2024 - a change of 24% - while generation increased from 24.7% to just over 50% - significant increases in a relatively short time.

EU capacity increased from 41.7% to 59.9% over the same period – a change of 17.8% - while generation increased from 29.5% to 44.3%, with the Netherlands increasing capacity from 18.2% to 59.4% and generation from 12.4% to 46.8%.



The chart shows global renewable capacity for the electricity sector, in MW capacity terms, highlighting strong growth in many countries including the UK



European countries comparison rates, percentage growth in the proportion of installed renewable power capacity, 2025 to 2024 and 2023 to 2024

	2015	2014	% Change
World	29.5	46.2	16.7
Asia	27.2	47.4	20.2
EU	41.7	59.9	18.2
UK	32	56	21
Germany	48	64.8	16.8
Denmark	50.8	75.5	24.7
Iceland	95.8	97.5	1.7
Netherlands	18.2	59.4	41.2
France	32.3	47.4	15.1
China	31.7	54.3	22.6
USA	18.2	33.5	15.3
Australia	24	52.5	28.5

The table shows global renewable capacity for the electricity sector, in percentage terms, highlighting strong growth in many countries led by the Netherlands, Australia, Oceania, Denmark and the UK.

Wind Power Generation

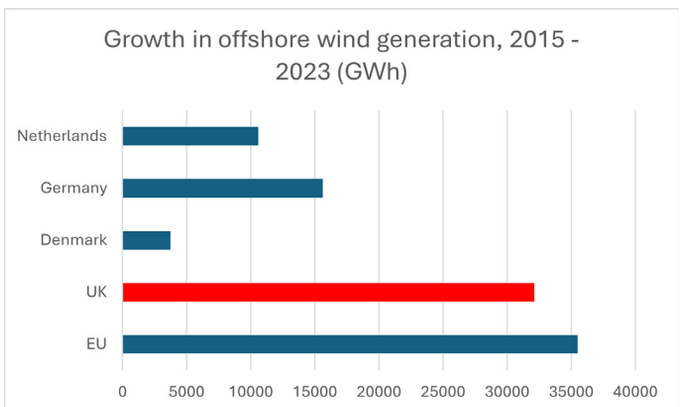
The figures for solar PV show that China has led the world internationally in growing deployment of the technology in terms of capacity, followed by the USA and EU, with the EU tripling deployment from 2015 to 2024 but Australia also growing rapidly – it is estimated that in the region of 30 – 40% of Australian households now have solar installed indicating would could be achieved. UK deployment grew by 86% from 2015 to 2024.

	2015	2024	MW Change	% Change
World	225,719	1,866,300	1,640,58	727
EU	86,604	304,412	217,808	251
UK	9,601	17,881	8,280	86
Germany	38,601	89,943	51,342	133
Netherlands	1,526	24,048	22,522	1476
Poland	103	20,199	20,096	19511
China	43,549	887,100	843,551	1937
USA	23,442	177,594	154,152	658
Australia	5,036	35,865	30,829	612

Table showing solar PV capacity 2015 – 2024 and Growth rates, highlighting high growth globally, with all other selected countries having grown more quickly

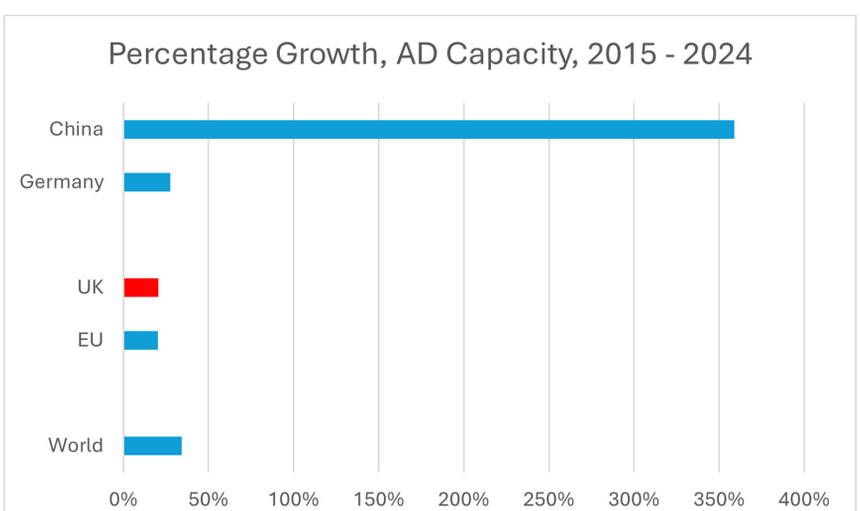
Wind

The UK is a leader on offshore wind deployment, with the highest capacity in Europe, but our North Sea neighbours have ambitious targets and China has over 40GW installed capacity with incredible growth rates (over 9,000% since 2015). UK offshore wind growth (32,127 GWh) has been the largest in Europe since 2015 and almost equivalent to the entire EU, illustrating the benefits of supportive policy, but it is worth noting that the percentage increases in the EU as a whole has been higher (20% vs 184% and the Netherlands generation growing by over 900%) which suggests other countries are also prioritising the technology.



Anaerobic Digestion (AD)

Anaerobic Digestion capacity (for biomethane generation) worldwide has increased due to the range of co-benefits and stable generation profile. There has been growth in many markets since 2015, notably in Germany (28%) and China (359%), which accounts for the majority of growth in the wider EU. The UK has seen growth but to a lesser extent, from 1.6GW in 2015, to 1.9GW by 2024 – an increase of 21%, just over the EU's 20%.



Growth in AD biomethane generation capacity in selected countries from 2015 to 2024, percentage terms.

Deployment: Heat & Cooling

Renewable Heat Deployment Summary

In 2024, renewable heat flatlined from the year before to remain at 9.4% of total demand – although the sector has increased from providing 3.7% of the UK's heat demand in 2013.

Bioenergy continues as the dominant source of low-carbon heat in the UK, and biomass boiler installations that use sustainable wood chips, pellets, or waste wood, are the majority. One third of this comes from stoves and associated installations, which act as top up or secondary heating devices in homes and this may highlight the recent growth in wood burners for example.

Anaerobic digestion remains a vital sector, with most of its renewable heat generation delivered as biomethane-to-grid, but future growth relies on the need for stronger policy support for biomethane production, especially with the Green Gas Support Scheme ending in 2028.

9.4%

OF ALL UK HEATING CONSUMPTION SUPPLIED FROM RENEWABLES

Heat pumps deployment remains far below the now revised downwards target of 450,000 heat pumps per year by 2030 set by the government in the Warm Homes Plan. Deep geothermal heat remains an underutilised resource, generating only around 9.6 GWh per year. The potential for geothermal heat in the UK is significant, and with adequate government support, several shovel-ready projects could be quickly deployed.

Overall, heat remains one of the most challenging sectors to decarbonise, with substantial policy gaps, particularly in commercial and industrial situations.

Deeper Insight:

Anaerobic Digestion Summary

Growth continues within the Anaerobic Digestion (AD) sector, however, the deployment of plants since the closure of the Feed-in Tariffs (FiTs) and non-domestic Renewable Heat Incentive (RHI) has continued to be slow. This is because capital expenditure and operational expenditure costs have been compounded by rising costs due to high inflation and supply chain issues that have arisen since Covid and Brexit.

There has been a slight increase in AD heat generation since 2022, due to the processing of outstanding RHI applications, as a handful of biogas plants were granted extensions to their applications post the closure of the non-domestic RHI in March 2021. Secondly, some plants will have come online since the introduction of the Green Gas Support Scheme (GGSS) in November 2021. However, due to limitations of the GGSS, growth has not been significant in the sector.

There is significant potential to increase biogas output and improve the UK's energy security – the Green Gas Taskforce estimates that up to 120TWh of biomethane could be produced from sustainable feedstock that could be used to decarbonise the heating sector without any downstream adaptations or building fabric upgrades [1].

[1] Green Gas Taskforce, 2025, GGT-Unlocking-the-Potential-of-Biomethane.pdf

Deeper Insight:

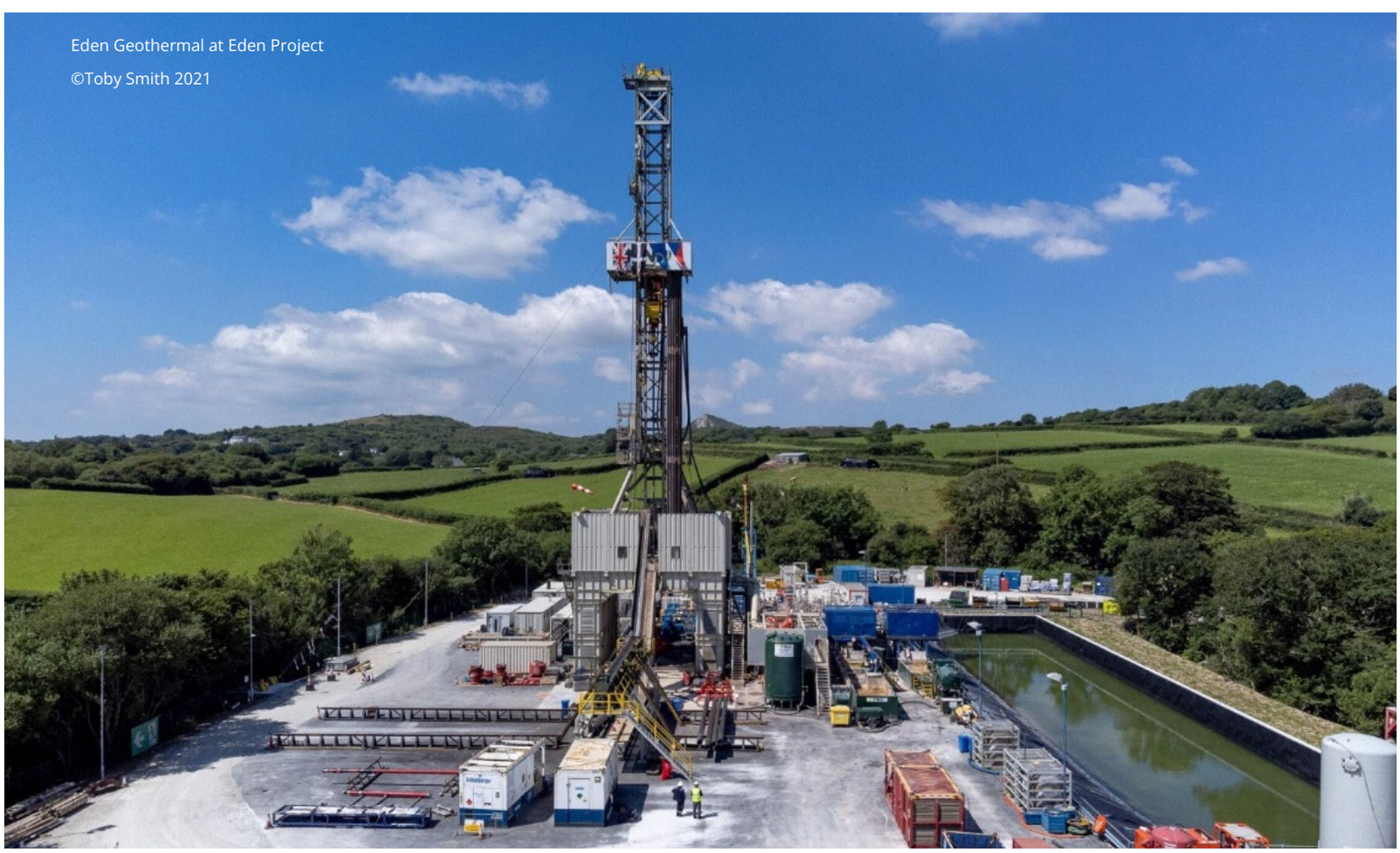
Deep Geothermal

Renewable heat generation from deep geothermal has remained negligible this year as with previous years, virtually unchanged.

In recent years we have seen some progress however, with Allocation Round 5 of the Contracts for Difference scheme awarding the first geothermal power projects comprising three projects delivering a total of 12 MW of capacity by 2027. There are also Geothermal heat network projects planned and a burgeoning pipeline of projects.

The REA continues to champion the geothermal sector, in 2025 combining forces with the GEEA association and continuing to be the Secretariat to the UK's All Party Parliamentary Group (APPG) on Deep Geothermal.

REA would like to see the Government develop a Deep Geothermal Strategy, which would set out national targets for heat and power from the technology, and the policies and funding mechanisms that will enable industry to deliver these targets.



Eden Geothermal at Eden Project

Deeper Insight:

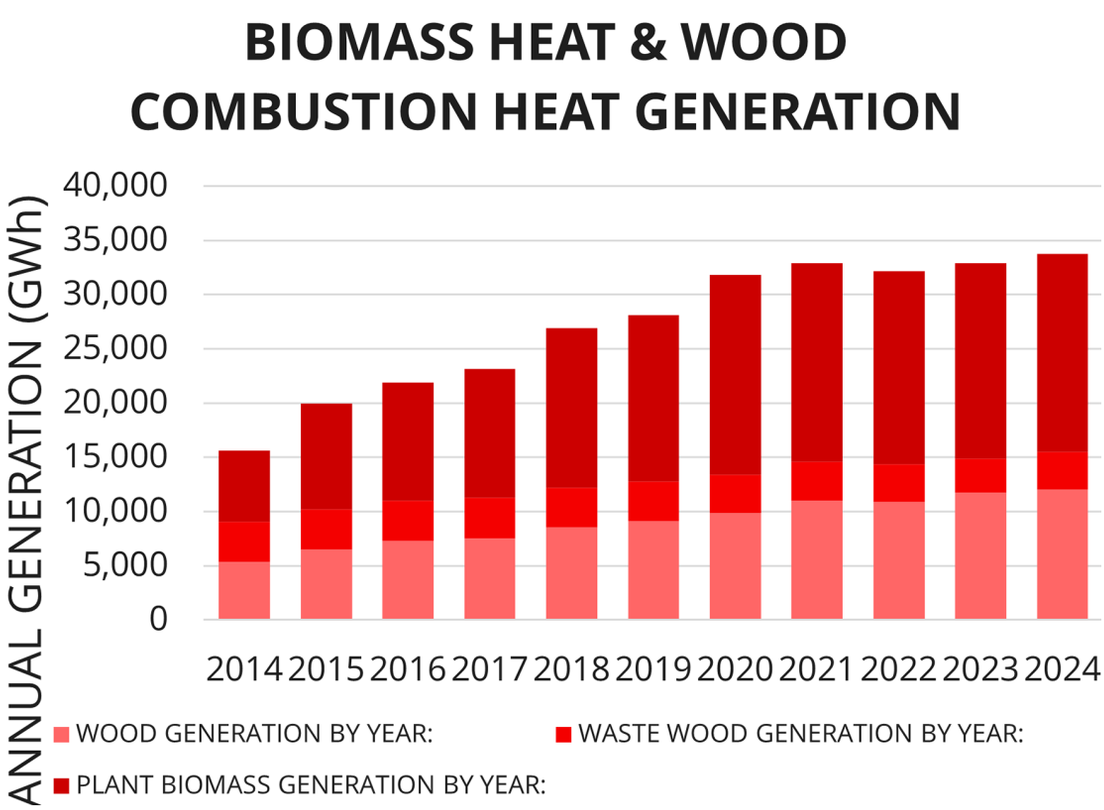
Biomass and Wood Combustion

Biomass Heat and Wood Combustion to Generate Heat

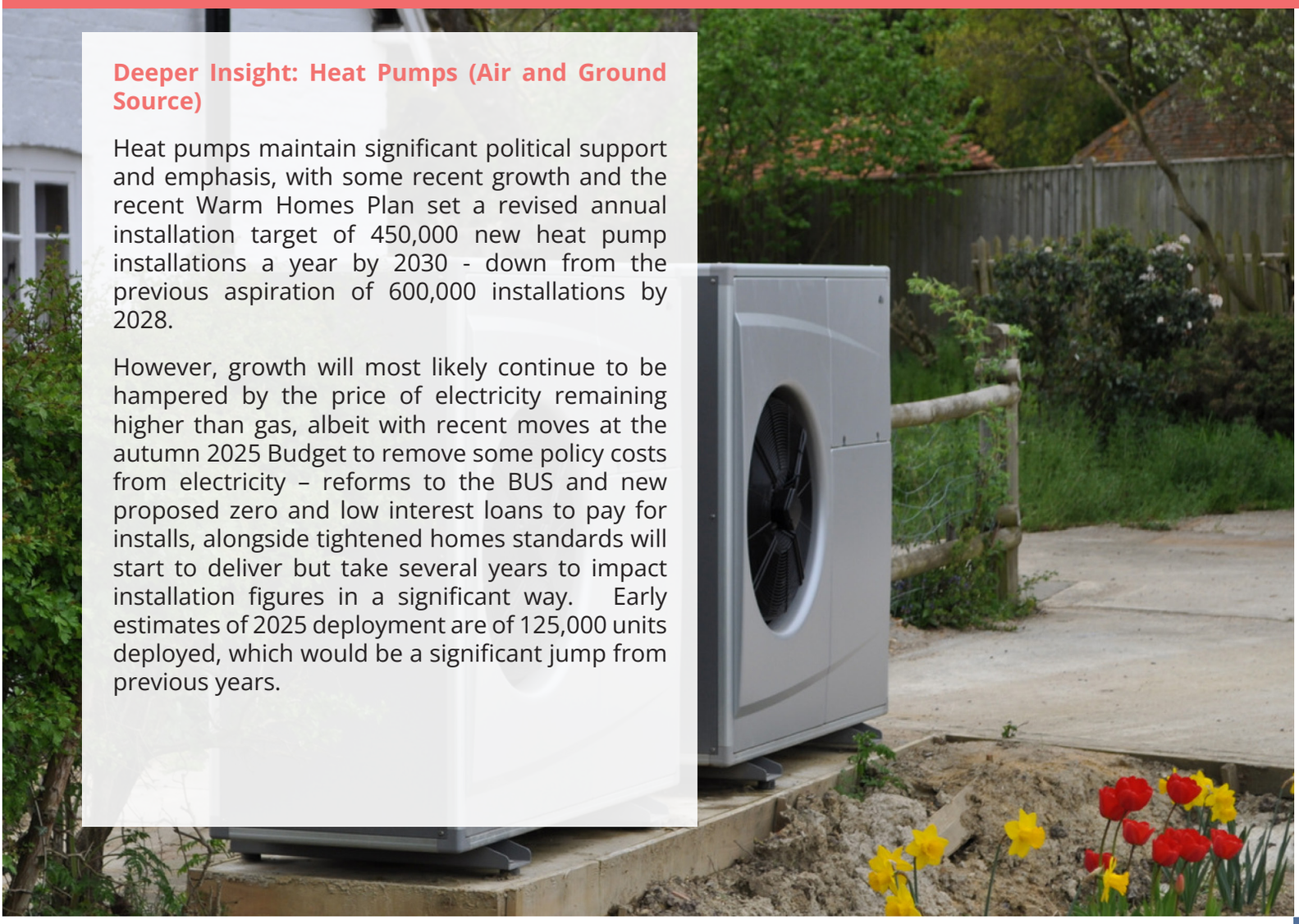
The sector has increased generation slightly from 2023 to 2024 and biomass remains the biggest contributor to the decarbonisation of the UK's heat sector. The Boiler Upgrade Scheme (BUS) continues to support the cost of a biomass boiler installation and there have been a few hundred biomass boiler grants. Also, the number of installations accredited under the non-domestic Renewable Heat Incentive (RHI) have slightly risen in the past couple of years due to re-accreditations of relocated or replaced boilers, as well as the processing of outstanding applications, including those, that under specific circumstances, were given an extended deadline (until April 2023) to submit an application.

Generation from sustainable wood and plant biomass has increased, and waste wood generation has remained consistent.

In terms of future deployment, the Warm Homes Plan could be beneficial for the technology in future years, and the development of new heat networks under a renewed policy push in the past year. However, Government has signalled that deployment for the sector should be centred around use at the hardest to decarbonise, off-gas grid properties - albeit this represents up to 4 million homes in the UK.



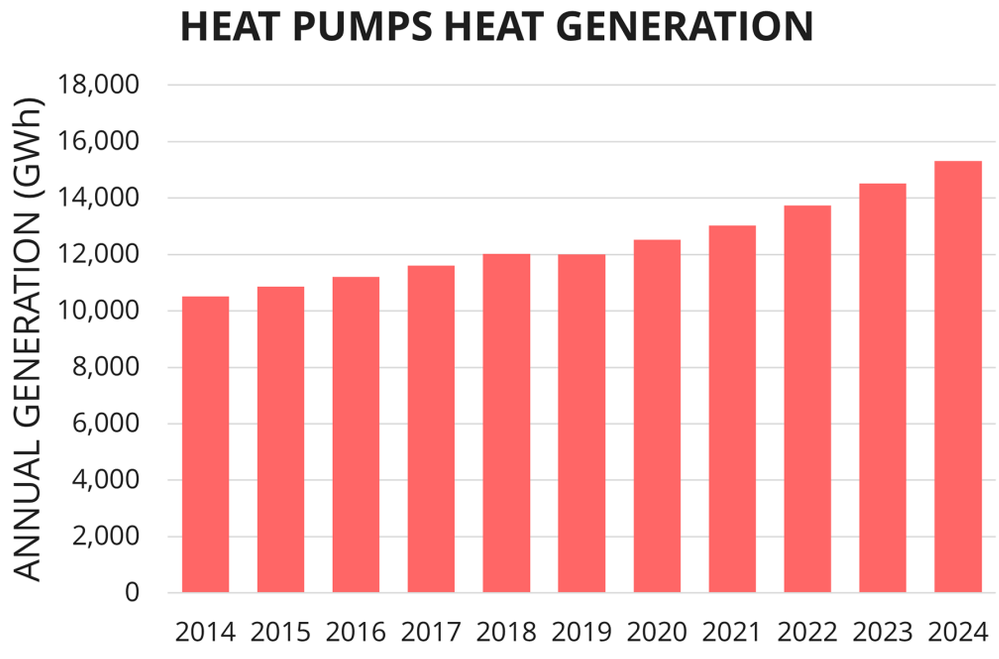
The chart shows the increasing amount of biomass heat and wood combustion heat generation over the past decade. Altogether, biomass and wood combustion heat increased by 2.6% on the previous year.



Deeper Insight: Heat Pumps (Air and Ground Source)

Heat pumps maintain significant political support and emphasis, with some recent growth and the recent Warm Homes Plan set a revised annual installation target of 450,000 new heat pump installations a year by 2030 - down from the previous aspiration of 600,000 installations by 2028.

However, growth will most likely continue to be hampered by the price of electricity remaining higher than gas, albeit with recent moves at the autumn 2025 Budget to remove some policy costs from electricity – reforms to the BUS and new proposed zero and low interest loans to pay for installs, alongside tightened homes standards will start to deliver but take several years to impact installation figures in a significant way. Early estimates of 2025 deployment are of 125,000 units deployed, which would be a significant jump from previous years.



The chart shows the increasing amount of heat generated from heat pumps over the past decade. In 2024, heat pumps generated around 15,000 GWh of heat, up from 13,744 GWh, an increase of 5.48% on the previous year.

Deeper Insight: Waste-to-Energy (including Animal Waste Derived Biomass, Energy from Waste and Landfill Gas and Sewage Sludge Digestion)

As in previous years, waste-to-energy remains asmaller but important producer of heat for the UK, contributing c.16% of renewable heat generation in 2024 (up from 15.7% in 2023).

Despite another fall in bioliquid heat generation, resulting in a slight overall decrease in waste-based heat generation, this has remained relatively stable across other technologies in the category.

Energy from waste (EfW, by which we mostly refer to incineration) continues to be the most significant heat source within the group, contributing around 3,700 GWh (around 40% of which was from biodegradable waste). We may see some limited further increases in heat contributions from EfW plants in coming years given current policy direction, e.g. inclusion in heat network zoning plans or potential incentivisation via the UK Emissions Trading Scheme, all aimed at encouraging greater heat offtake from EfW plants.

Sewage gas continued to be the second-largest form of waste-based heat generation. Continuing high fossil gas prices have raised the value of low carbon gas options, encouraging further investment in their use.

NB: animal waste derived biomass includes poultry litter, meat and bone. Energy from waste includes waste (including waste wood), tyres and hospital waste, primarily incinerated. Waste-based does not include anaerobic digestion (AD) as this is treated separately and can be seen earlier in this section.

Heat Deployment - International

Overall deployment

Data for international comparisons is limited and we focus here on Europe and heat pumps for that reason. Overall, while the UK saw a flatlining from 2023 to 2024, the EU increased renewable heating and cooling by 0.5% to 26.7% of total consumption on average across the EU27. This is compared to an 11.4% total in 2004.

The countries with the lowest share of renewables are Ireland (7.9%) and the Netherlands (11.3%), while Sweden (67.8%), Finland (62.6%) and Latvia (61.8%) have the highest levels.

In terms of growth per country, 16 EU countries increased their share of renewable heat and cooling sources in 2024, Malta (6.0 %), Luxembourg (3.7 %) and Denmark (1.9 %) being the top three. [1]

Territory	Total heat pumps	Unit sales in 2023	Total units installed per thousand people	Sales, 2023, per thousand people (1)
EU	19800000	2640000	44	31
Germany	2100000	437000	47	11
France	6000000	720000	191	17
Denmark	659000	57000	212	13
Norway	1600000	144000	632	48
Netherlands	528000	167000	63	15
UK	435000	60000	19	3.5

Sales of heat pumps, selected European countries, 2023

The market for air and ground source heat pumps is focused mainly on air source heat pumps across the EU and the UK. In Europe there has been a much higher level of support over the last two decades than in the UK, so the markets in countries such as Denmark, Norway and France are more mature. They are currently showing lower levels of percentage growth than the UK, though the unit sales in 2023 still far outstrip those in the UK. The last year of full data is for 2023.

It is noticeable that smaller Nordic countries such as Norway and Denmark, where there are weather conditions considerably colder than the UK in winter, have a larger deployment in both unit sales and per capita numbers than the UK. This may also reflect the different house building standards seen there, which helps the effectiveness of heat pumps.

The UK market is growing but is still a long way from the levels seen in Europe where the market growth is slowing down mainly because the market is already quite large and therefore considered mature. Where there is growth in Europe is in larger scale heat pump systems supporting heat networks.

Solar Thermal

Territory	Total installed capacity (Mth)	Total installed area (m2)
EU	62604	89,000,000
Germany	15818	22,597,857
France	1735	2,479,098
Denmark	1265	1,806,586
Netherlands	467	667,280
UK	663	946,461

Total installed capacity (MWth) in 2024 and total installed area in m2, selected European territories.

Solar thermal represents an anomaly for renewables - globally there has been a 50% decrease in sales of solar thermal technologies from 2015 to 2024. This is partly because certain markets are quite mature now and there is a move to other technologies such as heat pumps or hybrid systems using heat pump technology which are classed as heat pumps. For a European comparison the installed capacity in the UK is 1% of the European total. Denmark with a population less than 10% of the UK has twice the installed capacity. Denmark actually has 10 of the 20 largest solar thermal systems globally which illustrates their innovation and commitment to renewable energy technologies. This is mainly driven by their lack of fossil fuel and natural resources.

The removal of support via the RHI for solar thermal technologies in the UK combined with increased support for heat pumps have led to a decline in the UK market which is currently following the global trend of decreasing sales year on year.

[1] Eurostat, 2026, Small increase in renewable heating & cooling in 2024 - News articles - Eurostat

Circular Bioresources

Natural Resources and the Circular Bioeconomy

Circular Bioresources refers to the management of biodegradable wastes and materials. This includes composting, aerobic and anaerobic digestion.

For this report, the REA has compiled key content relevant to the UK's and Europe's bio-waste sectors from a selection of readily available and fairly recent published reports – but as highlighted in previous reports, UK waste and recycling datasets specific to biowaste treatment have been phased out since 2010 due to budget cuts and post-Brexit reporting changes.

Local Authority organic waste collections in the UK

Collection Type	England	Scotland	Wales	Northern Ireland	Total
Garden waste	262	14	22	1	299
Food waste	143	22	22	6	193
Food and garden waste together	33	13	0	11	57

Total number of Local Authorities = England – 317, Scotland – 32, Wales – 22, Northern Ireland – 11.

Source: WRAP LA portal https://laportal.wrap.ngo/uk/scheme/search

Please note this section does not cover collections of organic wastes from non-local authority sources, e.g. commercial, industrial, business and non-governmental organisations, nor agricultural sector organic wastes. In this report, organic means biodegradable.

We anticipate a substantial increase in food waste from Local Authority collections in England from March 2026 due to forthcoming Simpler Recycling requirements for households. From 31st March 2026, organic waste collections must be offered to all households in England (except those Local Authorities with transitional arrangements). Specifically, food waste must be collected at least weekly and free of charge to the householder. Garden waste collections must be made available upon request. Each local authority will have the discretion to choose whether to collect food and garden waste together or separately. This will result in a significant change to the above data from April 2026.

Amount of household food (and drink) waste in the UK

Focusing on food and drink waste from all waste streams, 6.0 million tonnes arose from UK households in 2022 – that's around 210 kg per household or 88 kg per person per year.

Of this, 4.4 million tonnes (73%) comprised edible parts, such as bread, meat, the edible parts of fruit – often referred to as avoidable food waste. The remaining 27% were parts of food generally considered inedible, such as eggshells, bones, and inedible peels of fruit and vegetables – unavoidable food waste. By weight of edible parts wasted, fresh produce was the most wasted food category, followed by meals (homemade and pre-prepared), bakery, and dairy and eggs.

5.0 million tonnes of these wastes were collected by Local Authorities, often as part of the general waste with 3.9 million tonnes in residual bins, ending up incinerated or in landfill. Around 850,000 tonnes were collected for composting or anaerobic digestion (AD). One million tonnes were disposed down the sewer or home composted.

This shows there is a huge potential for more food waste to be captured through separate collections and sent for anaerobic digestion and composting. The introduction of food waste collections under Simpler Recycling regulations should see increased tonnages of separately collected food waste.[1]

1. Source: https://www.wrap.ngo/resources/report/household-food-and-drink-waste-uk-2022

Material collected and going to in-vessel composting	Median (£/t)	Mean (£/t)	Range (£/t)
Mixed food and green waste	73	73	44 to 82
Green waste only	57	55	21 to 73
Food waste only	72	72	65 to 75

Material collected and going to Anaeorbic Digestion	Median (£/t)	Mean (£/t)	Range (£/t)
Food waste only	24	26	42 to 78

Residual waste going to Energy from Waste (EfW) facilities had a median gate fee of £121/t (range of £69-158/t). The median gate fee for non-hazardous landfill facilities was £26/t (range £16-59/t) plus standard rate landfill tax of £126.15/t.

Whilst the WRAP Gate fee report does not cover garden waste going to open windrow composting, Let's Recycle publish gate fees for a range of different materials, including the gate fee for sending garden waste to open windrow composting. In the year 2025, the gate fees ranged from £21-40/t.

Sending food and garden waste to energy from waste and / or landfill is considerably more expensive that sending it to composting or AD. Following the introduction of the Simpler Recycling collections, there is potential for Local Authorities to save considerable amounts of money on waste disposal costs if food waste is collected separately and does not remain in the residual waste bin.

Source: WRAP Gate fees report

2024-25 https://www.wrap.ngo/sites/default/files/2025-09/WRAP-Gate-Fees-Report-2024-25-v2.pdf

Country	Total number of permitted composting facilities	Total number of permitted AD facilities
England	230	220
Northern Ireland	11	47
Scotland	18	30
Wales	18	21
Total	277	318

Note: these figures do not include the numerous AD facilities registered as exempt from having a permit or waste management licence (e.g. certain small-scale or 'on-farm' facilities).

Source: REAL's annual report: https://www.qualitycompost.org.uk/upload/ccs_annual_report_2024_digital_final.pdf

Production of certified compost and digestate under the Compost Certification Scheme and Biofertiliser Certification Scheme

Certified composting

According to REAL, who administers the Compost Certification Scheme (CCS) in the UK, in 2024 there were 173 certified composting processes, processing over 4 million tonnes of source-segregated biodegradable wastes and producing over 2 million tonnes of compost annually. There were 133 certified processes in England, 21 in Scotland, 13 in Wales and 5 in Northern Ireland (with 1 in Ireland).

Country	Total number of permitted composting facilities	Total number of permitted AD facilities
England	230	220
Northern Ireland	11	47
Scotland	18	30
Wales	18	21
Total	277	318

Source: REAL's CCS & BCS Annual Report 2024

Certified compost produced

Composting sites in England produced over 1.6 million tonnes per annum (tpa) of certified compost and represented 80% of total output, Northern Ireland produced 180,000 tpa (9%), Scotland produced 120,000 tpa (6%) and Wales produced 62,000 tpa (3%). The most common end market was agriculture and soil-grown horticulture across all four countries of the UK, accounting for around half or more of certified composts. This was followed by land restoration and then domestic or professional horticulture and forestry which received far fewer tonnes of certified compost. According to Defra's figures on the annual use of peat and alternatives in the UK horticultural market, in 2023, 190,000 cubic metres of compost from green waste was used in retail and professional horticulture. Our assumption is this was certified compost.

Certified Anaerobic Digestion

According to REAL, who administer the Biogas Certification Scheme (BCS) in the UK, there were 105 certified operators on the BCS, processing 6 million tpa and producing 5 million tpa of biofertiliser (quality and end-of-waste certified digestate). There were 78 certified sites in England, 7 in Northern Ireland, 11 in Scotland and 9 in Wales.

Certified Digestate produced

Total digestate output across all countries was approximately 5.0 million tonnes per annum. Whole digestate (unseparated) was the most common certified output and, as expected, accounted for the highest percentage, at 65%, of total certified digestate tonnage produced. Separated liquor digestate accounted for 31% and separated fibre digestate for 4% (the lower tonnage of separated fibre can be partly attributed to its significantly lower water content compared with whole and separated liquid digestates).

Whole digestate is the most widely supplied product, primarily directed to agriculture, with smaller volumes supplied to land restoration and forestry. Separated liquor follows a similar pattern, though with a slightly higher proportion reaching non-agricultural markets. Separated fibre has the most concentrated supply to agriculture, with limited distribution to other sectors.

Production of non-certified composts and digestates

In the UK, numerous other composting and AD processes annually produce significant quantities of non-certified composts and digestates from source-separated biodegradable wastes that are spread to land under regulatory control. There are many AD processes also feed in purpose-grown crops to produce biogas or boost the amount of biogas that can be produced from manures, slurries and crop residues; these processes most commonly operate at small scale, on farms.

There is also a small number of composting and AD processes that are part of Mechanical and Biological Treatment facilities; their biological processes treat the biodegradable fractions mechanically separated from residual wastes.

This report by the REA does not include figures on these parts of the UK's composting, AD and MBT sectors due to challenges with identifying and compiling relevant, clear recent data from multiple sources.

Circular Bioresources deployment - International

Circular Bioresources materials used - INTERNATIONAL

It should be noted that waste data has a significant lag and that this data therefore relates to 2022, the most recent data available. International data is mostly available for Europe.

The European Compost Network (ECN) published a data report in 2022 estimating that 71 million tonnes per annum (tpa) of separately collected bio-wastes were treated through composting and Anaerobic Digestion. These estimates included both municipal and commercial/industrial bio-wastes. The municipal biowaste was approximately 47 million tonnes. Considering the total 71 million tpa, approximately 42 million tpa (59%) was sent to composting and 29 million tpa (41%) sent to anaerobic digestion.

There was a large variation in the amount of separately collected bio-waste treated per person in individual countries, ranging from a minimum of 28 kg/capita/annum to a maximum of 328 kg/capita/annum. Overall, composting treated on average 72 kg/capita/annum and AD 48 kg/capita/annum. Green, garden and food waste were the dominant feedstocks at composting sites, whilst food waste and 'other' non-specified wastes dominated at AD sites.

There were an estimated 5,800 bio-waste treatment facilities in the 27 EU Member States, Switzerland, Norway and the UK, of which 3,800 (66%) were composting and 2,000 (34%) were anaerobic digestion facilities. On average, each composting facility treated 8,000 tpa of bio-waste, whilst each AD facility treated 13,000 tpa. Similarly, each composting facility served approximately 120,000 people, whilst every AD facility served approximately 225,000 people. These differences probably reflect the differing levels of automation and economies of scale for the two different treatment types. In terms of bio-waste, 88% of composting facilities treated solely bio-waste, whilst 48% of AD facilities treated only bio-waste and no other feedstocks.

An estimated 21.1 million tpa of compost was produced. Agriculture was found to be the dominant market segment for both compost and anaerobic digestate, although sale prices were far below their theoretical potential, with digestate commanding either a zero or negative price (EUR 0 to minus 10 per tonne) and compost having a weighted average price of only EUR 10.1 per tonne (fresh mass) across all market sectors.

Source: European Compost Network, ECN, https://www.compostnetwork.info/download/summary-of-2022-data-report/

Transport Summary - UK

Transport decarbonisation has started to flatline, despite some major achievements - a total of 6.2% of the UK's transport energy demand in 2024 was met from renewable sources, up only slightly from 6% in 2023. This is despite surging zero emissions vehicles (ZEVs) sales, comprising (in 2025) around 1 in 5 new car sales.

Around 473,000 new battery electric vehicles (BEVs) were registered in 2025, up from over 381,000 new BEV sales in 2024, as well as 167,178 Plug-in Hybrid Electric Vehicle (PHEV) sales. This was almost four times higher than in 2020 and there were a number of contributing factors to this, including the first year of the ZEV Mandate targets coming into place, set at 28% in 2025 (and 22% in 2024) of new car sales. Electric van numbers have also increased rapidly, to more than 75,000 such vehicles in the UK by the end of 2024, though are still below the ZEV Mandate target level.

The sector still suffers from some misinformation (particularly concerning the availability of public charging infrastructure) and unfavourable public charging costs compared to home driveway refuelling due to higher VAT rates.

To ensure that consumers have somewhere to charge, the REA's EV Forum (RECHARGE UK) has campaigned to accelerate chargepoint installation. In the last year Government progressed reforms to street works licensing and permitted development rights, which was welcome. However the LEVI local EV charging funding rollout is still encountering problems while the Rapid Charging Fund has not allocated any funding and therefore not unlocked any further strategic charging sites on the motorway network.

Accelerating chargepoint rollout such as cross pavement and shared chargers is essential to give consumers the confidence to go electric.

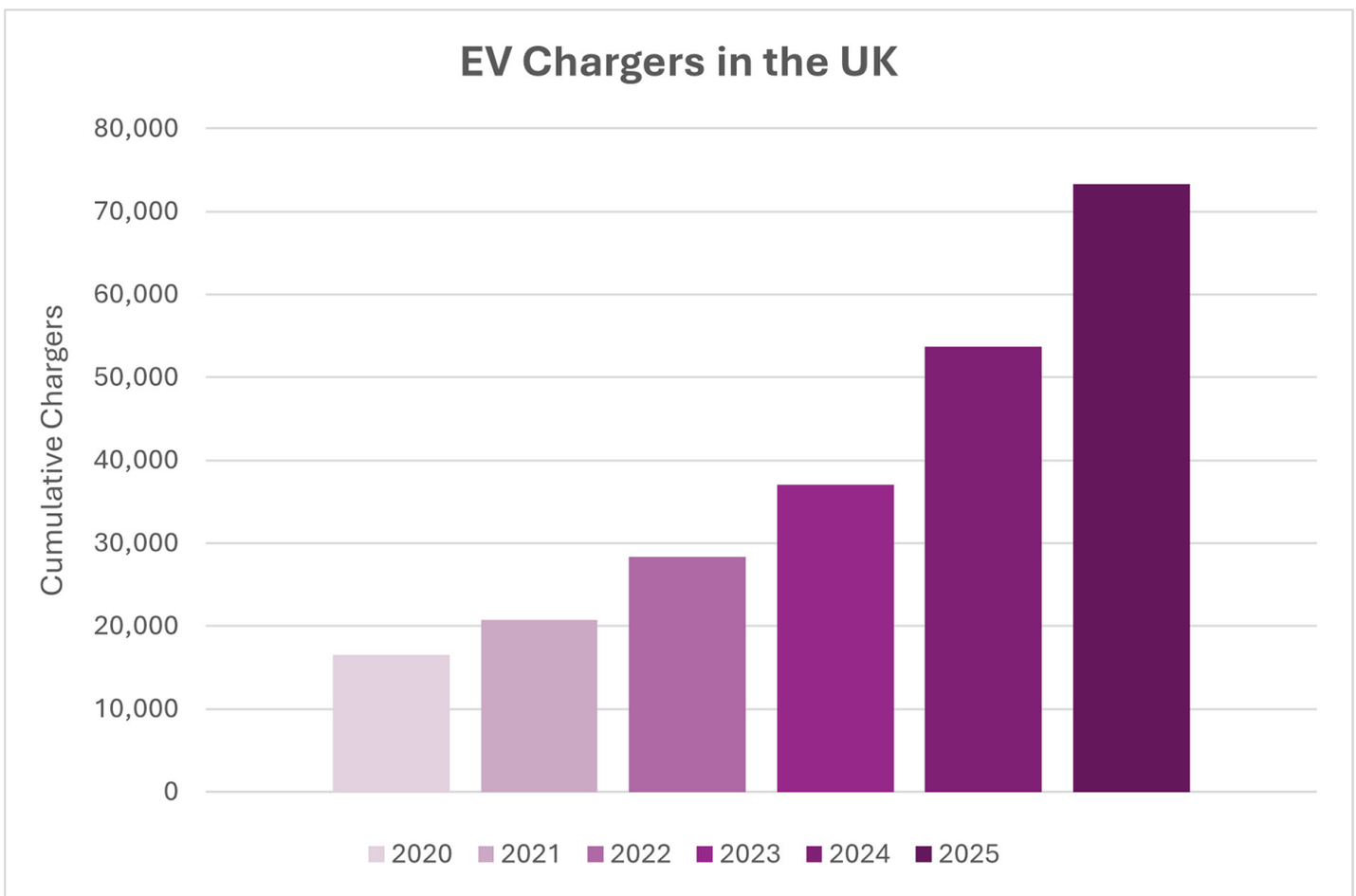
EV Car Sales	2020	2021	2022	2023	2024
PHEV	66,877	114,080	101,413	141,311	167,178
BEV	108,205	191,175	267,203	314,684	381,970
Total Car Sales	175,082	305,255	368,616	455,995	549,148
EV Cumulative					
	2020	2021	2022	2023	2024
Total EV Vans	5,266	18,025	34,769	55,022	75,531
Total EV Vehicles	439,568	744,823	1,113,439	1,569,434	2,118,582

UK new Electric Car and Van registrations in the past five years, and cumulative total of BEV and PHEV cars

Electric Vehicle Chargepoints

By the start of 2026 there were 88,000 public chargepoints installed in the UK, up from 73,334 public chargepoints in 2024, which was in turn, up by almost 20,000 from the previous year. Geographically, London had the majority of chargers, at over 22,000, in 2024, followed by the South East at 9,067 units - with relatively fewer in the north of England and devolved nations. At around 6,000 and 3,000 each, Scotland and Wales combined was only just greater then the total in the south east of England.

Even when adjusting for population and built-up area sizes, this highlights the uneven distribution of much of the charging network and the need to address this – something the Government's LEVI scheme aims to start to overcome.



The chart shows the increase in electric vehicle charging devices over the past five years. By the start of 2025, 73,334 devices were installed. This is up from a combined total of 44,020 in 2023

Renewable Transport Fuels

In 2024 renewable fuels made up 8% of total road fuels supplied, which was unchanged from the year before, saving on average 77% in GHG emissions compared to the use of fossil fuel supplies (inc ILUC considerations). Deployment of renewable transport fuels in the UK is almost entirely driven by the Renewable Transport Fuel Obligation (RTFO), which doubled the obligation level in 2023, to 10% of petrol supplied at the pump.

Biodiesel (22% of RTFO supplies) and bioethanol (39% of RTFO supplies) retained their standing as supplying the largest volume of certified fuel in 2024. HVO has seen considerable growth, to 22% of RTFO supplies in 2024 and other forms of renewable fuels are also increasing, such as biomethane and bioLPG. For example, there are over 2,000 CNG Heavy Goods Vehicles operating in the UK, in early 2026, using biomethane delivered via the gas grid and refuelling at a growing number of dedicated refuelling stations.

Transport - International

TRANSPORT – INTERNATIONAL, FOCUSSING ON EVs

Globally 17 million EVs were sold in 2024 with China by far the largest market for EV sales at 11.3 million followed by the USA at 1.5 million. 50% of car sales were EVs in China but only 10% in the USA.

In 2024 the UK sales of EVs was similar to that of Germany and above that of France. However both Germany and France had started to wind down subsidies and financial support for the purchase of EVs and the UK had started to ramp up support and targets for the sales of EVs which was supported by the industry.

Sales in 2024 - BEVs & PHEVs		
	Total ('000)	**% Cars sold**
Global	17,000	
China	11,300	50
USA	1,500	10
Germany	570	20
France	450	28
Netherlands	197	51
Norway	114	95
UK	550	27

EV sales globally 2024, totals and percentage of new car sales

In the UK the percentage of EV sales overall was 27% whereas in Germany it was 20% and in the Netherlands a relatively high 51%. Norway has the highest percentage of EV sales at 95% of all car sales – Denmark and Sweden also have high levels of EV vs Internal Combustion Engine car sales at 56% and 60% respectively.

China dominates the sales of EVs with 66% of global EV sales. There are also 70,000 electric buses and 450,000 electric light cargo vehicles (ELCVs) in China. In contrast there are 120,000 ELCVs in Europe and 8,400 in the UK.

There are estimated to be 58 million EVs in operation globally.

Electric Vehicle Charge Points

EV Chargepoints globally, 2024	
Country	**Chargepoints**
UK	74,000
France	155,000
Germany	160,000
Netherlands	180,000
USA	200,000
China	3,700,000
Global	5,000,000

EV chargepoints globally, 2024

In 2024 there were 1.3 million EV Chargepoints installed worldwide. China has the highest number installed globally, at 3.7 million while the Netherlands has the highest number of publicly available chargepoints installed in Europe with 180,000 – over twice the number that the UK has installed.

Finance Summary, 2023/24

This year's REview provides an overview of estimates of UK full-time employment and market value, of the sector and a range of sub-sectors, while for the first time also including data for select international countries, as a comparison. In another landmark moment, for the first time we estimate that the sector now employs more people than the oil and gas sector, by around 30,000 Full Time Equivalents.

We estimate over 145,000 people were employed in the renewable energy and clean technology sector in 2023/24, growing by 1.6% compared to the previous year – the REA projects that this could increase to over 265,000 by 2035 (excluding energy storage and flexibility services). The market value of the sector is projected to increase by 68% from £24.4bn to almost £54bn over the same period. This could accelerate even further, with a marked increase in market value by 2050 of £23.4 billion per year and employment increase of 123,495. These are potentially significant increases and show what could be achieved with increased levels of investment.

The backdrop of geopolitical tensions, policy uncertainties both at home and abroad, and a myriad of other challenges faced by the market such as import tariffs, grid bottlenecks, planning restrictions and supply chain disruptions, have created a challenging picture for investment.

But the energy transition in the UK and many areas of the world, continues apace, showing incredible resilience despite these headwinds. While growth has moderated compared to the post-pandemic rebound years, the sector expanded by 4.8% in market value and 1.6% in employment, confirming its position as a large, established part of the UK economy rather than a niche. Around 6,900 companies are now active across the renewable energy supply chain. Globally, the first half of 2024 alone saw $313 billion in new global investments in renewable energy technologies - a true testament to the momentum now in place.

The pace of this change must now accelerate. Many of the challenges that have impacted investor confidence in the last twelve months remain pertinent. International factors, especially political change in the US and the European drive for more energy independence have been key.

The economic risks of inaction are becoming increasingly evident. Nature degradation alone is projected to result in a reduction of UK GDP of around 12% over the coming decades, exceeding the economic impacts of both the global financial crisis and the COVID-19 pandemic. Against this backdrop, delays driven by political uncertainty or short-term considerations represent a material risk to long-term economic resilience.

Public finance continues to play an important role in catalysing private investment. The establishment of Great British Energy signals a renewed commitment to public participation in the energy system and provides an opportunity to de-risk strategically important areas of the transition. To avoid crowding out private capital, public funding is most effective when targeted at higher-risk sectors that struggle to attract commercial investment alone, including marine renewables, hydrogen, carbon capture and storage, and long-duration energy storage technologies.

However, public intervention alone is insufficient. Sustained private sector investment depends on a stable and predictable policy environment. Industry continues to emphasise the importance of clear market signals, consistent support mechanisms and long-term visibility over future frameworks. While progress has been made in some areas, uncertainty remains around future Contracts for Difference timelines and the treatment of assets reaching the end of existing support schemes, including Renewable Obligation contracts from 2027 onwards.

It is also important to look ahead to future challenges on the horizon. Competition for capital will grow. While clean energy technologies are making significant strides, they are now competing with artificial intelligence (AI) for venture capital, amongst other technological advances. Equity raised by climate-tech firms only made up 12% of the total global venture financing in the first half

of 2024, down from 16% in the same period in 2023, with many favouring the higher returns and quicker paybacks often associated with AI ventures. What's more, this rapid growth of AI technologies is being followed by an expansion of power-hungry data centres, something the REA's work now seeks to tackle and this could become a significant market opportunity for renewables co-located at such sites, or Corporate PPAs to serve them.

It is only through continual action, greater policy certainty and wider public support that we will continue to de-risk the sector, positioning the UK as a leader in the green economy.

United Kingdom	**2023/24**	**2023/24**	**2023/24**
Renewable Energy Sub Sectors	**Sector value (£'millions)**	**Employment Numbers**	**Company Numbers**
Air & Ground Source Heat Pumps	2,072	11,396	538
Anaerobic Digestion	457	3,363	161
Biofuels	3,177	13,995	655
Biomass Boilers	1,056	7,371	338
Biomass CHP	425	2,752	166
Biomass Dedicated Power	921	5,736	242
Energy from Waste	1,391	9,286	431
Hydro	769	6,141	304
Offshore Wind	7,485	33,405	1,156
Onshore Wind	3,952	23,258	1,034
Solar PV	1,244	9,324	851
Solar Thermal	391	5,135	289
Wave & Tidal	148	887	55
Production of biomass including wood for fuel	2,066	13,232	675
Totals	**25,554**	**145,281**	**6,895**

Market values, employment and active companies by sub-sector, UK

Looking Forward

Future Market Value & Employment Projections for UK Renewable Energy Technologies

The UK's renewable energy sector is on a trajectory for substantial growth by 2035, supported by both technological advancements and policy frameworks. We have assessed the projected market value and employment figures across various renewable energy technologies, providing a comprehensive analysis of each. These technologies are critical to achieving the UK's net zero targets and will play important roles in the energy transition.

Note: these projections are provided by our report partner Innovas and do not necessarily reflect REA's views on each technology's future pathways and development.

Air and ground source heat pumps

Air and ground source heat pumps are expected to grow by 141% in market value, increasing from £1,748 million in 2022-23 to £4,215 million by 2035. Employment is also projected to rise from 11,334 full-time equivalents (FTEs) to 16,147 FTEs, representing a 42.4% increase. The rapid expansion is driven by government incentives and policy focus on decarbonising heat. While the Government's target of 600,000 heat pump installations per year is unlikely to be met, ongoing support under the boiler upgrade scheme and requirements for new build homes and buildings to install low carbon heating will further boost the number of heat pump installations each year.

Air and ground source heat pumps

Anaerobic Digestion (AD) technology, used for generating energy from organic waste, is projected to grow moderately. Market value has previously been expected to increase from £437 million to £753 million by 2035, reflecting a 72.3% increase while employment is expected to rise from 3,324 to 3,400 FTEs, a 2.3% increase. However in the last 12 months the outlook for AD, and biomethane specifically, has changed significantly. Previous Government estimates of potential feedstock was for a range of 30-40 TWh of biomethane potential but new research suggests there could be up to 120TWh of feedstock potential. NESO's FES 2025 Holistic Pathway included up to 60TWh of biomethane in the energy system to meet net zero in 2050. Additionally there is a greater role for the biomethane byproduct which is liquified bioCO2 which could be sent for CCS delivering one of the cheapest and easiest forms of negative GHG emissions through BECCS. To realise this potential market value the Government must recognise the potential and support it through the future support framework consultation due in spring 2026.

Biofuels

The biofuels sector, which saw a significant recovery post-Covid, will experience slower growth moving forward, as the electrification of transport increases. Market value will rise from £2,496 million to £4,042 million by 2035, an increase of 61.9%, but employment is expected to rise only slightly from 14,581 FTEs to 14,933 FTEs. The transition to electric vehicles will likely limit the growth of biofuels, especially in road transport, although biofuels will continue to play an important role in decarbonising sectors like aviation, HGVs and shipping.

Biomass Boilers

Biomass boilers, which provide heating using organic material as fuel, will see steady growth, with market value expected to rise by 59.1%, from £1,175 million to £1,870 million by 2035. Employment will rise from 7,726 to 8,351 FTEs, an 8.1% increase. Biomass boilers will continue to play an important role in providing an alternative to fossil fuels for heating, particularly in off-grid locations. However, changes in policy support, for example in the devolved nations (Scotland's Heat in Buildings Bill), could hamper further growth.

Biomass Combined Heat and Power (CHP)

Biomass CHP is expected to see modest growth, with its market value increasing from £924 million to £1,308 million by 2035, a 41.5% rise. Employment will increase by 6.5%, from 5,726 to 6,101 FTEs. While CHP systems remain efficient for producing both heat and power, their future growth may be constrained by wider supply chain constraints.

Dedicated Biomass Power

The market value of dedicated biomass power will increase by 58.2%, rising from £911 million in 2022-23 to £1,441 million by 2035. Employment will increase marginally from 5,726 to 5,946 FTEs. However it is likely that there will be significant market growth and increased employment provided as biomass power generators transition to Bioenergy Carbon Capture and Storage (BECCS).

Energy from Waste (EfW)

Energy from Waste (EfW) is another key technology for waste management and energy production. Its market value will increase from £1,355 million to £1,966 million by 2035, a 45.1% rise. Employment will see moderate growth, from 5,253 FTEs to 5,943 FTEs, representing a 13.1% increase. EfW will remain an important part of the waste sector and could see further growth via the retrofitting and deployment of carbon capture and storage technologies, like BECCS, on sites.

Hydropower

Hydropower is one of the more mature technologies in the UK's renewable energy mix and is expected to see steady but modest growth. The market value will increase by 19.7%, from £763 million to £915 million by 2035, while employment will rise from 6,119 FTEs to 6,306 FTEs, a 3.1% increase. Hydropower's growth is constrained by geographical limitations and the relatively high cost of new developments, but it remains a reliable and consistent source of renewable energy.

Offshore Wind Energy

Onshore wind, like offshore wind, is likely to see further growth because of renewed, supportive Government policy. Market value will increase by 41.8%, from £3,867 million to £5,482 million by 2035. Employment will rise by 25.7%, from 22,953 FTEs to 28,853 FTEs.

Solar PV

Solar photovoltaic (PV) technology is set for substantial growth, with market value rising from £1,177 million to £2,100 million by 2035, an increase of 78.4%. Employment is expected to rise from 9,880 FTEs to 18,374 FTEs, a 85.9% increase. The decreasing cost of solar PV systems, combined with supportive Government policy, has made solar PV an attractive investment, particularly when paired with battery storage.

Solar Thermal

Solar thermal is expected to grow modestly. Market value will increase by 6.2%, from £502 million to £533 million by 2035. Employment will increase slightly from 5,593 FTEs to 6,358 FTEs by 2035, a 13.7% rise. The closure of the Renewable Heat Incentive (RHI) and move towards heat pumps is likely to limit significant growth in solar thermal deployment.

Wave & Tidal Energy

Wave and tidal energy are still to be deployed widely, but show good potential for future growth. By 2035, the market value could be expected to rise by 53.4%, from £161 million to £311 million, while employment is projected to grow from 934 FTEs to 1,159 FTEs, a 24.1% increase. Large-scale deployment has yet to occur, but advances in technology and investment in R&D could see wave and tidal play a larger role post-2035.

Production of Biomass Including Wood for Fuel

The production of biomass, including wood for fuel, is expected to grow from £1,725 million to £3,098 million by 2035, an increase of 79.5%. Employment is forecast to rise from 12,718 FTEs to 16,309 FTEs, representing a 28.3% increase. The Government's support for Carbon Capture and Storage technologies like BECCS is likely to lead to a further demand for biomass production.

Conclusion

By 2035, the UK renewable energy sector could see significant growth, with offshore wind, solar PV, and air source heat pumps leading the way in terms of market value and employment creation. More established technologies, such as hydropower, biomass boilers, and energy from waste (subject to policy decisions), will likely continue to grow but at a slower pace. With a suitable GGSS successor scheme and the right support, the AD sector could also grow strongly. Overall, the sector will play a vital role in the UK's transition to a low carbon economy, enhancing energy security, providing jobs, and increasing investment in the UK. Overall, under realistic pathways, the sector could employ around 265,000 people by 2035 and its market value double, to £54 billion.

RENEWABLE ENERGY MADE IN BRITAIN

Employment and market value by region and technology 2023/24

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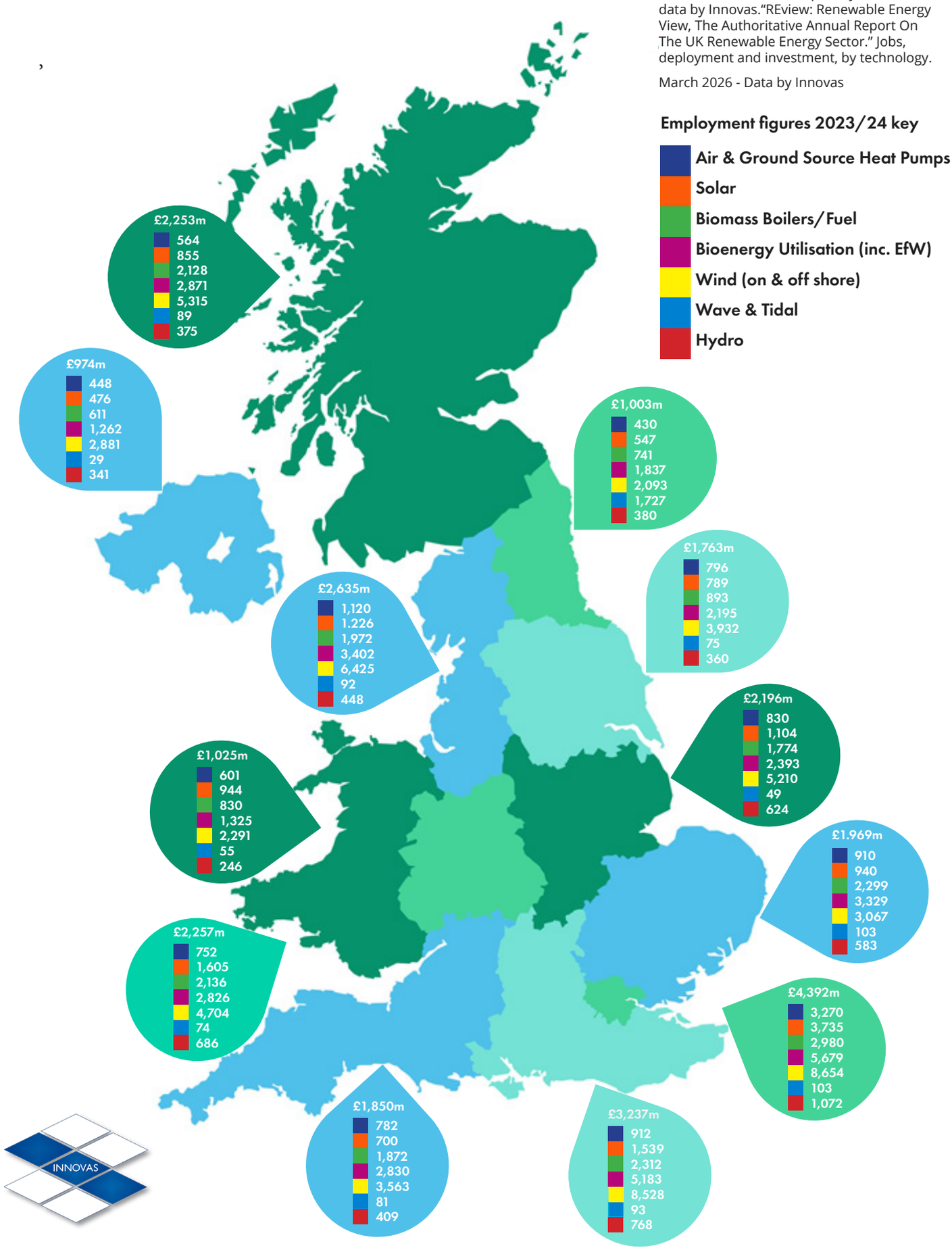

Made in Britain Map - employment and market value by region 2023/24 as published in REA's REview 2025. Report by the REA, data by Innovas."REview: Renewable Energy View, The Authoritative Annual Report On The UK Renewable Energy Sector." Jobs, deployment and investment, by technology.

March 2026 - Data by Innovas

RENEWABLE ENERGY EUROPEAN JOBS

REA

Employment by country and technology 2023/24

European Jobs Map - employment by country and technology 2023/24 as published in REA's REview 2025. Report by the REA, data by Innovas."REview: Renewable Energy View, The Authoritative Annual Report On The UK Renewable Energy Sector." Jobs, deployment and investment, by technology.

Employment figures 2023/24 key

- Solar
- Anaerobic Digestion
- Wind (on shore)
- Wind (off shore)
- Hydro

INNOVAS

Methodology

Deployment (Data & Growth Projections)

The intention of this report is to present the latest data from authoritative sources on renewable energy generation, renewable transport usage, and organic waste recycling, accompanied by qualitative analysis of trends, driving market and policy factors, and progress in renewable energy and clean technology compared to other countries.

The Deployment section is divided into sections based on the REA's strategic 'pillars' (Power & Flexibility, Heat & Cooling, Transport, and Circular Bioresources) with an international comparison for each. Unless otherwise stated, all data is annual and at the UK level.

Power & Flexibility

Power & Flexibility data focuses on renewable electricity generation, and is sourced from Energy Trends (ET), chapter 6, subsection 1. ET is a quarterly report on the supply and demand of all major energy sources in the UK, published by the Department for Energy Security and Net Zero.

European data comes from the EUROSTAT figures for European renewable power deployment.

Heat & Cooling

Heat & Cooling data focuses on renewable fuel used to generate heat and is sourced primarily from the Digest of UK Energy Statistics (DUKES) chapter 6, subsection 5, published by DESNZ. Most of the data is self-explanatory.

The exception concerns grid-injected gasses, specifically biogas from anaerobic digestion and sewage gas. Once these biogases are injected into the grid, they are blended with other gases, including conventional natural gas.

REview uses annual factors from DUKES chapter 4, subsection 2, on the fraction of the gas grid used for heating, thereby assuming that biogas is evenly mixed across the entirety of the gas grid and sums the product of grid-injected biogas and the annual gas grid heating factors to the biogas heat generation figures.

European data comes from the EUROSTAT figures for European Union Heat and Cooling energy sources.

Transport

The transport section covers three considerably different technologies: zero emission vehicles (ZEVs), Electric Vehicle (EV) chargepoints, and renewable transport fuels (RTFs).

ZEV data considers the number of new registrations per year of Battery Electric Vehicles (BEVs) and Fuel Cell Electric Vehicles (FECV, Hydrogen). Market shares are the sum of new registrations as a percentage of total new road vehicle registrations. Data is sourced from VEH 1153, a vehicle registration dataset published by the Department for Transport (DfT).

EV chargepoint data considers the total number of devices active in the UK, and the total number of rapid devices active in the UK. Data is sourced from EV charging device statistics, recompiled quarterly by DfT (Electric vehicle public charging infrastructure statistics: October 2025), in turn sourced from Zap-Map. The overall trends are based on summed totals from all local authorities, on the last publication of each calendar year.

RTF data comes from two sources. The first, covering just the two largest biofuels by volume (bioethanol and biodiesel), is sourced from ET chapter 6, subsection 2, published by DfT, and covers the annual consumption of biofuels in million litres.

The second is data published under the Renewable Transport Fuels Obligation (RTFO). RTFO data is published in five provisional reports and one final report over the course of the calendar year.

This is why REview looks at all RTFs as a percentage of total RTF volumes certified under the RTFO each year. By assuming that there is no bias between fuel types for when in the calendar year they report their volumes, the latest data (2024) can be considered in the report. RTFs considered individually are those which constitute at least 1% of total certified RTFs; the remaining RTFs are grouped together.

Circular Bioresources

Data on Circular Bioresources comes from a number of sources: the now NGO, WRAP; publicly available data published in the Compost Certification Scheme (CCS) and Biofertiliser Certification Scheme (BCS) annual report, published by Renewable Energy Assurance Ltd. (REAL); and the Waste Data Interrogator (WDI), published by the Environment Agency (EA).

Figures from the CCS & BCS Annual Report are aggregated across the four regions of the UK. For European statistics, there is a lack of robust data but these are sourced from the European Compost Alliance (ECA)'s most recent available data (2022).

Innovas Solutions Ltd – Methodology for Forecasting and Renewable Energy Soft Market Intelligence

Forecasting - The standard forecasting is based on a combination of:

• Historical trend analysis of actual figures with previous forecasts to assess accuracy from the data sources;

• Confirmed planned deployments of renewable energy technologies;

• Planned and speculative deployments of renewable energy technologies;

• Government policies and environmental targets;

• Analysis of future global markets based on environmental targets;

• Technology assessment i.e. solar thermal being partially replaced by heat pump technology.

Modelling of different jobs numbers is based on different scenarios dependent on policy support provided.

This is augmented by sense checking with current specialists in the various technology areas. These can be used to accurately forecast the cost and employment levels of specific technologies against specific deployment levels with a high degree of accuracy. Employment forecasts don't take into account displacement from other industry sectors.

Statistics referring to total or total regional employment and market value are for technologies including: Air & Ground Source Heat Pumps, Anaerobic Digestion, Biofuels, Biomass Boilers, Biomass CHP, Biomass Dedicated Power, Energy from Waste, Hydro, Offshore Wind, Onshore Wind, Solar PV, Solar Thermal, Wave & Tidal, and Production of Biomass Including Wood. Statistics referring to total or total regional employment on market value are for all previously mentioned technologies as well as Energy Storage and Flexibility Services.

The methodology for international renewable energy capacity and generation is exactly the same as DUKES uses for UK figures and is provided by IRENA and as for DUKES, is done on an annual basis. DUKES feeds into this dataset. Innovas then use modelling based on the UK employment figures and deployment/build levels for each technology where data is available for each country to estimate what the employment levels are.

This then is sense checked and verified using European and country specific sources which are reliable and use similar definitions to the UK for the technologies involved. Solar PV, onshore/offshore wind, hydro and AD are straightforward as these are distinct well recognised and defined technology areas. Biomass and any bioenergy technologies have different sector definitions across Europe and are therefore challenging to make direct comparisons with any degree of confidence.

Abbreviations

AD	Anaerobic Digestion
BCS	Biofertiliser Certification Scheme (administered by REAL)
BEV	Battery Electric Vehicle
BMW	Biodegradable Municipal Waste
BECCS	Bioenergy Carbon Capture & Storage
BUS	Boiler Upgrade Scheme
CBR	Circular Bioresources
CCC	Climate Change Committee
CCS	Compost Certification Scheme (administered by REAL)
CCUS	Carbon Capture Usage and Storage
CfD	Contract for Difference
COP 28/29	28th and 29th Conference of the Parties to the United Nations Framework Convention on Climate Change
DESNZ	Department for Energy Security and Net Zero
DEFRA	Department for Environment, Food and Rural Affairs
E5 / E10	5%/10% Bioethanol blend in standard petrol supplies
EA	Environment Agency
ECO	Energy Company Obligation
EfW	Energy from Waste
ETRI	Energy Transition Readiness Index (REA report)
EU	European Union
EV	Electric Vehicle
FiT	Feed-in-Tariff scheme
FTE	Full-time equivalent (number of people employed)
GWh	Gigawatt Hour
HBS	Heat and Buildings Strategy
HGV	Heavy Goods Vehicle
IBA	Incinerator Bottom Ash metals
KPI	Key Performance Indicator
MBT	Mechanical Biological Treatment
MT	Metric Ton
MWh	Megawatt Hour
NDRHI	Non-Domestic Renewable Heat Incentive
NRW	Natural Resources Wales
Ofgem	Office and Gas and Electricity Markets
R&D	Research and Development
REA	The Association for Renewable Energy and Clean Technology
REAL	Renewable Energy Assurance Ltd
REMA	Review of Electricity Market Arrangements
RHI	Renewable Heat Incentive
RO	Renewables Obligation
RTF	Renewable Transport Fuel
RTFO	Renewable Transport Fuels Obligation
SAF	Sustainable Aviation Fuels
SEPA	Scottish Environmental Protection Agency
Solar PV	Solar Photovoltaic
ULEV	Ultra Low Emission Vehicle
VAT	Value Added Tax
WFD	Waste Framework Directive
WRAP	Waste & Resources Action Programme (waste NGO)
WDI	Waste Data Interrogator
WtE	Waste to Energy

With thanks to our Patron members:

Patron members are sector leading organisations supporting the REA's belief that renewable energy and clean technology is central to the UK's future growth, prosperity and energy security.

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Policy advocacy: We press government to ensure there is a progressive policy and regulatory landscape. By doing so we create new markets, scale existing markets and address barriers to investment. This means members can have the confidence to invest and grow. We are also there to head-off unnecessary policy and regulatory burdens thereby avoiding costs to members.

Networking opportunities: We connect REA members with industry leaders, experts, and like-minded professionals at exclusive events. This supports your business development and sales activity.

Resources: Members receive a wealth of tools, including research reports, market insights and best practice designed to enhance capabilities and stay ahead of the competition.

Professional development: Our workshops and educational programmes equip your teams with the skills necessary to excel in an evolving industry landscape.

Recognition and support: We increase our members' brand visibility through our promotional channels, and members benefit from dedicated support designed to help achieve organisational goals.

International: Access to international conferences and events, notably Climate Change COPs where the REA is an official partner to the UNFCCC, hosting a pavilion inside the exclusive Blue Zone.

Market entry: For businesses wishing to enter the UK renewables market, whether already based in the UK or abroad, we help with market analysis, regulatory compliance and brand awareness.

Market assurance: Through our subsidiary company REAL, we deliver certification and consumer protection schemes enabling a well functioning market.

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