



SUPPORTING A NET ZERO RECYCLING & WASTE SECTOR

POLICY SCORECARD 2023

CONTENTS

1.	EXECUTIVE SUMMARY	3
2.	THE SECTOR IN NUMBERS	5
3.1	POLICY SCORECARD	7
3.2	THE POLICY SCORECARD EXPLAINED	8
4.1	MAXIMISING RESOURCES, MINIMISING WASTE	9
4.2	DECARBONISING RESIDUAL WASTE	12
4.3	TRANSITIONING TO ZERO-EMISSIONS FUELS	17
5.	ACKNOWLEDGEMENTS	18



1. EXECUTIVE SUMMARY

In 2021, **the ESA committed to achieving net zero by 2040** – ten years ahead of the Government’s target. At the heart of our net zero roadmap is a transition from a linear “take, make, use and throw” society, to an economy that maximises the value of its resources by wasting less, and reusing, repairing and recycling more.

Achieving net zero will be challenging and it will require everyone in our sector to act. In the coming years, the industry and government must together deliver the necessary policy frameworks, market signals and infrastructure needed to support the sector’s transition.

The ESA has developed a “Policy Scorecard” to visualise where regulatory progress is being made and where uncertainty remains.

The sector and Government have both been clear on our respective ambitions to achieve a zero carbon, zero waste society, **but the scale and pace of action has been hindered by a lack of regulatory clarity and certainty.**

Since 2018, the sector has been waiting for clarity over how key Resources and Waste Strategy reforms will be implemented across England. The sector is willing and ready to invest **more than £10 billion over the next decade** in key recycling infrastructure but, without urgent clarity, this cannot be achieved. Every year this is delayed is a lost opportunity for our sector to deliver decarbonisation, green investment and jobs.

By contrast, the pace of policy development to support carbon capture and heat network deployment for Energy from Waste has been welcomed by the sector. The continued progress of the Energy Bill through Parliament will provide the sector with **the clarity needed to invest in the infrastructure to underpin the UK’s green heat and carbon capture ambitions.**



The scorecard and a summary explanation of each policy area are included in this report.

As a result of this analysis, the ESA proposes the following interventions to support circular economy investment and decarbonisation.

1. Urgently deliver consistent kerbside collections for homes and businesses alongside clear binary recycling labelling.
2. Introduce stronger measures to support demand for recycled materials, including a long-term escalator on the plastic packaging tax.
3. Ensure critical safeguards are in place to prevent landfilling or export of waste ahead of the introduction of EfW into the Emissions Trading Scheme in 2028.
4. Deliver a comprehensive biodegradable waste to landfill ban by 2028, as well as clear supporting measures for collection of organic waste.
5. Deliver wider collections and packaging reforms without further delay.
6. Provide support for landfill gas capture following the Renewable Obligation.
7. Continue to deliver essential secondary legislation to enable the deployment of Heat Networks and Carbon Capture from Energy from Waste facilities.
8. Work with industry and Local Government to develop a Decarbonisation Plan for Waste Vehicles.



2. THE SECTOR IN NUMBERS



EMPLOYS MORE THAN **155,800 PEOPLE**¹



URNS OVER AN ESTIMATED **£9 BILLION** EVERY YEAR



BETWEEN 2014 AND 2019, EMPLOYMENT IN THE CIRCULAR ECONOMY **INCREASED BY 19%** - 10% MORE THAN THE MANUFACTURING SECTOR²



62% CONSTRUCTION, DEMOLITION, AND EXCAVATION

IN 2018, THE UK PRODUCED OVER **222 MILLION TONNES** OF WASTE³



19% COMMERCIAL AND INDUSTRIAL OPERATIONS

7%

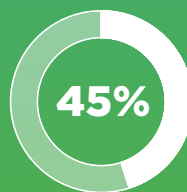
OTHER SOURCES



12% HOUSEHOLDS

IN 2021,

UK households produced **27.7 million tonnes** of waste, of which **12 MILLION TONNES (45%) WAS RECYCLED**



UK waste management facilities processing organic and residual waste generated **12,174 GWh** of renewable electricity, which accounts for approximately **4%** of UK total renewable electricity⁴



12,174 GWH

IN 2022, ENERGY FROM WASTE FACILITIES⁵:

Generated 1.7 GWhth of heat, the equivalent of switching 147,000 homes away from gas

Powered 3 million British homes (9,428 GWh)

Diverted 15.32 Mt of non-recyclable waste from landfill

1 Energy & Utilities Skills Partnership (2020) Workforce Renewal & Skills Strategy 2020-2025.

2 WRAP (2021) Delivering climate ambition through a more circular economy.

3 Defra (2023) UK Statistics on waste.

4 BEIS (July 2022) Digest of UK Energy Statistics: Capacity of, and electricity generation from, renewable sources (DUKES 6.2)

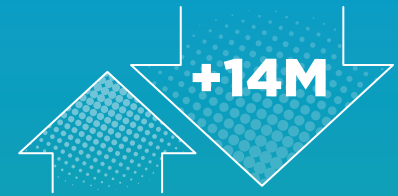
5 Resource Recovery UK (2023) Resource Recovery UK's Manifesto for a Sustainable, Circular Future.



Our sector was found to contribute to **8% OF TOTAL UK EMISSIONS**



In 2018, we contributed to **50 MILLION TONNES OF AVOIDED EMISSIONS -**



exceeding our direct and indirect emissions by **14 MILLION TONNES⁶**

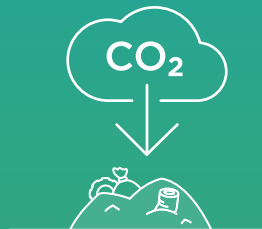
PRIORITY AREAS FOR NET ZERO:

1



INVESTING
IN NEW RECYCLING
INFRASTRUCTURE

2



DECARBONISING
NON-RECYCLABLE
WASTE TREATMENT

3



TRANSITIONING VEHICLES
AND FUEL USE TO
**ZERO EMISSION
SOURCES**

THESE GENERATE BROADER SYSTEM BENEFITS THROUGH:

1



MATERIAL RECOVERY:

Diverting materials to reuse or recycling can offset the need to make new products from virgin materials

2



ENERGY SUBSTITUTION:

Energy created from waste that can offset the need for higher carbon fossil fuel generation

6 Environmental Services Association (2021) A net zero greenhouse gas emissions strategy for the UK recycling and waste sector.

3.1 POLICY SCORECARD

The policy scorecard below provides a quick visualisation of progress against key policy areas to support both a circular economy and decarbonisation efforts in the context of recycling and waste management, as identified in our [Net Zero Strategy](#).

POLICY	COMMITMENT	DETAILS	DELIVERY
Promote waste prevention and reuse	Green	Orange	Orange
Separate collections for key waste streams	Green	Yellow	Orange
Deliver wider Resources and Waste Strategy reforms	Green	Yellow	Orange
Implement a comprehensive organics to landfill ban	Green	Yellow	Orange
Support increase in Landfill Gas Capture rates	Green	Orange	Orange
Facilitate initial deployment of CCS at EfW facilities	Green	Yellow	Orange
Develop heat networks from EfW where feasible	Green	Yellow	Yellow
Support investment in and delivery of a net zero fleet	Green	Yellow	Yellow
Support industrial use of zero-emission fuels	Green	Yellow	Yellow

The scorecard has been developed using a traffic light scoring mechanism to visualise where regulatory progress has been made and where uncertainty remains.

Our analysis shows overwhelming alignment between industry and government in our commitment to reaching Net Zero and broad agreement on how best our sector can achieve this. However, **the scale and pace of action has been hindered by a lack of regulatory clarity and certainty.**

Regulatory intervention in the Recycling and Waste Management sector is spread across several Departments within Government.

Going forward it is essential that we see an even pace of delivery for symbiotic policies across different government departments and that these provide a clear pathway for the industry to invest in technologies that support our mission to achieve net zero emissions, while maintaining the key principles of the waste hierarchy.

These key policy areas will be discussed in further detail in this document.

3.2 THE POLICY SCORECARD EXPLAINED

STATUS	COMMITMENT	DETAILS	DELIVERY
	A clear commitment has been announced by Government that is included within Primary Legislation.	Policy has been developed and is included within secondary legislation.	Industry has been able to invest in key infrastructure at the scale required as a result of supportive and clear regulations.
	A clear commitment has been announced by Government, but it is not yet in Primary Legislation.	Policy is under development. Either in the Call for Evidence or Consultation Phase. It is not yet included within secondary legislation.	Some operators within the sector have been able to invest, but regulatory uncertainty prevents widespread investment.
	No commitment has been made.	No detail or consultation on the detail has been released.	The sector has been unable to invest due to a lack of policy clarity and certainty.



4.1 MAXIMISING RESOURCES, MINIMISING WASTE

POLICY	COMMITMENT	DETAILS	DELIVERY
Promote waste prevention and reuse	Green	Orange	Orange
Separate collections for key waste streams	Green	Yellow	Orange
Deliver wider Resources and Waste Strategy reforms	Green	Yellow	Orange

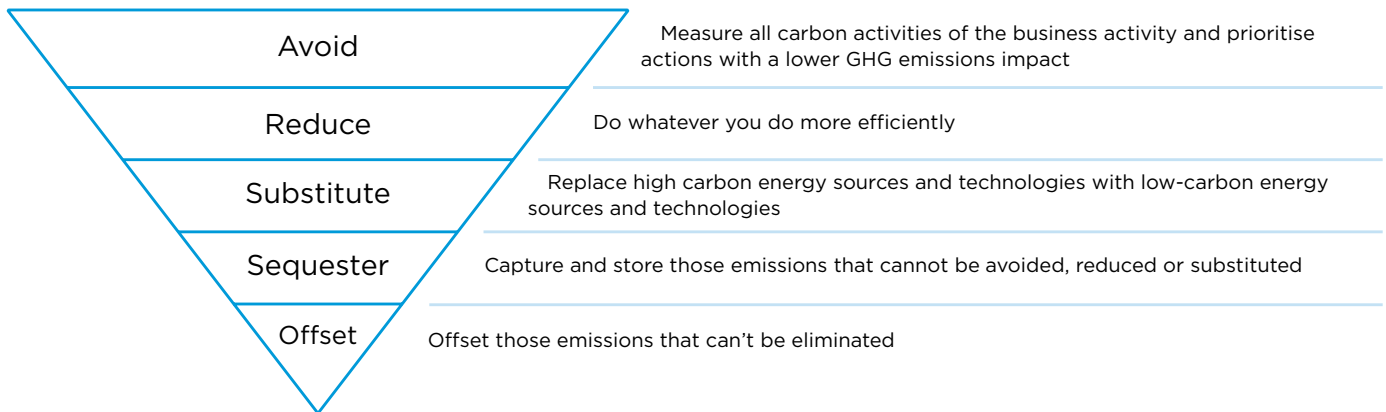
Commitments to reduce waste and increase recycling in Government and the devolved administrations are well established, however now is the time for **urgent delivery**. Achieving a circular economy goes hand in hand with a net zero economy.

Becoming a zero-avoidable-waste society by 2050 requires the UK to move from a linear

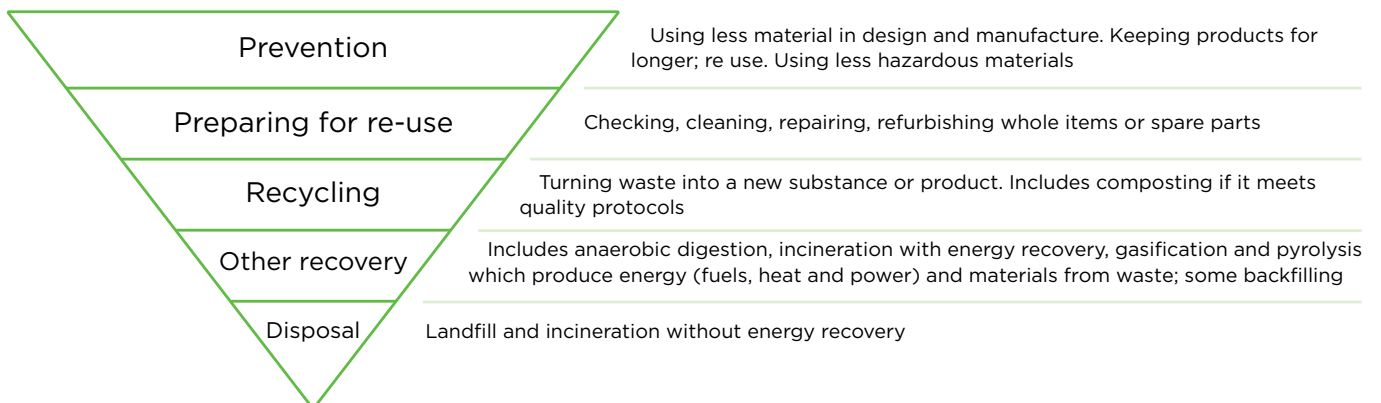
“take, make, use and throw” society, towards an economy that maximises the value of our resources by wasting less, and reusing, recycling, and repairing more.

Following the waste and carbon hierarchies, reducing the amount of waste generated is the single greatest means of reducing emissions associated with recycling and waste management.

The carbon hierarchy



The waste hierarchy



Where possible, we collaborate with producers and policy makers to design waste out of the system and make things as simple as possible for consumers to do the right thing.

Where this is not possible, it is essential that we recycle as much as possible to reduce our burden on the natural environment. This need to support a transition to a circular economy is well established within governmental commitments, however the scale and pace of action has been hindered by a lack of regulatory clarity and certainty.

The *Resources and Waste Strategy*⁷ was released in **2018**. It is now 2023 and the sector is yet to receive clarity on how key reforms will be implemented.

Estimates have found that the delivery of these policies, coupled with measures to increase resource efficiency, could increase GDP by 0.9% by 2035 and create over 200,000 gross jobs in the UK by 2030⁸. This is supported by **the sector's commitment to invest more than £10 billion over the next ten years** to deliver on the Government's recycling ambitions.

The continued delays to deployment of these policies reduces the ability of the sector to deliver these tangible benefits to the economy, the environment and society.

It is essential that the UK government and the devolved administrations provide our sector with confidence that key packaging and recycling reforms **will be implemented without further unnecessary delay**.

In England, **consistent collections hold the potential to deliver a step change in our recycling rate**. This will ensure that, no matter where in the country you are, every household and business can put the same materials in their recycling bin. This must be supported by clear binary labelling showing what can and cannot be recycled, which will help drive up recycling rates by tackling confusion and reducing contamination.

However, two years after consultation, Government is still yet to confirm the materials in scope and how these will be collected. **This uncertainty has undermined the sector's ability to invest** in new sorting and recycling infrastructure, as well as new equipment such as collection vehicles and containers. **Clarity is therefore urgently needed to enable the sector to deliver on the collection consistency agenda in the timescales required**.

As we move to collect and recycle more material under the Government's reforms, it is vital that stronger mechanisms are put in place to **incentivise producers to use more recycled material in their packaging**.

The Plastics Packaging Tax has been a successful first step in driving demand for recycled plastic by requiring producers to include at least thirty percent recycled content in their packaging or face paying a fine. However, this policy can go further to support nascent plastic end markets in the UK.

7 HM Government (2018) Our Waste, Our Resources: A Strategy for England

8 Rt Hon Chris Skidmore MP (2023) Mission Zero: Independent Review of Net Zero

Introducing a **fifty percent recycled content mandate** and an escalating penalty fee will stimulate domestic demand for recycled materials in the UK - re-shoring material currently exported - giving our members confidence to invest in additional plastic sorting and recycling infrastructure. This would reduce our reliance on waste exports and could generate **£8 billion in Gross Added Value and create 60,000 jobs**⁹.

Meeting future targets will be challenging - but will be made easier if the nature and composition of the waste we generate is more recyclable.

Reforms that shift the full cost of collection, sorting, and processing packaging waste back to the producer should enable this by incentivising producers to transition to packaging materials that are easier to recycle and to use less packaging overall.



CALL TO POLICY MAKERS:

- Urgently deliver consistent kerbside collections for homes and businesses alongside clear binary recycling labelling.
- Introduce stronger measures to support demand for recycled materials, including a long-term escalator on the plastic packaging tax.
- Deliver wider Collections and Packaging reforms without further delay.

4.2 DECARBONISING RESIDUAL WASTE

POLICY	COMMITMENT	DETAILS	DELIVERY
Implement a comprehensive organics to landfill ban	Green	Yellow	Orange
Support increase in Landfill Gas Capture rates	Green	Orange	Orange
Facilitate initial deployment of CCS at EfW facilities	Green	Yellow	Orange
Develop heat networks from EfW where feasible	Green	Yellow	Yellow

Managing non-recyclable waste is the second greatest contributor to our emissions as a sector. Minimising the amount of waste that goes to landfill, and decarbonising thermal treatment, will be key to achieving a net zero circular economy. The sector is willing to go further and faster to reduce these emissions, but it will rely upon a supportive and clear policy pathway for the decarbonisation of residual waste.

4.2.1 LANDFILL

Our sector is fundamentally driven by the waste hierarchy. Ensuring the policy environment supports maximising the resource value of waste and reducing the amount of it that goes to landfill is critical to reducing our emissions as a sector.

The waste sector is proud of the 75% reduction in landfill methane emissions achieved since 1990¹⁰- which is the result of reducing the amount of biodegradable waste that goes to landfill while increasing methane capture rates at existing facilities.

In our *Net Zero Strategy*, the sector has committed to building the necessary infrastructure required to divert organic material from landfill by 2025, with a target to implement a comprehensive organics to landfill ban by 2030

across the UK. This commitment is supported by waste targets across England and the devolved administrations – most recently with Defra announcing a Call for Evidence of the near elimination of this waste to landfill by 2028.

To deliver the infrastructure needed to divert this material from landfill, industry seeks further clarity on the future policy treatment of residual waste. Delays and uncertainties in the delivery of these policies will hinder the ability of our sector to invest in key infrastructure.

For example, Scotland’s ban on the landfill of biodegradable municipal waste was set out in legislation in 2012 with the passing of the Waste Scotland Regulations. However, limited clarity in policy deployment led to the implementation date being postponed from 2021 to 2025 thereby undermining investment decisions.

10 BEIS (2022) United Kingdom Methane Memorandum

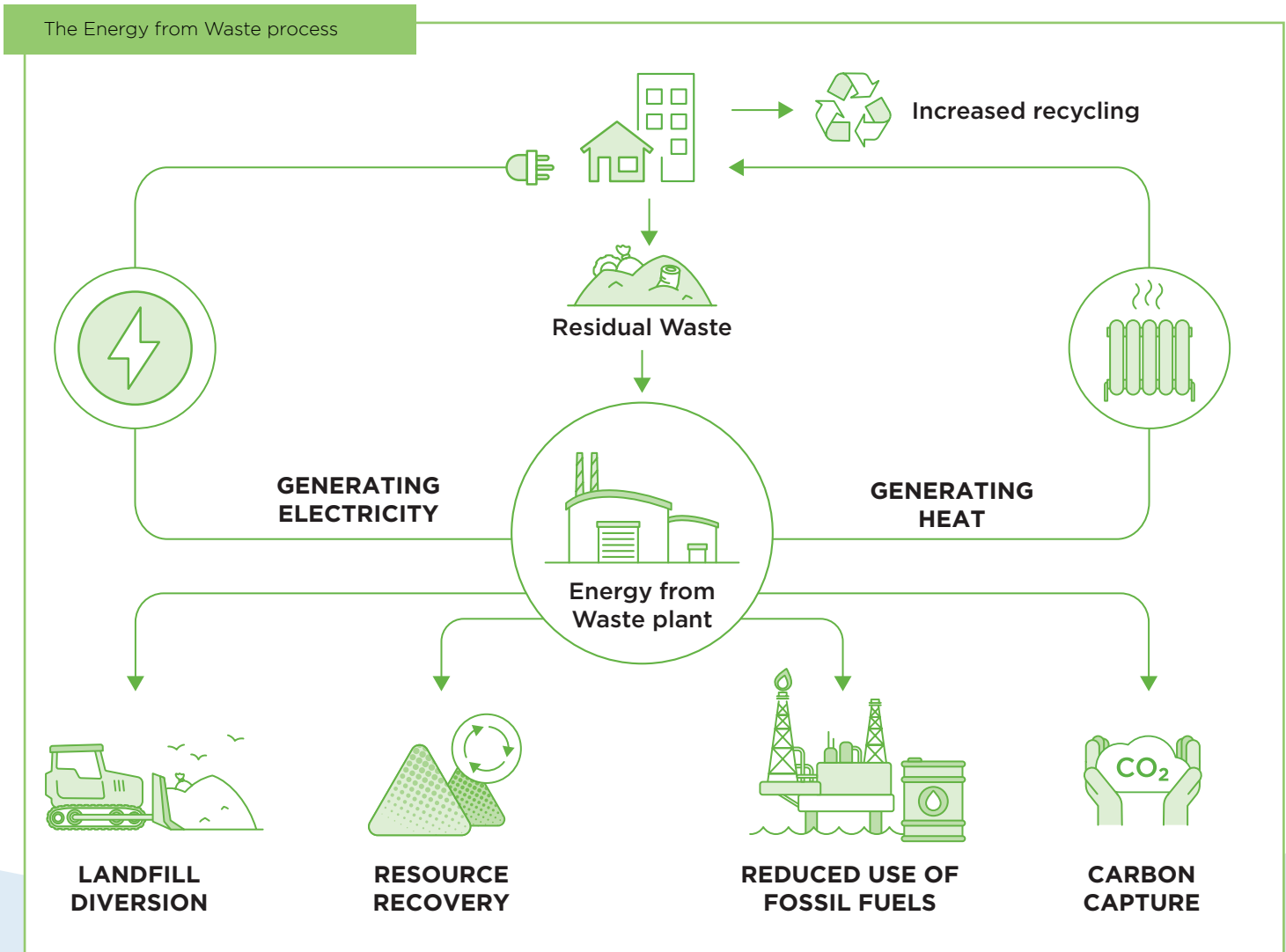
Decarbonising existing landfill sites will rely on extensively capping and capturing any residual methane emissions, where it can be utilised as biomethane in the grid or as transport fuel. One tonne of waste into landfill today will emit greenhouse gases for the next 60 years – for this reason the ESA has committed to an ambitious 85% landfill gas capture rate by 2030.

Support for the capture and utilisation of landfill gas has historically been successfully supported via the Renewable Obligation scheme. However, as of 2027 all support in England will be terminated. The prevailing market prices for landfill gas alone will not be sufficient to incentivise capital and operational expenditure. Going forward, industry would welcome clarity for future support in this area.


4.2.2 ENERGY FROM WASTE

Energy from Waste (EfW) provides an essential sanitation service to society by treating residual waste.


In addition to treating waste, these facilities can also play a significant role in decarbonising other sectors and communities by delivering stable baseload electrical power to the grid; continuous heat to low carbon heat networks; and, when coupled with electrolysers, low carbon hydrogen for use by industry or in transport.



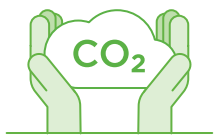
There are three broad ways in which EfW can decarbonise:



1. Removing fossil-based plastics from the waste feedstock by rolling out key recycling and packaging reforms.



2. Increasing the efficiency of the process by generating electricity and heat while recovering key materials.



3. Where feasible, capturing any residual CO2 from the process.

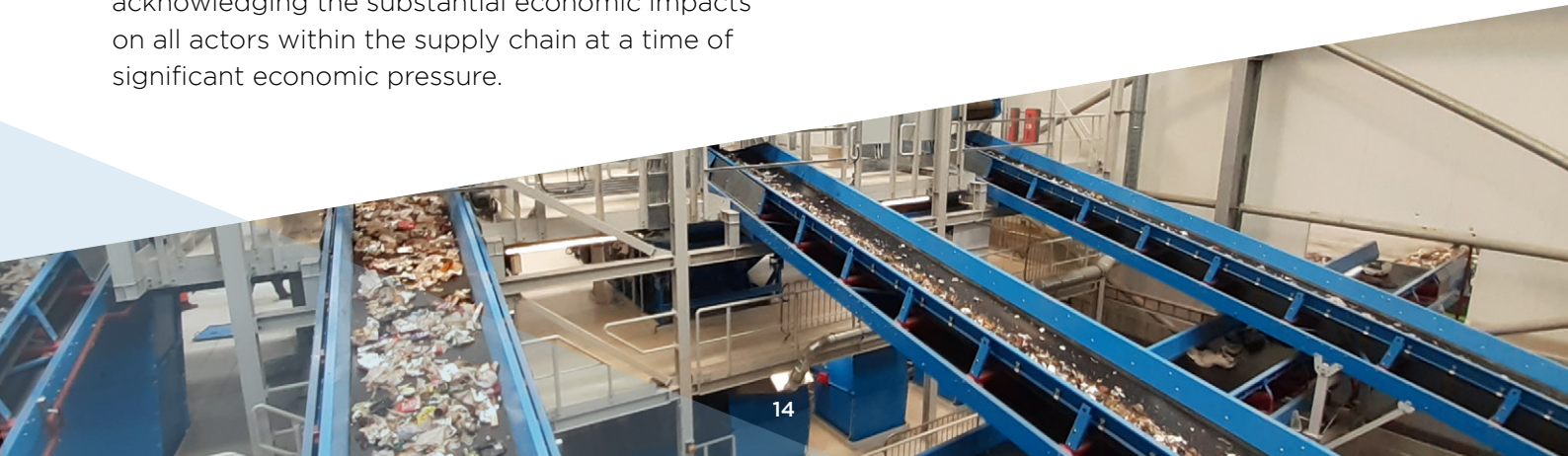
Since the release of our Net Zero Strategy in 2021, there has been **substantial** policy progress and intervention acting upon the EfW industry, the most notable of which is the recent proposed application of the Emissions Trading Scheme to all Waste Incineration and Energy from Waste facilities.

This represents the most significant policy intervention in our sector in a decade. It will fundamentally change the economics of the sector, and impact all stakeholders across the value chain, including local government and the general public.

Carbon pricing can provide a powerful incentive for net zero investment and support delivery against ambitious recycling targets. **It is essential this intervention is applied with the utmost care to avoid waste moving down the hierarchy to landfill or offshore,** while supporting implementation of key packaging and recycling reforms to drive up recycling rates and acknowledging the substantial economic impacts on all actors within the supply chain at a time of significant economic pressure.

Since 2021, the Department for Transport noted the potential to use residual waste as a feedstock for the development of Sustainable Aviation Fuel. The sector welcomes the acknowledgement that we can influence the decarbonising of other, more challenging, sectors of the economy. However, policy development in this area must be carefully considered to avoid disruption to the waste hierarchy and the sector. To avoid this, Government departments must work together to ensure policies that incentivise the conversion of non-recyclable plastic into fuel do not undermine broader commitments to increase recycling and reach net zero emissions.

In tandem with these policy development, key technological decarbonisation policies for EfW have been solidified within the Energy Bill currently progressing through Parliament. EfW can play an essential role in underpinning the deployment of heat networks and establishing a world-leading carbon capture sector.



Heat Networks

Heating buildings is the single largest source of greenhouse gas emissions in the UK's energy system. Heat networks will play a strategic role in decarbonising this sector by using heat that would otherwise go to waste to power local homes and industrial hubs. These result in lower costs for customers, allow for decarbonisation at scale and attract large investment from industry.

Currently, only 2% of UK heat demand is served by heat networks. To meet net zero by 2050 this has to increase to 18%¹¹. EfW facilities can play a role in scaling up this sector by providing high-grade anchor loads to these networks.

In 2022, EfW facilities generated 1,770 GWh¹² of local heat – **the equivalent of switching 147,000 homes away from gas**¹³. Utilising combined heat and power also increases the efficiency of the EfW process by up to twenty five percent¹⁴. This maximises the resources recovered and minimises emissions from the process.



Ensuring EfW heat networks are deployed at scale and speed will require a supportive regulatory environment that acknowledges the value of heat networks. **The policy landscape for Heat Networks has developed substantially in recent years.** The Government has brought forward the Energy Bill that will legislate for Heat Network Regulation across the UK and will bring forward Heat Network Zoning in England by 2025.

This has the potential to support delivery of essential infrastructure by solving some of the persistent problems hindering progress. Most notably, the mandating of connections will de-risk upfront costs by ensuring heat demand matches supply. As these policies become legislation, the ESA welcomes the opportunity to work with government to ensure heat networks underpinned by EfW are expanded to the scale required to reach net zero.

Carbon Capture

The strategic value of carbon capture in the UK has been accelerated in recent years and, as such, the speed of policy development in this area has been substantial.

As of October 2021, EfW projects have been eligible for **essential** funding via the Industrial Carbon Capture business model, and two EfW carbon capture projects have successfully progressed to the final stage of commercial negotiations for Track-1, Phase-2 funding.

11 Committee on Climate Change (2020) The Sixth Carbon Budget: The UK's path to Net Zero

12 Tolvik Consulting (2023) UK Energy from Waste Statistics - 2022

13 Resource Recovery UK (2023) Resource Recovery UK's Manifesto for a Sustainable, Circular Future.

14 Environmental Services Association (2021) A net zero greenhouse gas emissions strategy for the UK recycling and waste sector

CCUS is likely to be the only technological way for EfW plants to reach net zero, since operators have limited influence over the composition of the waste they receive. Continued work between Government and industry is essential to ensure this model is investable.

EfW has a unique opportunity to support the development of a UK negative emissions market, since roughly half their emissions arise from the treatment of biogenic content. Establishing a regulated market will help to underpin future investment in CCUS across the sector.

The nature of existing CCUS funding is dependent on proximity to industrial clusters, so this will not be a viable solution for all facilities to decarbonise.

EfW facilities must be located where the waste is generated – saving emissions by limiting how far waste travels. This often means they are located in high density areas with limited footprint on site or away from the current cluster locations. The expansion of current regulations to facilitate non-pipeline forms of transport, such as rail and road, and a carbon utilisation market, will enable further innovation to decarbonise dispersed sites.

CALL TO POLICY MAKERS:

- Ensure critical safeguards are in place to prevent landfilling or export of waste ahead of the introduction of the Emissions Trading Scheme in 2028.
- Deliver a comprehensive biodegradable waste to landfill ban by 2028, as well as clear supporting measures for collection of organic waste.
- Provide support for landfill gas capture following the Renewable Obligation.
- Continue to deliver essential secondary legislation to enable the deployment of Heat Networks and Carbon Capture from Energy from Waste facilities.



4.3 TRANSITIONING TO ZERO-EMISSIONS FUELS

POLICY	COMMITMENT	DETAILS	DELIVERY
Support investment in and delivery of a net zero fleet			
Support industrial use of zero-emission fuels			

The sector has approximately 17,500 waste transport vehicles on Britain’s streets handling 221 million tonnes of waste per year.

Our waste vehicles contribute over 13% of our total emissions - almost five million tonnes per year - which is **equivalent to 1% of the UK’s total emissions**.

This is why we have pledged to end the purchase of new fossil-fuel powered vehicles from 2030 and switch all existing fossil-fuel powered vehicles to zero emission sources by 2040. To enable these switches, we need to be able to treat waste locally, invest in electric vehicles and, where that is not possible, look to transition to alternative fuels.

Government has made substantial commitments to decarbonise the transport and industrial sectors including the development of a net zero electricity grid by 2035 alongside the required infrastructure, and 50TWh of industrial fuel-switching to low carbon fuels by 2035. These will broadly support our sector decarbonise.

However our sector has been undervalued in more targeted demonstrator projects, such as the Zero Emissions Road Freight Demonstrator Programme.

We believe the waste transport sector provides a notable opportunity for the Government to signal its proactive approach to decarbonising transport, since there are more than 17,500 highly visible waste vehicles on UK streets predominantly in urban areas.

Industry would value collaboration with Government on the development of a waste transport decarbonisation pathway to address specific challenges facing the industry.

This should help industry overcome the initial challenges of investing in net zero vehicles by providing local government with specific funding for municipal vehicles with an obligation to invest significantly in a zero-emissions fleet while also enabling a relaxation of operating constraints on commercial collections when using zero emissions vehicles.

CALL TO POLICY MAKERS:

- Work with Industry and Local Government to develop a Decarbonisation Plan for Waste Vehicles.

5. ACKNOWLEDGEMENTS

The Environmental Services Association (ESA) would like to thank all of the members who contributed to the creation of this document.

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The Environmental Services Association (ESA) is the trade body representing the UK's recycling and waste management industry. Our members are helping the UK move towards a more circular economy by collecting, sorting, and treating waste to recover materials and energy, while protecting the environment and human health. Combined, our members collect or process tens of millions of tonnes of waste material every year and have helped to increase England's recycling rate five-fold over the past twenty years.

To find out more about the ESA or access our Net Zero Strategy, please visit www.esauk.org