FEHILY TIMONEY

DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

PLEDGE TO NET ZERO ANNUAL REPORT

Date: **December 2025**

Core House, Pouladuff Road, Cork, T12 D773, Ireland

T: +353 21 496 4133 | E: info@ftco.ie

CORK | DUBLIN | CARLOW

www.fehilytimoney.ie

PLEDGE TO NET ZERO ANNUAL REPORT 2025

REVISION CONTROL TABLE, CLIENT, KEYWORDS AND ABSTRACT

User is responsible for Checking the Revision Status of This Document

Rev. No.	Description of Changes	Prepared by:	Checked by:	Approved by:	Date:
01	Final	MS	SAT	SAT	22/12/2025

CONTENTS

1. INTRODUCTION

Climate change is the long-term shift in the Earth's average temperatures and weather conditions. The world has been warming up quickly over the past 100 years or so. As a result, weather patterns are changing. Since the 1980s, each decade has been warmer than the previous one, according to the UK Met Office. The world's ten warmest years on record have all happened since 2015, according to the World Meteorological Organization (WMO).

2024 was the hottest year ever recorded on Earth, with climate change mainly responsible for the high temperatures. It was the first year to surpass the 1.5°C of warming compared to pre-industrial levels of the late 1800s.

Human activities are causing world temperatures to rise, in particular the widespread use of fossil fuels; coal, oil and gas in homes, factories and transport systems. When fossil fuels burn, they release greenhouse gases (GHGs), mostly carbon dioxide, CO_2. This CO_2 acts like a blanket, trapping extra energy in the atmosphere near the Earth's surface. This causes the planet to heat up.

Climate change poses serious threats to people and nature. It leads to more frequent and intense extreme weather events, such as heatwaves and heavy rainfall. It contributes to the rapid melting of glaciers and ice sheets which raises sea levels and sea temperatures.

Things are likely to worsen in the coming decades, but scientists argue that urgent action can still limit the worst effects of climate change.

2. PLEDGE TO NET ZERO

The Intergovernmental Panel on Climate Change (IPCC) published a special report in 2018 on the impacts of global warming of 1.5°C above pre-industrial revolution levels and related global GHG emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. The report explains why it is necessary to maintain the global temperature increase below 1.5°C above pre-industrial levels.

Climate adaptation takes place at international, national and local levels. The IPCC report focuses on climate-resilient sustainable development, acknowledging the need for synergies and trade-offs between mitigation, adaptation and sustainable development. Limiting warming to 1.5°C implies reaching net zero CO_2 emissions globally by around 2050 and concurrent deep reductions in emissions of non-CO_2 gases, particularly methane.

Pledge to Net Zero is the environmental industry's global commitment, requiring science-based targets from its signatories, to tackle greenhouse gas emissions within their organisations. By taking the pledge, an organisation commits to delivering greenhouse gas reductions in line with science-based targets' 1.5°C climate change scenario. This is achieved by a linear 4.2% annual reduction in scope 1 and 2 emissions and a linear 2.5% annual reduction in scope 3 emissions over the target period. Signatories to the Pledge to Net Zero are required to set a long-term target of 2050 and are encouraged to also set medium-term targets.

The pledge recognises the need for those in the environmental sector to demonstrate leadership and take strong actions to mitigate the most significant impacts of climate change. The Pledge to Net Zero initiative is a partner to the UN's Race to Zero campaign.

3. INTRODUCTION TO FEHILY TIMONEY AND COMPANY

Fehily Timoney and Company (FT) is an Irish multi-disciplinary engineering, planning and environmental consultancy, founded in 1990, with three offices across Ireland in Cork, Dublin and Carlow. FT's headcount continues to increase year on year, with approximately 66 staff in 2019, our baseline year, and approximately 97 staff in 2024.

Our mission is to combine engineering, scientific and planning skills in a unified approach to set and promote, design and deliver world-class standards in achieving the most sustainable project delivery to our clients and provide a sustainable future for the public. Our services span infrastructure, environmental, geotechnical, water, energy, and transport sectors. We recognise our significant role in supporting the built environment's transition to a sustainable, net-zero future.

4. EMISSIONS

The Association of Consulting Engineers of Ireland (ACEI) has chosen 2019 as the baseline year, as this was the most recent "normal year" before the COVID-19 pandemic. This baseline year is used to measure our progress to achieving Net Zero, year on year. 2019 was the last year in which all staff in Fehily Timoney were working full-time from the offices.

4.1 Scope 1 - Direct Emissions

Direct GHG emissions occur from sources that are owned or controlled by the company. Scope 1 emissions at FT are emissions from combustion in gas boilers at our Cork and Dublin offices, combustion in an oil boiler at our Carlow office, diesel from our five fleet vehicles and diesel/petrol from our rented vehicles. Units of fuel were used in the carbon footprint calculations; kWh of gas, litres of oil, diesel and petrol. Figure 1 shows the gradual increase in gas and oil use throughout the three FT offices, from 2019 to 2024, as the headcount increases.

Whilst most FT work is office-based, a proportion of the working year is spent conducting "site" or "field" work, which involves additional travel. In 2024 approximately 278 weeks were spent conducting site or field work by 40 staff. Figure 1 shows that FT fleet and rented vehicles fuel use fluctuates based on site travel requirements. This has been an area of focus for FT in 2025, with efforts being made to reduce travel where possible.

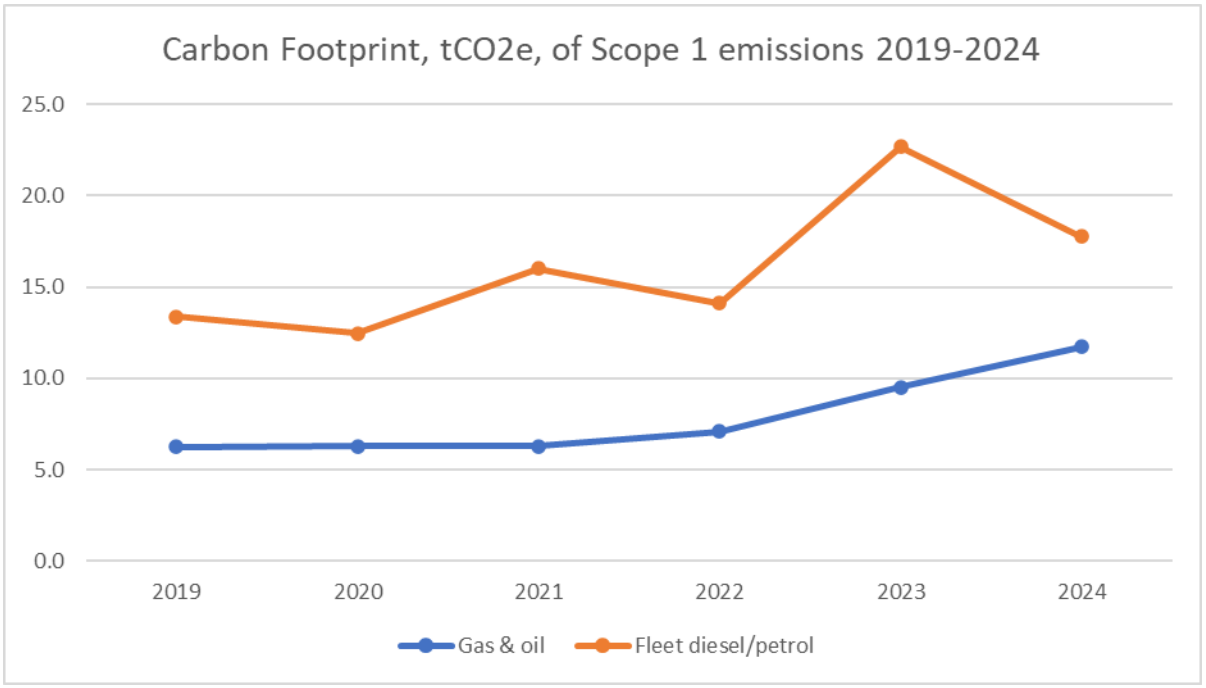


Figure 1. Scope 1 emissions

4.2 Scope 2 - Indirect Emissions

Indirect GHG emissions occur from the generation of purchased electricity consumed by the company. There are two methods to work out these GHG emissions: location-based or market-based method. The location-based method uses the average emissions intensity of grids on which energy consumption occurs, while the market-based method looks at the emissions from the specific electricity sources which are purchased.

With the location-based method, emissions can generally only be reduced through reducing the amount of electricity FT uses. With the market-based approach, emissions can be reduced through switching to a lower emissions energy provider and also by reducing electricity consumption. FT have used the market-based method. Units of electricity, measured as kWh, were used in the carbon footprint calculations.

Figure 2 shows a gradual decline in electricity consumption from 2019 to 2024, which aligns with an increase in staff working from home from 2020 onwards.

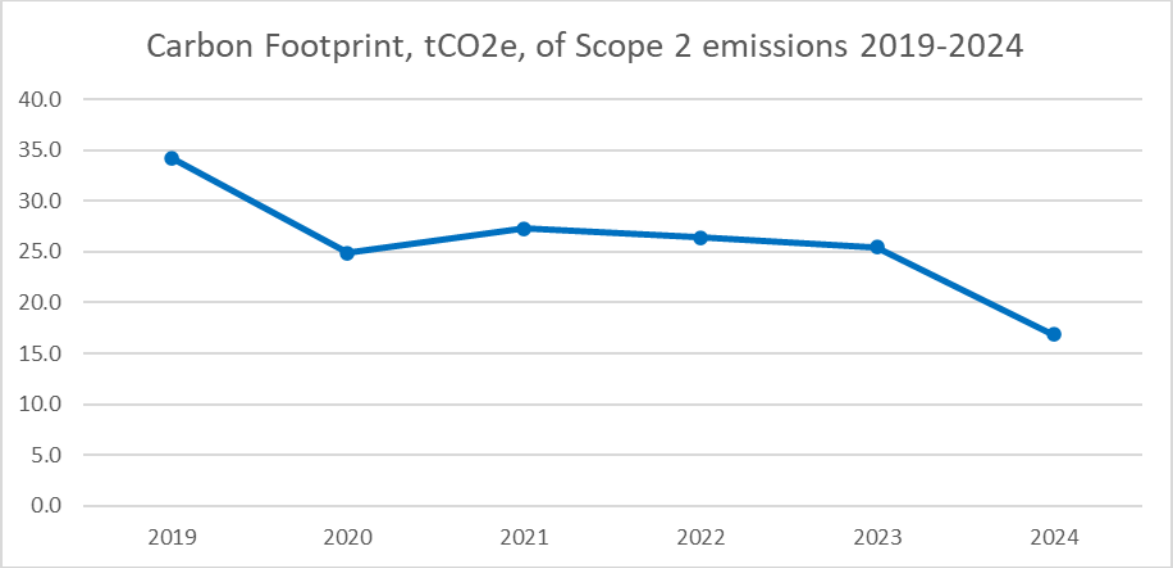


Figure 2. Scope 2 emissions

4.3 Scope 3 - Business Activity Emissions

Scope 3 encompasses emissions that are not produced by FT, and not the result of activities from assets owned or controlled by FT, but by those that FT is indirectly responsible for, up and down our value chain. Scope 3 emissions include all sources not within the scope 1 and 2 boundaries. FT has used the Pledge to Net Zero Scope 3 calculator tool in its Scope 3 calculations. All other significant indirect GHG emissions that occur as a consequence of FT activities, but that are from sources not owned or controlled by the company, include:

- Purchased Goods & Services
- Business Travel
- Employee Commuting
- Homeworking
- Transmission & Distribution (Market-based Electricity)
- Waste generated

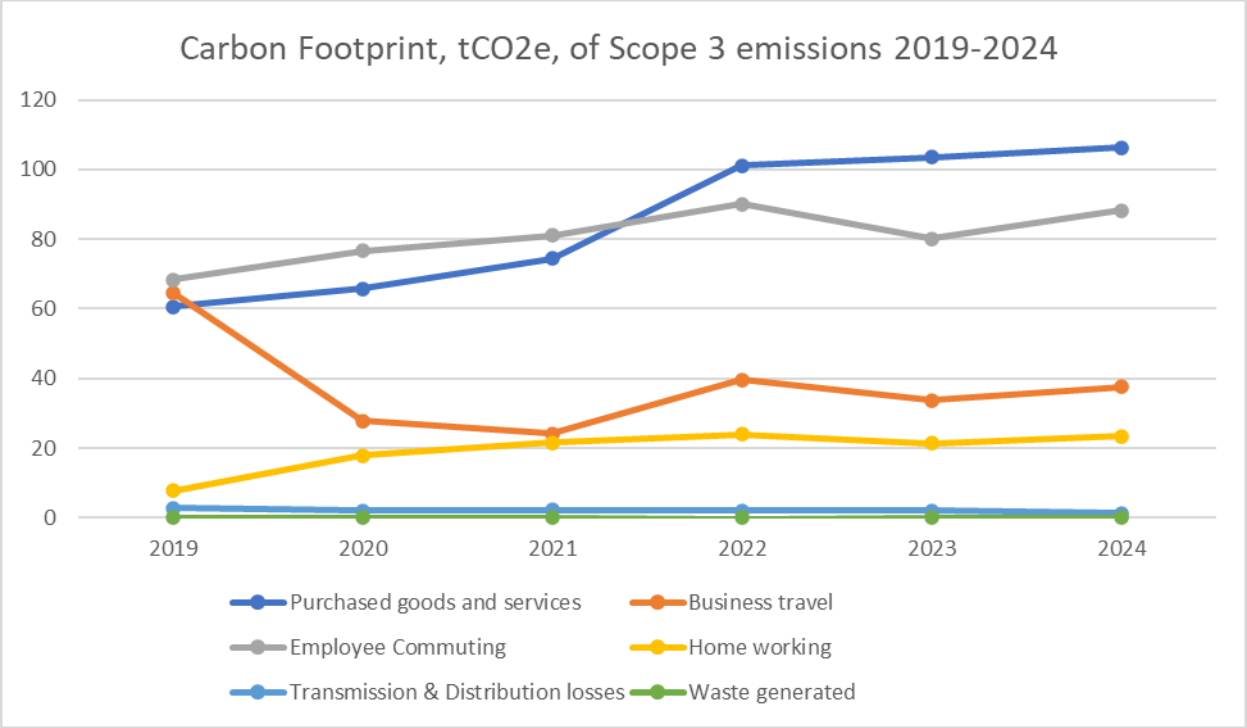


Figure 3. Scope 3 emissions

4.3.1 Purchased Goods & Services

FT has calculated its "Purchased Goods & Services" Scope 3 emissions based on spend in the following categories:

- Social action
- Creative, artistic, cultural activities, libraries and organisations of games of chance
- Activities of membership organisations
- Sports, recreation and leisure activities
- Publishing (books, newspapers, magazines etc.)
- Education
- Accommodation and catering
- Paper and cardboard
- Computer, electronic and optical products
- Services (printing, advertising, architecture and engineering, multi-technical building maintenance)
- Telecommunications
- Textile and clothing

Figure 3 shows that this spend has increased significantly since 2019, likely due to the increase in headcount.

4.3.2 Business Travel

Business Travel spend has decreased from 2019 to 2024, mainly due to a vast reduction in air travel. A reduction in business travel done in staff's private vehicles has contributed to this decrease also. This is captured via staff expenses submissions. Public transport, including taxis, buses and trains, has remained at a similar level between the two years.

4.3.3 Employee Commuting

A survey conducted in 2025 asked staff about their commuting journeys in 2024 and 2019. The results were adjusted by headcount in each year. Whilst staff used a variety of modes of transport, including bike, scooter, bus, motorbike and walking, 78% used cars to get to work in 2024 and 84% used cars in 2019. Hybrid working ordinarily would lead to a reduction in employee commuting, but this is not apparent due to FT's growing headcount.

4.3.4 Home working

Home working was not fully in place in the baseline year of 2019 but became the norm during and after the COVID-19 pandemic in February 2020. A survey conducted in 2025 asked staff about their home working in 2024 and 2019. The results were adjusted by headcount each year. The increase in the home working carbon footprint aligns with the decrease in office electricity use.

4.3.5 Transmission & Distribution (Market-based Electricity)

This takes into account the amount of CO_2 emissions that occur while electricity is transmitted to our offices. The World Bank provides the T/D loss rate in percentages for each country, with Ireland at 8%. As such this will always align with our electricity carbon footprint.

4.3.6 Waste generated

Waste generated in the Cork office is captured as tonnes of Mixed Dry Recyclables, Compostable Waste and General Waste. The TII Carbon tool emission factors are used to calculate the associated carbon footprint of these waste streams. The carbon footprint for Dublin and Carlow offices is estimated based on the Cork office waste generation and headcount per office. This figure has increased slightly from 2019 to 2024 with the increase in headcount but remains negligible.

The following table shows the summary of the carbon footprint from Scopes 1, 2 and 3.

	Source	2019 (tCO2e)	2024 (tCO2e)	% Delta
Scope 1	Gas, oil, biomass	6.2	11.7	89%
	HFC & CFC	N/A	N/A	N/A
	Company-owned fleet	13.4	17.8	33%
Scope 2	Electricity (location-based)	N/A	N/A	N/A
	Electricity (market-based)	34.3	16.9	-51%
	Heating (if any)	N/A	N/A	N/A
	Cooling (if any)	N/A	N/A	N/A
Scope 3	Purchased Goods & Services	60.7	106.4	75%
	Business Travel	64.7	37.7	-42%
	Commuting	68.3	88.3	29%
	Homeworking	7.8	23.5	201%
	Transmission & Distribution Losses	2.7	1.3	-52%
	Waste Generated in Operations	0.1	0.1	0%
	Investments	N/A	N/A	N/A
Total		258.2	303.7	18%

Table 1. Fehily Timoney Carbon Footprint

5. TARGETS & IMPROVEMENT MEASURES TO DATE

5.1 Scope 1 & 2

FT's scope 1 emissions are from combustion of gas and oil for office heating and combustion of diesel and petrol for Fleet and rental vehicles. These emissions have continued to increase from 2019, the baseline year. A slight decrease from 2023 to 2024 is a positive sign of change, see Figure 4. Office heaters are on timers, thus allowing optimal control and reducing waste. Furthermore, boilers are regularly serviced allowing for maximum efficiency. FT is limited in its capacity to make structural changes, such as insulation and solar panels, to its offices as all three offices are rented.

FT's Travel and Subsistence Policy was updated in 2025 to encourage all staff to choose the following hierarchy of travel options to help reduce Scope 1 and 3 emissions;

1. Avoid travel where possible
2. Use public transport, when suitable
3. Use FT Fleet
4. Carpool
5. Use personal vehicle

FT's scope 2 emissions are reducing year on year and are within the targeted 4.2% annual linear reduction.

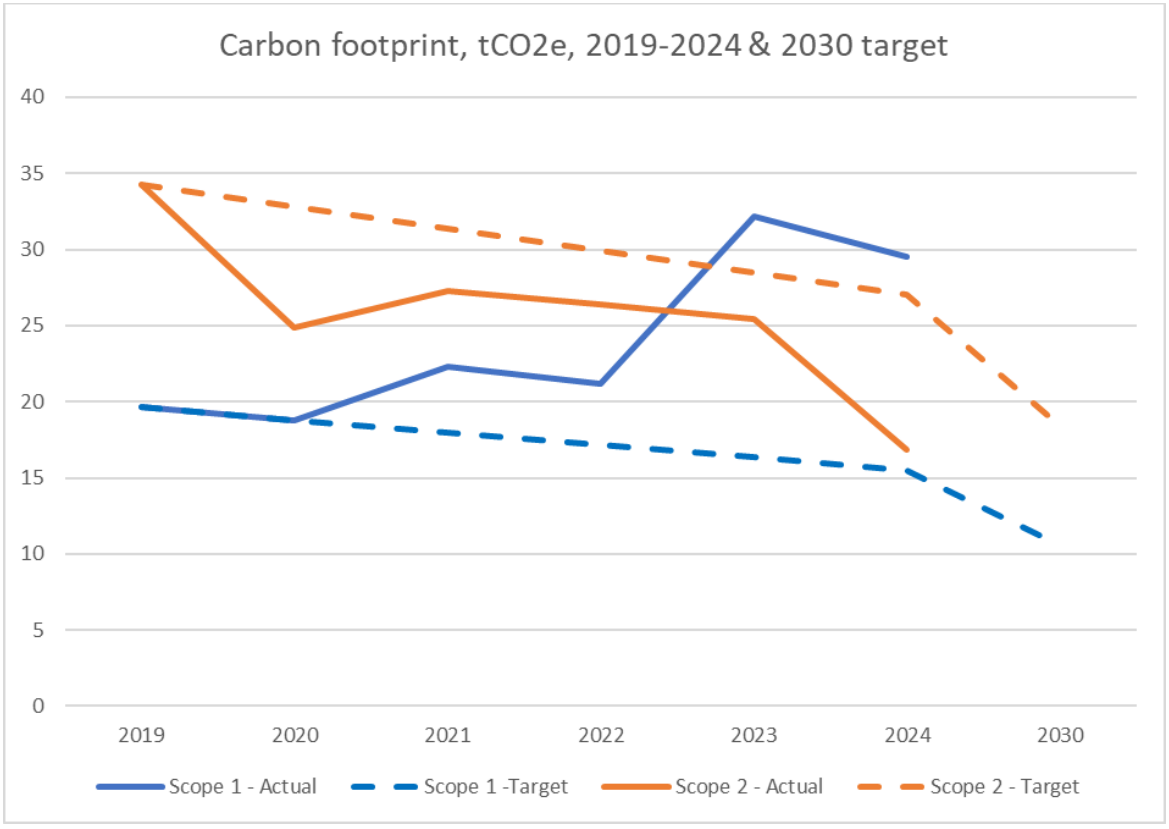


Figure 4. Scope 1 & 2 current position vs target

5.2 Scope 3

Whilst FT's scope 3 emissions are not produced directly by FT, we do have some control over them. Business travel is an area that received a lot of focus in 2025, with staff being strongly encouraged to question if travel is necessary and to use sustainable travel options when available.

Waste segregation is strongly encouraged in FT, with separate waste receptacles for;

- Re-Turn
- Recycling
- Compost
- Glass
- WEEE
- Batteries
- General waste

Figure 5 shows FT's scope 3 emissions are not in line with the targeted 2.5% annual linear reduction. Much work is needed here, in particular with "Purchased goods and services."

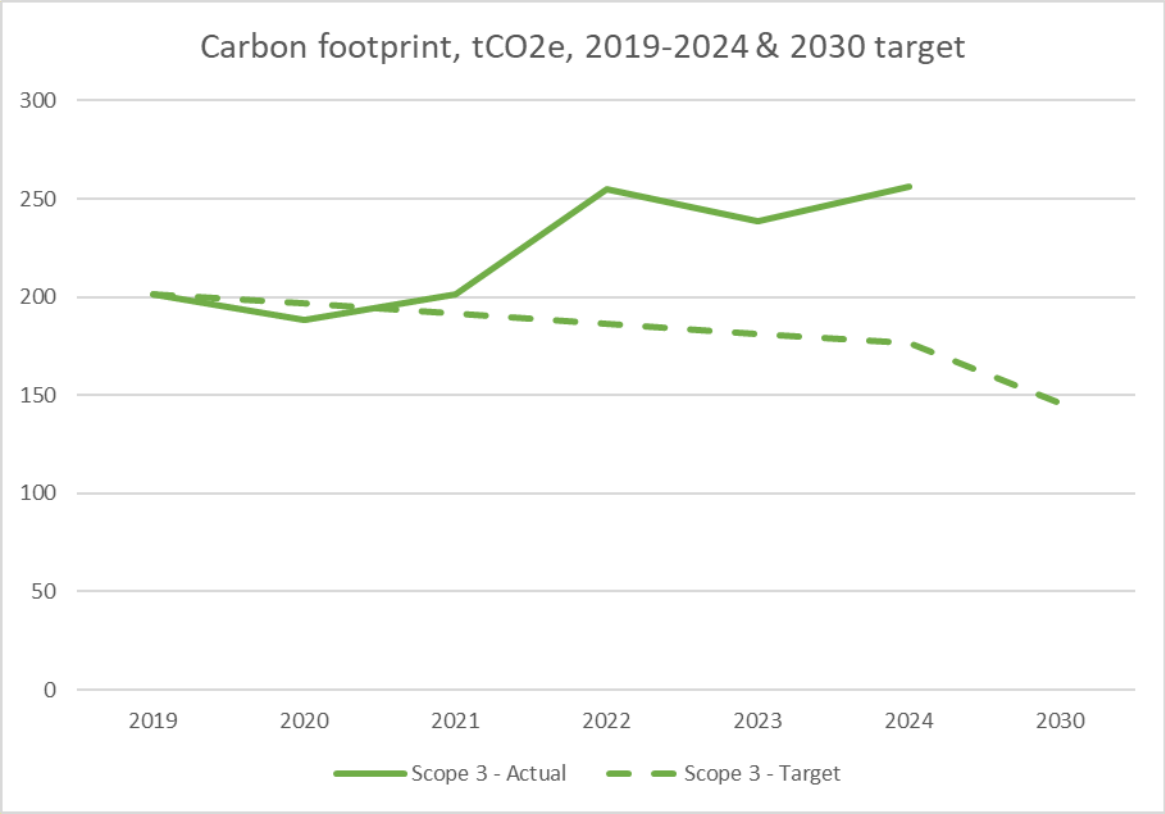


Figure 5. Scope 3 current position vs target

6. NEXT STEPS

FT's emission reduction goals for 2026 goals are:

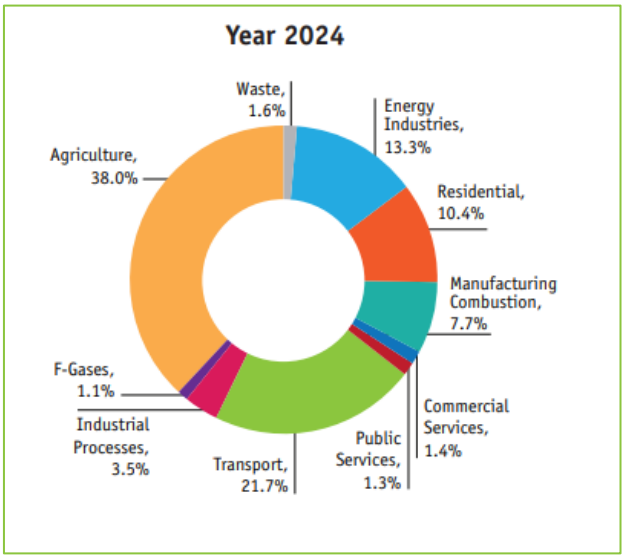
- Continue to discuss emissions, targets and goals at monthly meetings
- Introduce a "First to site" protocol, in which sufficient data is captured on a first site visit, thus reducing the need for further site visits
- Replace diesel with Hydrotreated Vegetable Oil (HVO) in Fleet vehicles where feasible
- Replace some FT Fleet diesel vehicles with electric vehicles
- Research smart technology for energy efficiency in offices
- Replace paper towels with hand dryers in bathrooms

7. THOUGHT LEADERSHIP

Accelerating the Transition to Zero Emission Vehicle Fleets

The latest Greenhouse Gas (G) emission data for Ireland was published in the EPA document entitled 'Ireland's Provisional Greenhouse Gas Emissions 1990 – 2024 (EPA, 2025). Total national GHG emissions in 2024 (excluding LULUCF) are estimated to be 53.75 million tonnes carbon dioxide equivalent (MtCO2e) which is 2.0% lower (or 1.09 MtCO2e) than emissions in 2023 (54.85 MtCO2e). This follows a 6.8% decrease in GHG emissions from 2023 to 2022.

There is a pressing need to deliver GHG emission reductions in **Ireland's Transport sector**. Transport represents the **second-largest source of GHG emissions** in Ireland, accounting for 21.7% of Ireland's GHG emissions in 2024.



Under the **Climate Action and Low Carbon Development (Amendment) Act 2021**, Ireland's Transport sector is required to reduce its emissions by 50% by 2030, with the new sectoral ceilings limiting total emissions from transport to 54 $MtCO_2e$ between 2021-2025, and to 37 $MtCO_2e$ for the 2026-2030 period. As of the end of 2024, 85.7% of the Transport sectors sectoral budget for 2021 – 2025 has been utilised. The Transport sector must achieve Net Zero by 2050.

It is widely acknowledged that **delivering Transport sector GHG emission reductions** will be **a very complex and difficult task**, and **will require transformative change** in how we design and manage our transport systems. To date, Government policy has primarily targeted shifting society away from unsustainable transport systems to sustainable transport systems (i.e. reducing car dependency and unsustainable transport systems, and promoting sustainable mobility and travel). The National Sustainable Mobility Policy is a key driver for this.

Ireland is currently **highly dependent on private and commercial vehicles**. While there is an ambition to reduce this dependency and promote active travel and public transport, there will continue to be a reliance on vehicles for personal transport and commercial operations. Collectively, **we will need to transition to low and zero carbon vehicles**, at the same time as driving active travel and public transport, to achieve climate targets for the Transport sector and Ireland's overall climate objectives.

Fehily Timoney and Company, as a multi-disciplinary engineering, planning and environmental science consultancy, is reliant on vehicles for various aspects of its operations, e.g. site surveys, visits to client sites, attendance at meetings etc. Like any other engineering company committed to achieving Net Zero, we will have to explore and examine alternative fuel options for our vehicles and deliver transformative change within our operations. The main priority should be to reduce reliance on vehicles insofar as possible, i.e. by promoting staff usage of public transport etc. There is **a need to investigate alternative fuel options** for continued, residual vehicle usage, however.

The main types of alternative fuels available and emerging on the island of Ireland are as follows:

- Hydrotreated Vegetable Oil (HVO).
- Conventional Biofuel (Biodiesel or Bioethanol).
- Battery Electric Vehicle (BEV)/Hybrid Electric Vehicle (HEV)
- Biomethane based options (BioCNG, BioLNG or BioLPG).
- Green Hydrogen (Fuel Cell or Internal Combustion Engine).

Hydrotreated Vegetable Oil is a form of renewable diesel which is synthesised and made chemically identical to diesel. HVO can be used as a replacement fuel in higher concentrations than other biodiesel without causing technical issues.

Biodiesel is a diesel substitute made from vegetable oil, animal fats and used cooking oil. Biodiesel is made using a process called transesterification which processes the source materials into a liquid fuel similar to diesel which can then be blended. Ireland currently deploys 7% biodiesel in its fuel supply derived mostly from used cooking oil and tallow.

Bioethanol (alcohol) is a petrol substitute made by fermenting the sugars in cereal grains, sugar beet, cane and other plant matter. Most Bioethanol consumed in Europe is produced from sustainably grown grain and beet with no adverse impacts on land use, biodiversity or the environment due to stringent sustainability criteria set out in European law.

A **Battery Electric Vehicle** or BEV is a vehicle that uses a battery as the sole means of energy storage for the propulsion of the vehicle. A BEV does not have a fossil fuel engine or generator. It is driven purely by an electric motor with battery energy storage. A BEV is 'refuelled' by plugging into an electrical power source. A **Hybrid Electric Vehicle** (HEV) is powered by an internal combustion engine in combination with one or more electric motors that use energy stored in batteries.

Biomethane is gaseous renewable fuel that is made by breaking down organic matter by microbial action using anaerobic digestion technology. Biomethane produced in this way has the qualities as fossil gas (often called natural gas) and can be used to decarbonise a range of sectors such as heat, transport and power generation.

Green Hydrogen is produced from renewable energy such as wind. Green Hydrogen can be used to power transport through hydrogen fuel cell technology and can be used in the manufacture of synthetic fuels for transport. Green Hydrogen is distinct from other types of Hydrogen in that it is sourced from renewable energy rather than being sourced from non-renewable energy (e.g., electricity generated by fossil fuel based power stations).

Each of these alternative fuel options have Pros and Cons. **Certain options** are **readily achievable** short-term options, whilst **others** require more **complex and costly** longer-term options. A **mix of alternative fuel options** must be availed of **to achieve climate objectives,** depending on the make-up of vehicle fleets and the nature of fleet operations and fundamental company priorities and capabilities.

HVO can be a short-term, transitionary option for achieving prompt GHG emissions reduction in line with 2030 targets. BEV and HEV can support achieving zero emissions in the longer-term, in line with decarbonisation of the electricity grid. For Heavy Duty Vehicles (HDVs), however, BEV/HEV is less viable considering power requirements, therefore more suitable longer-term options for HDVs are Biomethane based options or Green Hydrogen. Regardless of the options explored, it is **imperative that strategic planning is undertaken** to guide the process of transitioning to alternative fuels. An overview of key steps for any organisation in planning for the alternative fuel transition is provided below:

1. Conduct a **Feasibility Study** on various viable alternative fuel options. Develop a clear understanding of your vehicle fleet requirements. Identify the most viable alternative fuel options for vehicle types.
2. Develop a **Strategic Roadmap** for achieving a net zero emission vehicle fleet. This roadmap should also have regard to other organisational factors, apart from technological solutions, that can support achieving vehicle fleet related GHG emission reductions, including operational, fleet management and behavioural related factors and opportunities to avoid vehicle use and shift to sustainable travel. This roadmap should be supported by the development of subsequent phased implementation plans.
3. **Measure** vehicle related data each year to allow for accurate and ongoing quantification of vehicle fleet GHG emissions, and an estimation of costs associated with vehicle fleet decarbonisation, including data on vehicle type and number, fuel use, capital cost and operational cost.
4. **Establish lifecycle GHG emissions** for vehicle fleet, rather than quantifying direct vehicle related GHG emissions only, to allow for quantification of lifecycle GHG emission reductions.
5. **Establish a long-term business case** for the vehicle fleet transition.
6. Explore funding supports for the vehicle fleet transition.
7. Work as a **partnership** with other organisations, where appropriate, to progress the alternative fuel transition. A joint approach may create more “buying power” and an “economy of scale” for a partnership.
8. Progress **alternative fuel pilot projects** – to help “guide the way.”
9. Carry out ongoing **stakeholder engagement** with the Alternative Fuels sector, e.g. join and participate in events held by Zero Emissions Vehicles Ireland. Gaining as much knowledge as possible is key in delivering a successful transition to a Net Zero vehicle fleet in the long-term.
10. Finally, develop a clear **Alternative Fuel Transition Implementation Plan** 2030 - 2040 that defines a path to a Net Zero, and commit resourcing to delivering a Net Zero vehicle fleet. It is clear that significant and ongoing work and investment is needed to achieve this overall goal.

Overall, there is a need for organisations to define a vision and a strategic approach for achieving a Net Zero vehicle fleet. Fehily Timoney and Company aspire to lead the charge in transitioning our fleet, in line with our overall vision for **designing and delivering a sustainable future.**

FEHILY TIMONEY

DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

www.fehilytimoney.ie

Cork Dublin Carlow