

ASSET MANAGEMENT

CARBON MANAGEMENT PLAN 2025-2030

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FOREWORD FROM THE DIRECTOR OF FINANCE, DIGITAL AND INFRASTRUCTURE

The Scottish Fire and Rescue Service (SFRS) enter the 2025–2030 period at a pivotal moment in our organisational journey. As we continue to modernise our estate, fleet and enabling infrastructure, we do so against the backdrop of significant national and global challenges. The Strategic Service Review is reshaping how we operate, where we base our assets and how we deliver an effective and resilient service to the people of Scotland. This Carbon Management Plan reflects our commitment to ensuring that these essential changes align with our responsibility to reduce environmental impact and support Scotland’s wider transition to net zero by 2045.

Building on the measurable progress achieved under the 2020–25 Carbon Management Plan, this new plan expands our emissions boundary to present a more comprehensive and transparent picture of our carbon footprint. Our baseline has been updated to reflect these additional sources, and while this presents a more challenging landscape, it also ensures that our actions remain credible, targeted and aligned with best practice in public sector climate reporting. The projects identified for this period – focused on improving energy efficiency, investing in low-carbon technologies, and supporting behavioural change – demonstrate a balanced approach that recognises both practical constraints and the urgent need for action.

Meeting our carbon budgets will require sustained investment, strong governance and collaboration across every part of the Service. Challenges remain, particularly in relation to decarbonising our heavy fleet and replacing gas fuelled heating systems, but the direction of travel is clear: continued modernisation, smarter energy management and embedding sustainability at the heart of daily decision-making. This plan lays the foundation for the next stage of our transition, ensuring that SFRS plays its full part in creating a safer, more sustainable future for the communities we serve.

1. EXECUTIVE SUMMARY

SFRS are currently in a transition period whilst the Strategic Service Review is undertaken. The review is considering our service delivery footprint and enabling infrastructure, including where our stations and appliances are based. The review will also address estates challenges, primarily RAAC and the provision of dignified facilities and contamination controls.

The Carbon Management Plan (CMP) 2020-25 was successful in reducing our carbon by 4,784 tCO₂e during the 5-year period. Whilst our 5-year reduction target was missed by 1,897 tCO₂e, significant progress was made during an unprecedented five-year period where global events had a significant impact on the economy.

Our Carbon Management Plan 2025-30 extends the scope of emissions that will be reported on during the five-year period. This is to ensure that the Service presents a clear picture of our impact upon the climate, and the efforts that we are making to reduce it.

Due to the increased scope, our baseline has also been reviewed and increased to reflect the additional emission sources. Our new baseline is **26,405 tCO₂e** and our current footprint is 41% lower at **15,502 tCO₂e**

Earlier this year, the Scottish Government introduced a new set of five-yearly carbon budget targets as part of our pathway to net zero in 2045. As a Scottish public sector organisation SFRS has decided to match these budgets with our own carbon budgets.

The average level of emissions for SFRS over each five-year period are:

- 57% lower than our baseline for 2026-2030;
- 69% lower than our baseline for 2031-2035;
- 80% lower than our baseline for 2036-2040;
- 94% lower than our baseline for 2041-2045;
- Net zero from 2046 onwards.

With a baseline of **26,405 tCO₂e** our emissions must average lower than **11,354 tCO₂e** during 2026-2030.

This plan outlines the projects that will be delivered during the period, subject to funding. They have been selected based upon the carbon saving potential, available resources and the improved working environment for building users. The service expects to lower its carbon emissions by 2,658 tCO₂e and a forecast reduction of £615,216 from utilities by 2030.



2. OVERVIEW OF SFRS IN 2025

SFRS are currently in a transition period whilst the Strategic Service Review is undertaken. The review is considering our service delivery footprint and enabling infrastructure, including where our stations and appliances are based. The review will also address estates challenges, primarily RAAC and the provision of dignified facilities and contamination controls.

The review will have a direct impact upon the energy used in our buildings, the utilisation of our fleet and the carbon emissions that are generated as a result.

To provide context on the scale of the task to decarbonise the Service, [Table 1](#) provides a breakdown of SFRS's workforce, estate and fleet.

Over 40% of the estate is classed as being in poor or bad condition and 75% is classed as poor or bad suitability. Over £800 million investment is required just to bring the estate, fleet and equipment to a suitable modern standard.

The work to reduce the carbon emissions that are produced by our estate in line with Scottish Government targets will involve the replacement and retrofitting of hundreds of buildings and will require the engagement and the assistance of the full workforce.

Our heavy fleet, whilst it cannot yet be transitioned to a low carbon fuel, can be improved through the replacement of older appliances with new Euro 6s. Our light fleet has a target of being fully electric by 2030, however, this can only be delivered if there is sufficient funding available.

Sustained external investment will be required if SFRS are to reach net zero by 2045.




PEOPLE 		Fleet 		Estate 	
Wholetime Operational	3,433	Heavy Fleet	762	Wholetime Stations	74
On Call Operational	2,976	Light Fleet	932	Retained Stations	240
Operations Control	171	Electric Light Fleet	261	Volunteer Stations	42
Support	918			Training Hubs	4
Rural Fulltime Staff	60			Asset Resource Centres	4
Staff Total	7,558	Fleet Total	1,955	Estate Total	364

Table 1 – SFRS Building / Fleet Composition 23/24

3. CARBON PERFORMANCE 2020-25

The Carbon Management Plan (CMP) 2020-25 was successful in reducing our carbon by 4,784 tCO₂e during the 5-year period, see [Chart 1](#). Significant gains were made during years 1-3 when external funding was available, however the reductions slowed in years 4-5 as internal budgetary pressures and resourcing impacted the progress.

3.1 Progress to Date

Whilst our 5-year reduction target was missed by 1,897 tCO₂e, significant progress was made during an unprecedented five-year period where global events had a significant impact the economy.

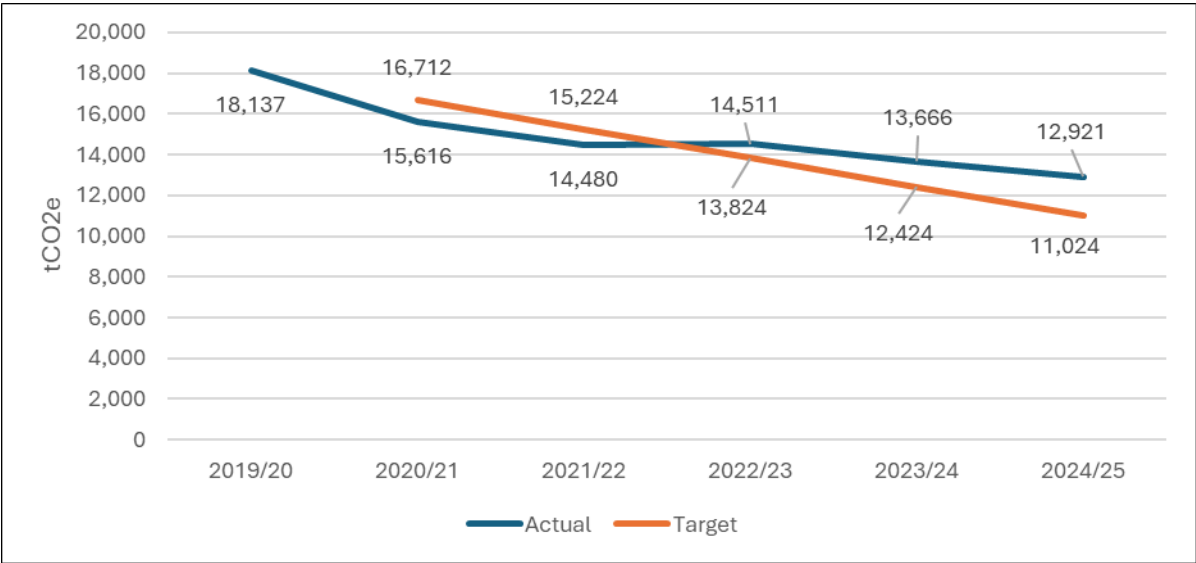


Chart 1 – CO₂e Emissions Target vs Actual 2020-25

The carbon savings were achieved through a combination of carbon management plan projects, decarbonisation of the electricity grid and the changes made to unwanted fire alarm signal response (UFAS).

[Chart 2](#) splits the estate and fleet emissions. It shows that Fleet fuel use dropped sharply during the pandemic, before it gradually increased again in 2022/23. The UFAS changes were introduced in summer 2023 and emissions began to reduce back to levels similar to those recorded during the pandemic. This drop of 2,161 tCO₂e over the 5 years was a fantastic result given the limited options that are available to reduce our heavy fleet emissions.

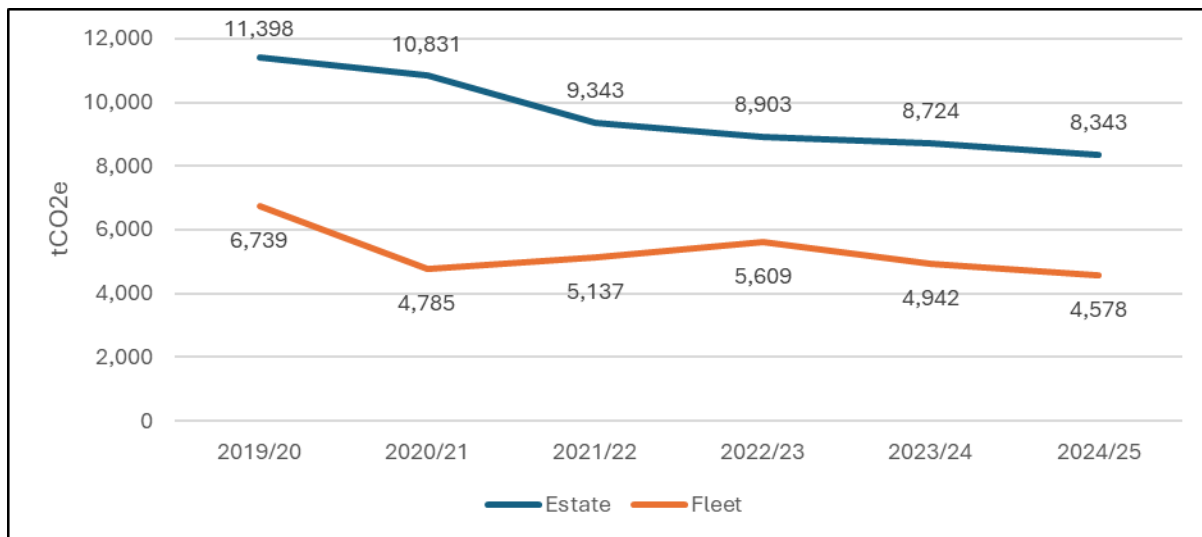


Chart 2 – CO₂e Reduction Estate & Fleet 2020-25

The Carbon management Plan 2020-25 projects focused on three key areas; reducing energy waste, the installation of renewable energy generation and the removal of small-scale gas fuelled heating systems.

[Table 2](#) lists the 428 projects that were delivered during the period. Much of the ‘low hanging fruit’ was delivered during this period, such as the installation of larger solar PV arrays and biomass boilers. Future projects are going to require greater investment and disruption for less carbon savings in return.

Project	20/21	21/22	22/23	23/24	24/25	Total
Building Management System and Controls	23	19	0	0	6	48
Retained Station Building Heating Controls	16	37	31	0	4	88
Retained Station Energy Package	1	11	9	0	0	21
Solar PV	24	30	24	0	0	78
Insulation Works	0	26	0	0	0	26
Biomass Boilers	1	1	0	0	0	2
AMR Install Programme	0	1	0	0	0	1
Consultancy support		1	0	1	0	2
EV Chargers	65	0	91	6	0	162
Total	130	126	155	7	10	428

Table 2 – Carbon Projects 2020 – 2025

[Table 3](#) details the investment that went into the CMP 2020-25 during the 5-year period. SFRS invested over £4 million internally, which was enhanced by over £8 million from the Scottish Government and Transport Scotland.

	2020/21	2021/22	2022/23	2023/24	2024/25	Total
Internal Capital	£1,700,000	£1,350,000	£500,000	£0	£700,000	£4,250,000
Scottish Government	£0	£2,100,000	£1,900,000	£60,000	£0	£4,060,000
Transport Scotland	£2,125,000	£1,500,000	£254,000	106,000	£0	£3,985,000
Total	£3,825,000	£4,950,000	£2,654,000	£166,000	£700,000	£12,295,000

Table 3 – Carbon Management Plan investment 2020-25

3.2 Future Challenges

[Chart 3](#) displays the sources of SFRS carbon emissions. The areas that we must address are diesel fuel (29%) and natural gas (31%), however these are also the two most problematic and financially intensive sources.

3.2.1 Fire Appliances

There is currently no viable low carbon alternative to our heavy fleet. With such specific operational demands, the options are limited by both the available technology and funding.

A fully electric prototype fire appliance was developed during 2023/24 however the technology is a long way away from being deployed across Scotland. A principal reason for this is the requirement and challenges surrounding the high voltage charging infrastructure that is required to keep the appliances operational.

The use of lower carbon biofuel is not an option that is available to SFRS. As we are a national Service and pull our resources from across the country, we rely on public fuel courts to fuel our fleet. These courts do not currently offer lower carbon biofuel as standard.

3.2.2 Gas Heating Systems

The decarbonisation of our gas fuelled heating systems also presents significant challenges. Currently most of our wholtime and corporate sites utilise gas fired systems for their heating and hot water systems.

Implementing non-direct emission heating systems such as heat pumps will require major renovation works to live stations to accommodate lower flow temperatures and larger heat emitters at high capital cost.

The price difference between gas and electricity currently show an increase to our already stretched operational budget for utilities where these systems are implemented.

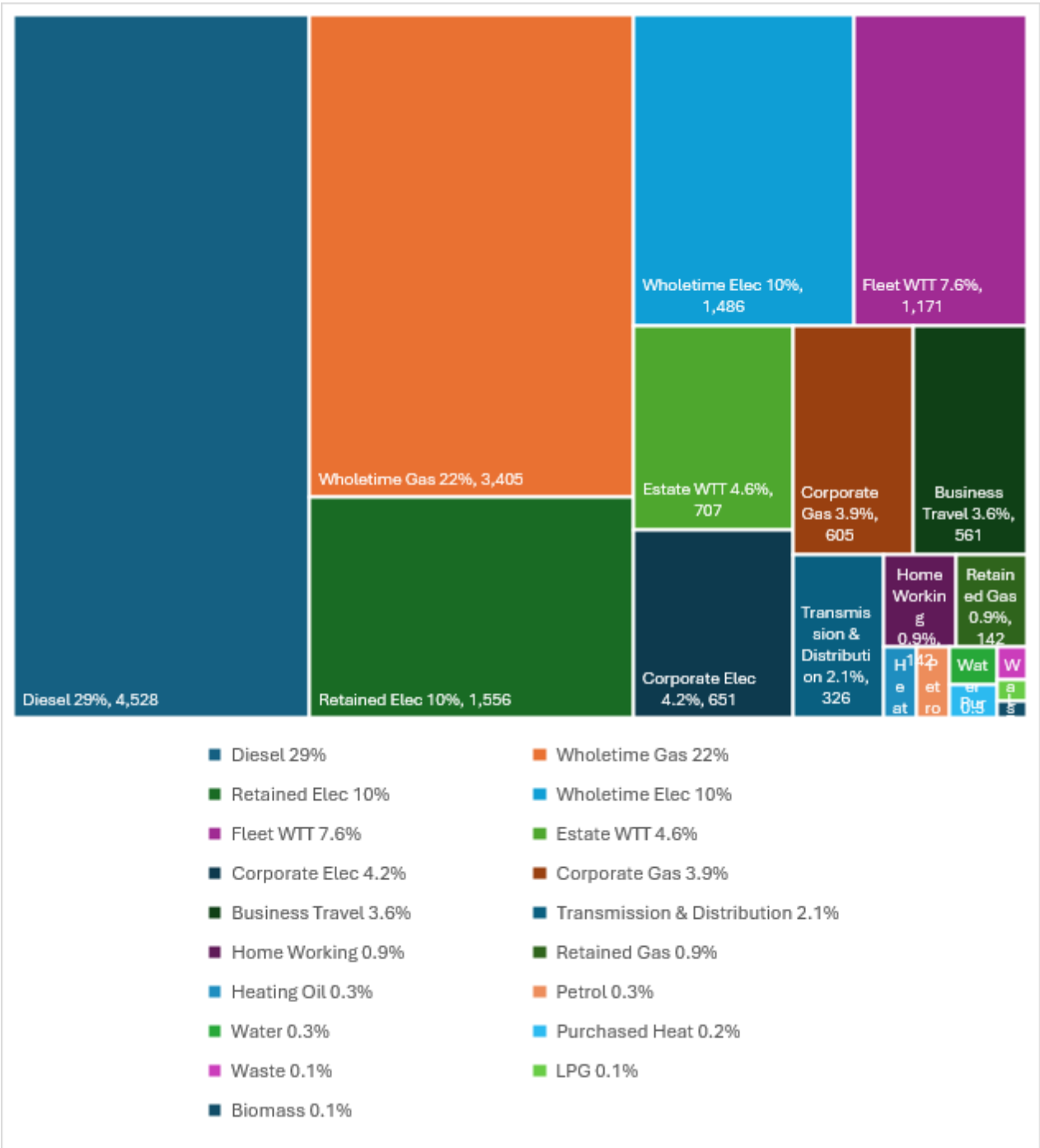


Chart 3 – SFRS Carbon Sources % and tCO2e

4. GOVERNANCE AND MANAGEMENT

4.1 The Scottish Fire and Rescue Service Board

The SFRS Board oversee and sign off on key policies and strategies regarding the Service's carbon reduction targets and objectives.

4.2 The Strategic Leadership Team

The Strategic Leadership Team (SLT) is responsible for delivering the Scottish Fire and Rescue Service on behalf of the Board.

4.3 The Senior Management Board

The purpose of the Senior Management Board (SMB) is to provide oversight, scrutiny, open challenge, and collective problem resolution in relation to SFRS' Service Delivery and Corporate Services activities and performance, ensuring appropriate systems of control are in place and operating effectively, improving accountability and collaboration to ensure that key Service priorities are met

4.4 The Energy Group

The purpose of the Energy Group is to review and monitor energy use and the associated decarbonisation of the Service. This includes monitoring the financial and environmental costs in support of the aims and objectives of the Energy Strategy and Carbon Management Plan.

The Energy Group will submit proposals and recommendations to the Service Delivery Board (SDB) for consideration and approval where the SDB has delegated authority to make decisions.

4.5 The Environment and Carbon Management Team

The Environment and Carbon Team are based within the Property Services Department and are responsible for delivering projects, providing expertise, advice and the daily management of the Service's environmental impacts. The E&C Team are not responsible for the environmental impacts of Operational activities. See [Chart 4](#) for the current team structure:

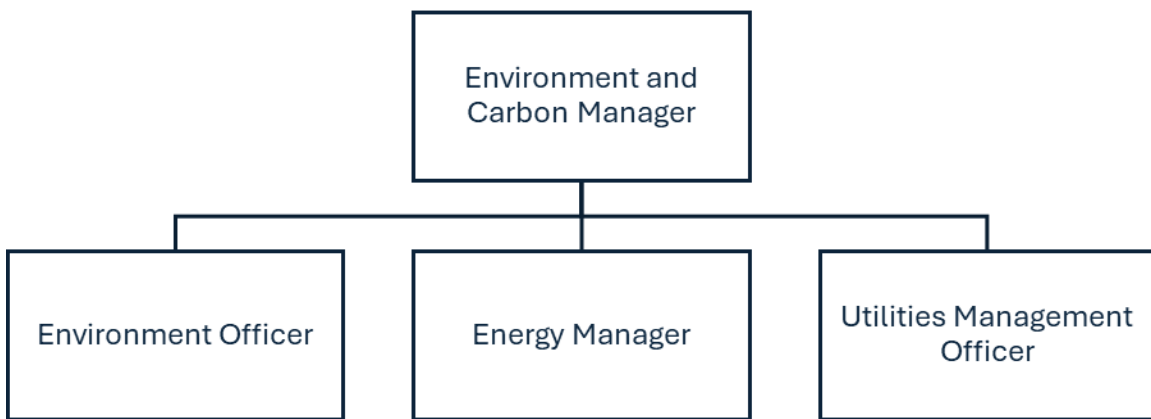


Chart 4 – Environment and Carbon Team Structure

5. CARBON SCOPE AND BASELINE

To chart progress in relation to carbon reduction, it is necessary to be clear on its definition. The Greenhouse Gas Protocol¹ is the standard adopted worldwide to measure and manage greenhouse gas (carbon) emissions and defines emission sources for an organisation within three broad categories as outlined below, Direct Emissions, Energy Indirect and Other Indirect emissions:

¹ For more information on identifying and calculating emission sources, see the Greenhouse Gas Protocol: <https://ghgprotocol.org/corporate-standard>

Scope 1 (Direct Emissions)	Scope 2 (Energy Indirect)	Scope 3 (Other Indirect)
<p>Activities owned or controlled directly by an organisation that release emissions straight into the atmosphere.</p> <p>Examples include emissions from combustion in owned or controlled boilers or owned vehicle emissions.</p>	<p>Emissions being released into the atmosphere associated with an organisation's consumption of purchased electricity, heat, steam and cooling but which occur at sources outside ownership or control.</p>	<p>Emissions that are a consequence of the organisation's activities but which occur at sources outside ownership or control and which are not classed as Scope 2 emissions.</p> <p>E.g. business travel by means not owned or controlled by the organisation.</p>

The Carbon Footprint Boundary of an organisation is the area within which carbon emissions can be identified and tracked, incorporating Scope 1, 2 and 3 activities. For the past five years, SFRS have closely monitored and managed our Scope 1 and 2 emissions plus selected Scope 3 emissions.

Scope 1 direct emissions are easiest to record and influence as they are controlled by the organisation. Scope 2 and 3 are more difficult to reduce as they are produced by indirect sources such as electricity providers, contractors and supply chains.

Our Carbon Management Plan 2025-30 includes a broader range of emissions sources than the 2020-25 plan, as additional data and information has become available during the past 5 years. This in turn allows us to target reduction on a wider area of projects and behaviours across the Service and our activities.

The additional emission sources that have been added to our 2025-30 carbon footprint are purchased heat, business travel, home working and well to tank emissions, please see [Table 4](#).

[Table 5](#) details the carbon sources that are not yet included within our boundary. Initial data has been gathered on our Supply Chain carbon footprint; however, this requires further analysis before being brought into scope.













Type of Emissions	Emission Sources	Baseline Carbon Emissions (Baseline Year)	24-25 Carbon Emissions
Scope 1 Direct emissions from sources controlled by SFRS	 Natural Gas Used to heat our buildings	6,596 tCO ₂ e (2015/16)	4,152 tCO ₂ e
	 Oil Used to heat our buildings and for training	194 tCO ₂ e (2015/16)	64 tCO ₂ e
	 Biomass Used to heat our buildings	0 tCO ₂ e (2015/16)	11 tCO ₂ e
	 Diesel & Petrol Used to fuel our fleet	5,390 tCO ₂ e (2015/16)	4,578 tCO ₂ e
Scope 2 Indirect emissions from the grid electricity we use	 Electricity Used for lighting, IT equipment, heating ventilation	10,330 tCO ₂ e (2015/16)	3,693 tCO ₂ e
	 Purchased Heat Purchased from heat networks to heat SFRS buildings	30 tCO ₂ e	35 tCO ₂ e
Scope 3 Indirect emissions associated with our activities and supply chain	 Water Consumed at our sites	165 tCO ₂ e (2015/16)	40 tCO ₂ e
	 Waste Generated on sites	91 tCO ₂ e (2019/20)	21 tCO ₂ e
	 Business Travel Air, rail, car etc travel and hotel stays	619 tCO ₂ e (2019/20)	561 tCO ₂ e
	 Home Working Generated by staff working not at SFRS sites	0 tCO ₂ e (2015/16 estimate)	142 tCO ₂ e
	 Well to Tank Generated in production of the fuels we use	2,137 tCO ₂ e (2015/16)	1,878 tCO ₂ e
	 Transmission & Distribution Getting electricity from generation to sites	853 tCO ₂ e (2015/16)	326 tCO ₂ e
Total Footprint		26,405 tCO₂e	15,502 tCO₂e

Table 4 – Carbon Footprint Boundaries



Type of emissions	Emission Sources	Baseline Carbon Emissions
Scope 3	 Supply Chain Everything we buy, includes construction, equipment, etc.	Not yet measured. Plans to start measuring and include within future reporting.
	 Staff Commuting Generated by staff travelling to work at SFRS sites Requirements may change in guidance	Not yet measured. Assessing how best to determine commuting emissions for future reporting periods.

Table 5 – Outside of Current Boundary

6. DRIVERS FOR CHANGE

SFRS outlined our commitment to reducing our carbon emissions, in line with Scottish Government Targets, in our Climate Change Response Plan 2045. The plan details the impacts that climate change will have upon our operational response, estate and the communities that we serve.

6.1 Scottish Government Carbon Reduction Targets

Earlier this year, the Scottish Government introduced a new set of five-yearly carbon budget targets as part of our pathway to net zero in 2045. As a Scottish public sector organisation SFRS will match these budgets with our own carbon budgets. Carbon budgets provide 5-year limits on emissions, they provide a reliable and consistent framework to measure progress and are less prone to fluctuations than annual targets.

The average level of emissions for SFRS over each five-year period are:

- 57% lower than our baseline for 2026-2030;
- 69% lower than our baseline for 2031-2035;
- 80% lower than our baseline for 2036-2040;
- 94% lower than our baseline for 2041-2045;
- Net zero from 2046 onwards.

Using our carbon footprint boundaries defined above our baseline emissions are **26,405 tCO₂e**, therefore over the course of this Carbon Management Plan our average emissions must be lower than **11,354 tCO₂e**.

Our budget for 2031-2035 when our next Carbon Management Plan should be in place is **8,185 tCO₂e** therefore we must make significant progress beyond our current budget in the later years of this plan to be able to hit our future budgets.

With the available funding, it is anticipated that we will not achieve the carbon reductions required to meet the 5-year average for our full scope of emissions.

6.2 Utility Costs

Utility costs have been very volatile in recent years, resulting in increased bills and difficulties in budgeting. The most effective tool that is available to all consumers is to reduce the amount of energy that we use and therefore minimise the impact of cost increases. The projects that are outlined in section 7 aim to reduce energy waste, and therefore costs, whilst improving the working environment for building users.

Non-commodity energy costs that support electric grid infrastructure and renewable generation are forecast to rise significantly over the course of this plan but there is still a high degree of uncertainty on what the cost implications will be for the service.

Recommendations are for the service to reduce consumption, make buildings as energy efficient as possible and consider reducing capacity levels to best protect from the impacts of price fluctuations.

7. POLICIES AND PROJECTS

SFRS have a range of policies and strategies that provide a framework for our net-zero journey. These include:

- SFRS Environmental Policy 2025-30;
- Climate Change Response Plan 2045;
- Energy and Carbon Strategy 2020-30;
- Buildings Heating, Cooling and Ventilation Policy;
- Waste Management Policy and Strategy.

7.1 Carbon Reduction Projects

[Table 6](#) outlines the projects that will be delivered during the plan period. They are based upon an annual capital allocation of £1 million for the 5-year period, subject to funding. Due to the significant underfunding of the previous carbon management plan and the ongoing budgetary pressures only projects that have funding allocated have been considered for delivery.

Project Name	Description	Emission Scope	Number of sites targeted	Project Cost	Predicted Annual Carbon Reduction
Retained Station Building Heating Controls	Installation of smart heating controls on retained fire stations with direct electric heating allowing for remote management and ensure that the buildings are being heated to appropriate levels as per SFRS building heating and cooling policy.	Scope 2	60	£950,000	60 tCO ₂ e

Lighting Replacement and Controls	Review of lighting across sites replacing fluorescent lamps with LED luminaires. Installing new lighting controls to take account of daylighting to reduce usage during daylight hours.	Scope 2	20	£800,000	100 tCO ₂ e
HQ Solar PV Field	Installation of new Solar PV field at National HQ, including battery storage to reduce electrical load and add resilience	Scope 2	1	£675,000	57 tCO ₂ e
Portlethen Solar PV Field	Installation of new Solar PV field at Portlethen Training Centre, including battery storage to reduce electrical load and add resilience.	Scope 2	1	£500,000	28 tCO ₂ e
Window & External Door Upgrades	Review of glazing in wholetime and corporate sites, replacement of single glazing at end of economic life with new triple glazing.	Scope 1	5	£500,000	27 tCO ₂ e
Upgraded Building Management Systems	Review of heating controls and zoning of the heating systems in wholetime fire stations and corporate sites	Scope 1&2	10	£350,000	50 tCO ₂ e
Solar PV and Battery Upgrades	Installation of upgrades to Solar PV installations adding battery energy storage systems to maximise potential returns.	Scope 2	3	£300,000	25 tCO ₂ e
Building Sub-Metering	Installation of energy sub metering of wholetime & corporate sites to provide improved more granular data allowing a greater understanding of the	Scope 1&2	20	£200,000	20 tCO ₂ e

	energy performance of buildings.				
Building Insulation Improvements	Improved insulation in retained estate roofing insulation to reduce waste and improve user comfort.	Scope 1&2	25	£125,000	25 tCO ₂ e
Drying Room Upgrades	Installing heating controls and dehumidifiers in drying rooms that currently use space heating to dry kit	Scope 1	15	£100,000	26 tCO ₂ e
Consultancy Services	Detailed design of WT station air sourced heat pump installations	Scope 1	2	£100,000	0
Oil fuelled heating system replacement	Replacement of Invergordon oil fuelled heating system with direct electric alternative.	Scope 1	1	£80,000	30 tCO ₂ e
Behavioural Change Initiatives	Reducing energy waste through staff engagement and behavioural change initiatives.	Scope 1,2&3	1	£0	175 tCO ₂ e
Total			164	£4,680,000	625 tCO₂e

Table 6 – Carbon Reduction Project Details

7.2 Decarbonisation of Gas Heating Systems

Should external grant funding become available, additional projects and programmes will be assessed. This will focus on the replacement of gas fuelled boilers across our Wholetime estate, which estimated to cost approximately £100 million.

This work will also be subject to further scrutiny due to the increased operational costs resulting from switching from gas to electric heating systems. The existing SFRS budget

allocation does not account for this increase, which could vary from £10,000 - £50,000 per site per annum.

Funding this work through external grants can create a number of additional risks and issues, including:

- Funding uncertainty due to bidding processes;
- Timing of funding allocation and reduced delivery period during heating season;
- Requirement to deliver complex projects within one financial year with no allowance for unforeseen project delays;
- Funding limitations state that application design works and DNO costs are not covered;
- Application timelines and limited visibility of future funding availability;
- Internal risk appetite;
- Internal resource availability to apply, manage and procure projects.

7.3 Risks and Dependencies

There are several risk and dependencies associated with delivering the projects and the projected carbon savings.

7.3.1 Building Management Systems Internal Connectivity

The use of our Building Energy Management Systems (BMS) is currently restricted due to connectivity issues relating to cyber security. This is impacting our ability to access the systems remotely.

The Service is currently working on a solution to the issue which will allow remote access to the systems. This will help to ensure that our larger buildings heating, cooling and ventilation systems are operating efficiently and in line with our Heating, Cooling and Ventilation Policy.

7.3.2 Building Management Systems Engineer

Following the resolution of the BMS connectivity issues, it would be of significant value to have a dedicated role to actively manage the BMS and other remote monitoring systems across the estate.

7.3.3 Project Management Support for Externally Funded Projects

Should external grant funding become available to support additional projects, a dedicated Project Manager will be required to support their delivery.

The uncertainty surrounding external grant funding during the Carbon Management Plan 2020-25 resulted in an unforeseen additional workload that had to be absorbed by the existing Project Management resource. This proved to be unsustainable and resulted in the Service being unable to scope and plan projects for the following financial year.

7.4 Projected Carbon Savings

As outlined in [Table 4](#), our carbon emissions are derived from a number of sources, with the largest being fleet fuel emissions and the electricity and gas that is used on our estate. The projects outlined in [Table 6](#) are estimated to deliver savings of 625 tonnes from our estate derived emissions.

[Section 3.2.1](#) discussed the restrictions that we face in decarbonising our heavy fleet. Therefore, to provide a clear picture of our carbon reduction progress, our emissions will be reported on in two formats throughout the duration of the plan.

[Chart 5](#) displays our projected carbon reduction and budget for our total carbon footprint. Unfortunately, with £1 million scheduled investment per annum, we will not meet our carbon budget target for all our total carbon footprint.

[Chart 6](#) displays the projected reduction for only our estate derived emissions. With the projects outlined in [Table 6](#), we can expect to meet our budget target from year 2 onwards.

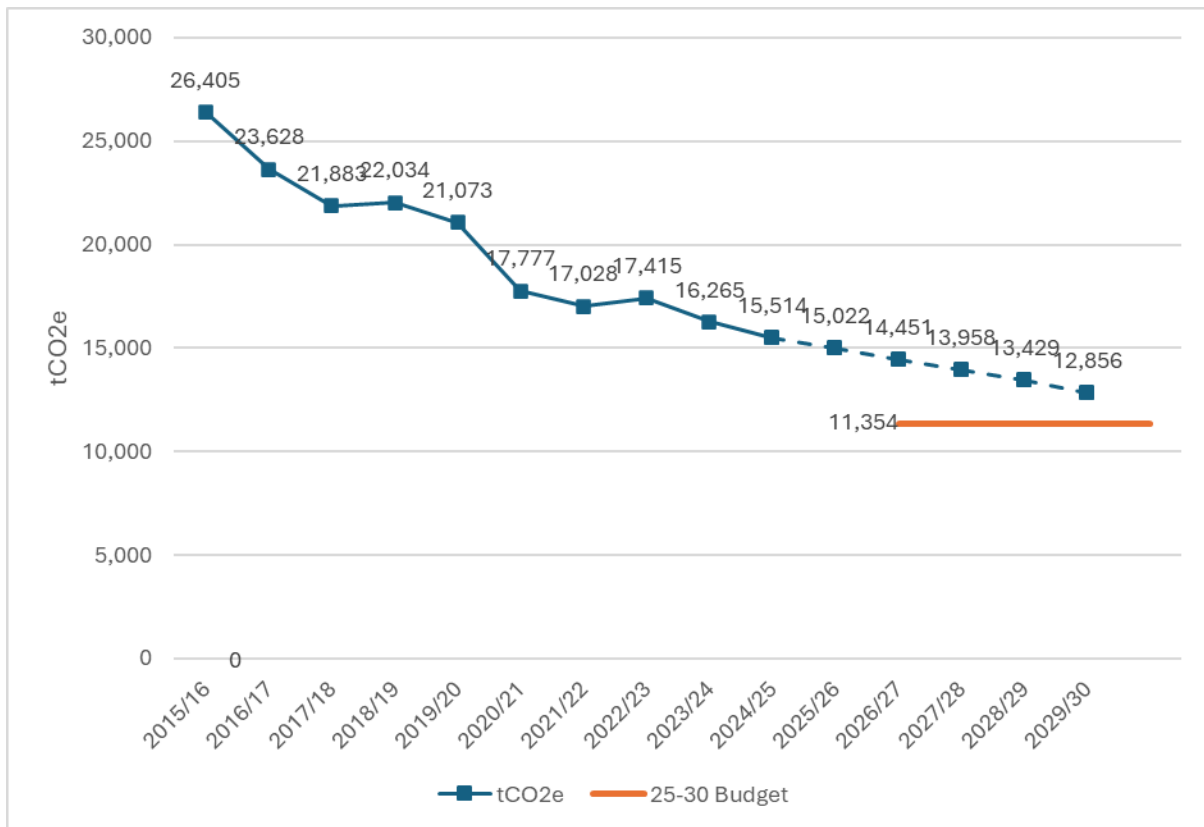


Chart 5 – All Scopes Carbon vs 25-30 Budget

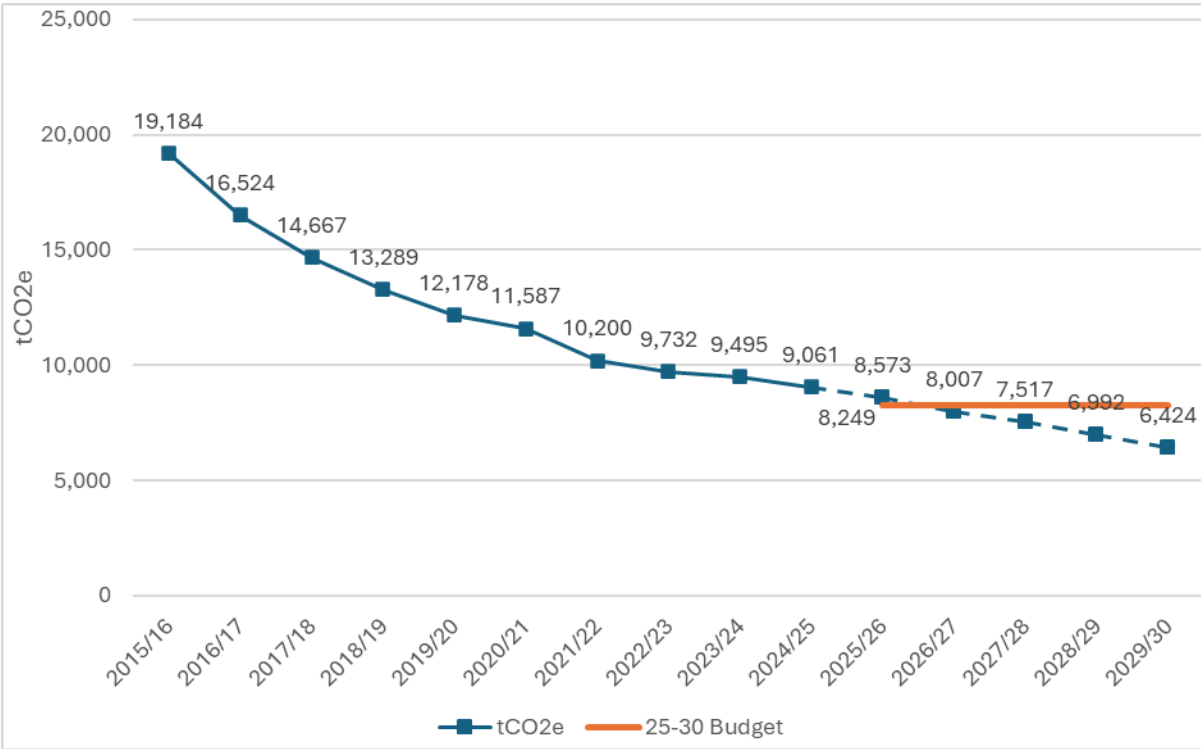


Chart 6 – Estate Carbon vs 25-30 Budget

7.5 Projected Cost Savings

The reduction in carbon is the result of a decrease in usage of electricity, gas and oil, as a result there are cost savings through use of less utilities. [Chart 7](#) shows a forecast reduction of £615,216 from utilities by 2030, this is based on 18.82p/kWh for electricity and 4.84p/kWh for gas and has assumed to be constant over the course of the 5 year.

As previously mentioned, utilities costs are currently highly volatile therefore the costs modelled exclude “non-commodity costs” which make up large parts of the overall utilities bill. This currently accounts for 57% of electricity prices and therefore is significantly lower than the overall utilities bill but forecasts the portion of the bill that will change with lower usage.

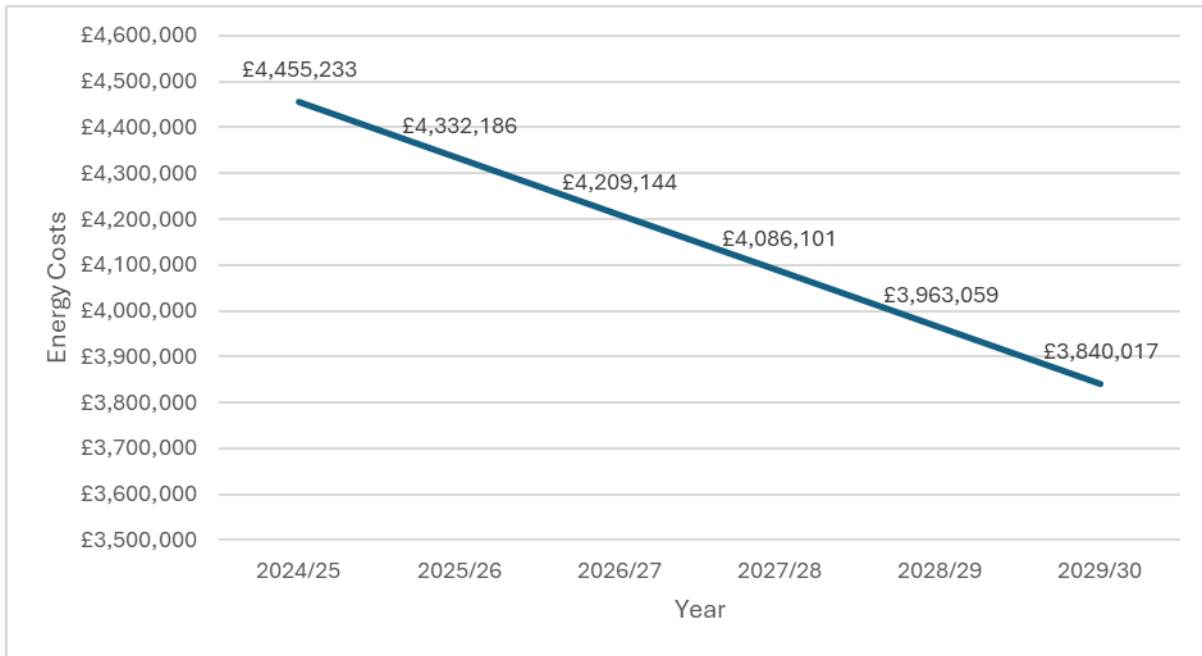


Chart 7 – Electricity and Gas Cost Reductions

7.6 Project Sequencing and Prioritisation

Project prioritisation will be based on:

- The carbon savings that they offer;
- The level of financial investment required;
- The level of financial savings that they offer;
- Improvements to station working conditions;
- Other scheduled Property Services works, to minimise station disruption.

Projects may be brought forward or postponed to other external factors, such as the availability of grant funding.

8. REPORTING OF PROJECTS AND PROGRESS

8.1 Carbon Reduction Reporting

The progress and reductions achieved by the Carbon Management Plan will be reported on annual within the Service's Annual Performance Report. This will detail the projects delivered and the financial investment.

Carbon reductions are monitored and reported on quarterly to the Service Delivery Board.

It should be noted that the carbon reductions will be related to the previous year's projects and initiatives as the impacts are not fully realised for 12 months after the installation.

8.2 Project Delivery Reporting

Project delivery is managed by the Project Teams, who review progress, risks and issues on a weekly basis.

Progress on the delivery of projects will be reported to the Energy Group and Senior Management Board on a monthly basis.

Annual progress will be reported on within our Annual Progress Report and the Public Bodies' Climate Change Duties annual compliance report that is submitted to the Scottish Sustainability Network each November.

8.3 Data Gathering, Monitoring and Issue Resolution

The Environment and Carbon Team are responsible for the ongoing collection and management of all data that contributes to our carbon footprint. The data is gathered from a number of platforms and suppliers.

8.3.1 Utilities Bureau Service

SFRS have a utilities bureau service contract that is responsible for collating our electricity, gas and water consumption data from each of our providers. The contract is also responsible for identifying discrepancies such as abnormally high reads or meter errors.

8.3.2 Smart Metering and Sub-metering

SFRS have automated meter readers installed across our estate. This includes 90% of our electricity meters, all gas meters and all water meters on our wholetime and corporate estate. This allows for meter reads to be taken remotely, helping to ensure that our bills are accurate, flagging any issues such as over consumption or potential water leaks and bursts.

8.3.3 Heating and Building Energy Management Systems

Our Wholetime and Corporate sites have building energy management system to control and monitor their heating, cooling and ventilation.

Approximately 25% of our retained and volunteer estate have smart heating controls installed. This allows us to monitor their performance and make adjustments to schedules and setpoints remotely. This reduces the need to travel to stations which in turn reduce carbon emissions, time and costs.

8.3.4 Scope 3 Analysis

SFRS recently commissioned a project to calculate our Scope 3 supply chain emissions. The project outputs will be analysed to determine an accurate footprint, future objectives and reduction targets. The data will be integrated into the CMP 2025-30 when it has been fully analysed.

8.3.5 Fleet Fuel Data

Our fleet fuel data is collected and collated by the Fleet department. The carbon analysis is undertaken by the Environment and Carbon Team.

8.3.6 Waste Data

Our waste collections are managed via our Soft FM provider. The data is collected by a waste broker and provided to SFRS each month for analysis and reporting.

8.3.7 Business Travel Data

All business travel is managed through our contracted service provider. Data on all hotel stays, car hire and rail and air and travel are provided quarterly for carbon reporting.

9. OTHER FACTORS INFLUENCING EMISSIONS

There are a variety of external factors that can influence the Service's carbon emissions.

9.1 Operational Activity

Emergency response is unpredictable by nature, and an increase in our operations has a direct influence on our carbon emissions. This can be both positive and negative, depending on the demand for response. Influencing factors include:

- Vehicle fuel, for both travel and pumping water, is our single largest carbon emission source and is directly driven by the number of incidents that the Service responds to;
- The use of natural gas for heating and hot water on wholtime stations is our second largest carbon source. The need for crews to shower within one hour of an incident involving contaminants results in increased hot water use;
- The need to dry PPE and kit following an incident increases the energy use from drying rooms;
- Opening and closing appliance bay doors results in a significant loss of heat from the building;
- Heating systems are boosted on retained stations when responding to an incident, resulting in an increase in electricity use.

9.2 Extreme Weather Events

Extreme weather events often result in an increase in operational activities. Climate change is driving an increase in:

- Wildfire response;
- Flooding events;
- Storm damage response;
- RTCs due to adverse driving conditions, e.g. snow, ice, storm conditions.

9.3 Strategic Service Review Programme

The outcome of the Strategic Service Review Programme will likely impact upon the Service's carbon emissions, due to station closures, new duty systems and asset transfers.

Station closures will require our baseline to be revised, to reflect the changed estate. New duty systems will change our building use profiles and therefore impact upon the energy that they use.

9.4 Station Replacements

The ongoing RAAC roofing station replacement programme will have a positive impact upon our Scope 1 and 2 carbon emissions. Older fire stations are being replaced with well insulated buildings that have low carbon heating systems, renewable energy generation and efficient building management controls.

9.5 Grid Decarbonisation

[Chart 8](#) depicts the gas and electricity emissions of the SFRS in a “do nothing” scenario, as the grid decarbonises our emissions from electricity will fall significantly up to 2040 where gas will not, so moving from gas as our primary source of heating to electric options will be required to meet our targets.

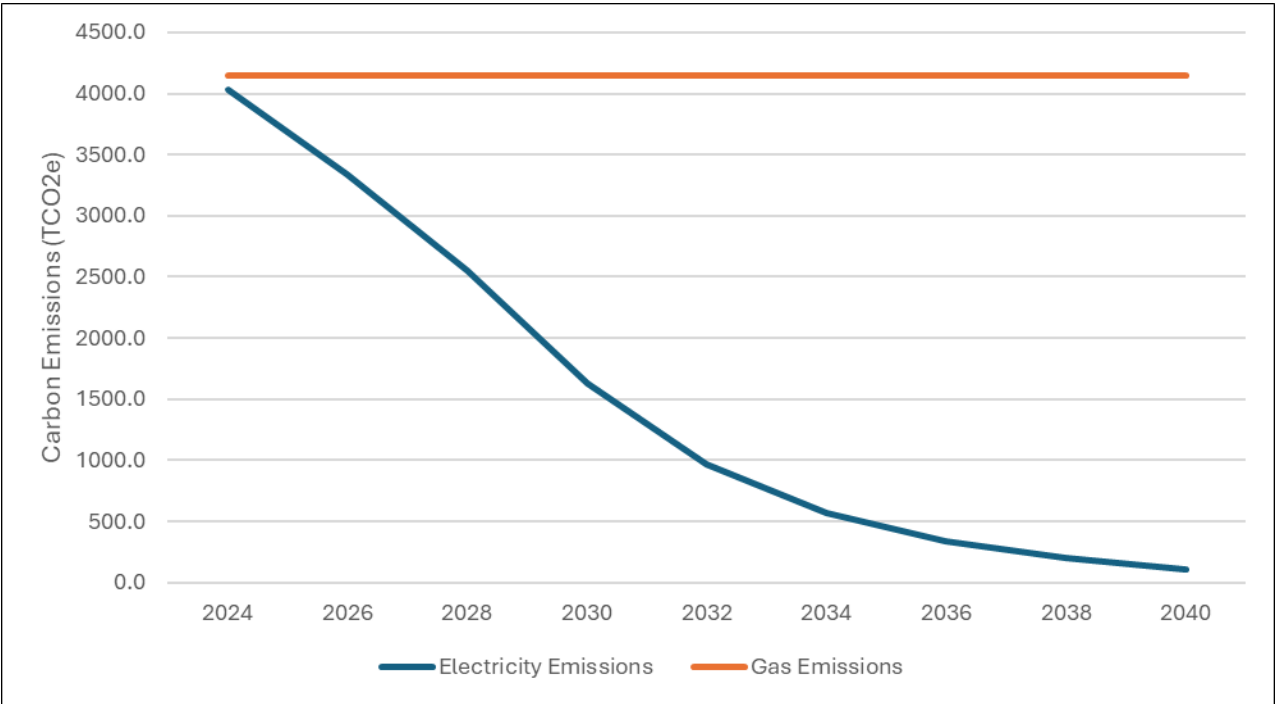


Chart 8 – Projected Electricity and Gas Carbon Emissions 2025-2040

Projected emissions based on constant kWh usage from 24/25, emissions factors from Department for Energy Security and Net Zero Green Book supplementary guidance: valuation of energy use and greenhouse gas emissions for appraisal, November 2023 update.

9.6 District Heating Networks

District heating networks are one of the most cost-effective ways to reduce the carbon emissions associated with heating water for our buildings.

The [Heat Networks \(Scotland\) Act 2021](#) introduced powers to regulate the heat networks market in Scotland for the first time and networks will be introduced and expanded in the coming years.

As stated above, the gas fuelled boilers that heat our Wholetime fire stations are our second largest emitter of carbon emissions. Fortunately, due to many of the wholetime station's central locations within Scotland's towns and cities, they are likely to be located within district heating network boundaries.

The option to work with partner agencies to support district heating networks, by providing our stations as anchor sites, would result in a source of low carbon heat for SFRS whilst supporting the development of networks and assisting public sector partners.

10. MONITORING AND REPORTING

10.1 Internal Governance

Progress on our carbon budget is reported on quarterly. The reports are received by the following forums:

- Energy Group;
- Senior Management Board;
- Senior Leadership Team;
- SFRS Board.

Annual progress on projects delivered and performance against the carbon budget is published with the Services Annual Performance Report.

10.2 External Governance

Climate Change Duties Report that is submit to the Scottish Sustainability Network.

11. VERIFICATION AND SENIOR LEADERSHIP DECLARATION

11.1 Verification of Data

- The Environment and Carbon team are regularly audited internally and externally;
- Our annual Climate Change Duties Report submissions are peer reviewed by colleagues at Police Scotland.

11.2 Leadership Declaration

I confirm that the information in this report is accurate and provides a fair representation of the body's performance in relation to carbon management.

Name: Stuart Stevens

Position: Chief Officer

Organisation: Scottish Fire & Rescue Service

Date: 12 June 2026

Next review due date: