

Electricity
Transmission

nationalgrid

September 2024

Our Annual Environmental Report

Progress towards
a more sustainable future
in our third year of this
regulatory period.



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Harker substation: Leading on environmental commitments

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I am pleased to present our Annual Environmental Report for the financial year 2024

Three years ago, we set out our environmental commitments for the regulatory period 2021-2026 in our Environmental Action Plan. Since then, we've made significant strides forward to achieving our goals, that will benefit not only National Grid, but the energy sector, the environment and communities in the broadest sense.

We are growing our networks to connect new renewable energy sources and reducing our own climate impact in support of our net zero ambitions. This year, we increased the low carbon capacity of our network by 1.35GW by connecting to the world's largest wind farm. We are upgrading our existing infrastructure and building at a pace never seen before to enable us to connect more renewables to accelerate the transition to a clean energy system.

As we upgrade our grid and connect more renewables, we are committed to preventing harmful emissions and the deterioration of the natural world.

FY24 was a difficult year for tackling SF₆ emissions. Whilst 13 of our top 20 leaking assets were repaired and we reduced our scope 1 and 2 emissions by 17 per cent, system access constraints prevented the repairs from being completed until the second half of the year. We therefore missed our annual target of a 20.4 per cent reduction in scope 1 and 2 emissions. We expect our SF₆ abatement plan for next year to put us back on track to meet our 2026 target.

Innovation is critical to meet our net zero goals. We invested £12.1m in FY24 in innovation projects that support decarbonisation and continue to explore new technology and solutions that can help us to reduce our impacts. For example, to reduce our construction emissions, we are conducting studies on the potential use of low carbon alternative construction materials. Adding graphene to concrete reduces the amount of cement needed to achieve the required strength, which lowers the carbon intensity.

All of our construction projects that have an impact on the natural environment will deliver environmental net gain, which sets out to leave natural environments in a better condition than prior to development. Those projects in scope and sanctioned during the year committed to achieving at least a 10 per cent net gain with six committed to 15 per cent or greater.

We are an environmental leader in the energy sector thanks to all our employees who take proactive steps to drive positive change. They have a firm focus on the long-term sustainability of our business. Our employee engagement score on responsible business improved from 74 per cent to 78 per cent this year.

Overall, I am proud of what we achieved despite some of the setbacks, and I look forward to reaching greater heights in 2025.

Alice Delahunty

Alice Delahunty
President, Electricity Transmission

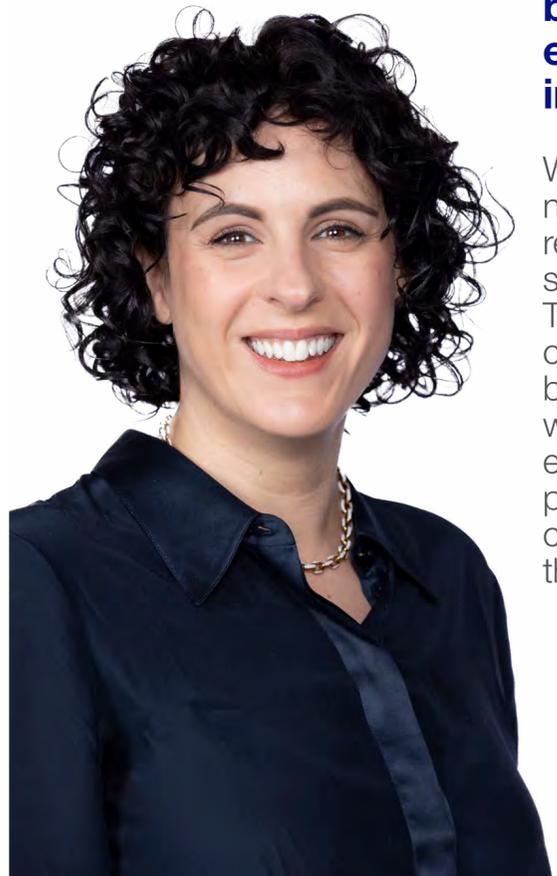


We have reduced our scope 1 and 2 emissions by 17%...



...and we are on track to reach our target of 50% by 2030

“As we upgrade our electricity grid and connect more renewables, we are conscious that we must do so in an environmentally responsible way to prevent harmful emissions and the deterioration of the natural world.”



FY24 highlights

Net zero carbon emissions



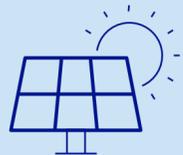
17%

reduction in controllable scope 1 and 2 emissions since FY19



1.35 GW

new low carbon generation connected



100%

of the energy we buy is renewable for our metered estate



95.7%

of senior managers' company cars are Zero Emission Vehicles (ZEVs)

Sustainable use of resources



99.4%

of construction waste diverted from landfill



86.5%

construction waste recycling rate



78%

operational waste recycling rate



52

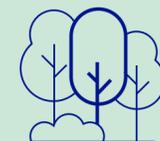
site visits carried out to engage with employees on environmental topics

Nature positive



100%

of construction projects committed to deliver 10% net gain or greater



44

hectares of land enhanced with natural capital value



7.9%

improvement in the environmental value of non-operational land since FY21



£300,000

invested in schemes to enhance/restore local environmental quality

Leadership for change



78%

employee engagement score on responsible business



10

representatives from National Grid participated in COP28



SF₆

virgin SF₆ is no longer acceptable where alternatives exist



ISO 14001

achieved for our Integrated Management System

About this report

Welcome to our Annual Environmental Report, the third in our current regulatory period.

Our report provides an update on progress towards achieving our environmental commitments, as set out in our [Environmental Action Plan](#), and the impacts on the environment from our network.

The scope of this report is focused on performance data for the financial year reporting period 1 April 2023 to 31 March 2024 (FY24); however, future activities are also described.

The focus of this report is solely on National Grid Electricity Transmission's (NGET's) EAP commitment and activities. However, some of the commitments in this document feed into our Group performance and are reported in our annual Responsible Business Reports.

Our reporting is mostly aligned with the [Responsible Business Report](#) however some differences may occur due to individual consolidation timelines.

This report is supported by a [Methodology Annex](#) which details the scope and boundaries of our environmental commitments in addition to assumptions made around our calculation and measurement methods.

How to use this document



Home

This will take you to the home page.



Arrows

Click on the arrows to move backwards or forwards a page.



Reveal/hide

Hover over the magnifying icons to reveal hidden content.

'Linked' content

Words that are underlined have links to other pages in this document, or are URLs.

Our business

We are National Grid Electricity Transmission plc (NGET)

We own and maintain the high-voltage electricity transmission network in England and Wales.

What we do

We move electricity from where it is generated to where it is needed. We are responsible for transporting the electricity generated from wind farms and power stations safely and efficiently through our network onto the distribution system, so that it reaches homes and businesses reliably.

Our environmental responsibilities

Our vision is to be at the heart of a clean, fair and affordable future. We will do this by connecting increasing amounts of renewable energy, managing the environmental impact of our network, and supporting long-term decarbonisation goals. Our view is that net zero is achievable and, with the right policy, we can make it affordable for all.



Our environmental vision

Significant changes must be made in order to reduce harmful emissions and the deterioration of the natural world.

We have set ourselves ambitious environmental commitments within our Environmental Action Plan in response to this call to action.

Our Environmental Action Plan concentrates on four priority areas where we can make the greatest contribution to a more sustainable future, aligned to the United Nations' Sustainable Development Goals.

Since our first Annual Environmental Report, changes to the external environment have encouraged us to review and refine our strategy, including some of our environmental commitments. This year, we added two new commitments to our Environmental Action Plan under the focus areas 'Leadership for change' and 'Nature positive'. Roll over the icons to see the changes to our commitments in FY24.

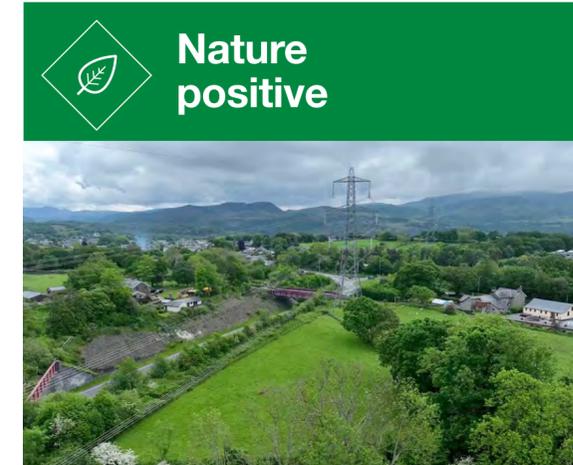
Priority areas



We are reducing our direct emissions in line with Science-Based Targets (SBT) and reduce the emissions associated with our construction projects and compensate for the residual balance.



We are finding ways to achieve zero waste to landfill and using circular economy principles to make the most out of natural resources and our assets.



We are delivering benefits for nature across our network. We are protecting and enhancing it, where possible, using natural capital and net gain principles.



We are advancing environmental good practice as leaders in our industry.



Our environmental vision

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Priority areas

Net zero carbon emissions

Achieving net zero by 2050 requires significant reductions in our emissions. In support of this, we updated two of our climate commitments in FY24:

- Replace 60 per cent of our fleet with Zero Emission Vehicles.
- Encourage 75 per cent of National Grid's top 250 suppliers (by category/spend) to have carbon reduction targets and for 80 per cent (by emissions) of these to have Science-Based Targets (SBT).

In FY24 we achieved and retired our commitment to create a transmission losses strategy. Visit page 16 to read about our approach to reducing transmission losses.

Sustainable use of resources

Our construction projects produce the largest proportion of waste across our business. We therefore updated two of our construction waste commitments in FY24:

- All construction projects to report on waste avoidance opportunities.
- Maintain an 80 per cent recycling rate in construction.

Nature positive

Nature positive reflects our aim to increase nature in and around the communities that our network serves. We added a new commitment in FY24:

- Work collaboratively with other transmission owners to agree a consistent approach to measure biodiversity impact and dependencies in the supply chain (inc. water).

Leadership for change

We are leading the way in the industry on environmental best practice. To continue driving our sustainability journey forward, we added a new commitment in FY24:

- Maintain a certified Environmental Management System (EMS).

In FY24 we achieved and retired our commitment to have senior leadership accountability that reflects our corporate focus on the environment. 100 per cent of our directors are accountable for our environmental commitments.



Net zero carbon emissions

The UK has committed to decarbonise its power system to **reduce reliance on fossil fuels** by 2030.



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Hover over for more information



Net zero carbon emissions



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Our electricity network is turning the UK's net zero ambitions into reality by building the infrastructure needed to deliver green power across the country, in a fair and affordable way. We are also taking steps, both big and small, towards reducing all aspects of our own carbon footprint across scopes 1, 2 and 3 emissions. We are:

Reducing SF₆ leaks from our equipment and replacing SF₆ with greener alternatives

Purchasing renewable energy to supply our substations and offices

Enhancing energy efficiency at our substations

Replacing our fleet with zero emission vehicles

Reducing the carbon intensity of our construction activities

Empowering our suppliers to reach net zero in line with Science-Based Targets (SBT)

Investing in innovative technologies that support decarbonisation



Hover over for more information

Our 2026 commitments

To enable effective monitoring of objectives and measures, the following RAG status definitions are used:



Progress against the implementation milestones is on track.



Progress is delayed but it is likely to be achievable before the end of the regulatory period.

Roll over the panels below to find out how we performed over FY23 and FY24.

1.1 Achieve a 34% reduction in controllable scope 1 and 2 emissions from a FY19 baseline, with additional targets of: 50% reduction by 2030 and net zero by 2050.

● FY23
● FY24

1.2 Reduce SF₆ emissions from our operations by 50% by 2030; from a FY19 baseline.

● FY23
● FY24

1.3 Purchase 100% of electricity we use from renewables.

● FY23
● FY24

1.4 Create a substation energy efficiency programme.

● FY23
● FY24

1.5 Focus on an efficiency-first approach to decrease the carbon emissions from our office energy use by 20% from a FY20 baseline.

● FY23
● FY24

1.6 Replace 60% of our fleet with Zero Emission Vehicles (ZEVs).

● FY23
● FY24

1.7 Reduce carbon emissions for our business transport by 10% on 2013-2020 averages.

● FY23
● FY24

1.8 Deliver carbon-neutral construction.

● FY23
● FY24

1.9 Encourage 75% of National Grid's top 250 suppliers (by category/spend) to have carbon reduction targets and for 80% (by emissions) to have Science-Based Targets (SBT).

● FY23
● FY24

1.10 Install 1,430 AC electric vehicle (EV) charging bays and 40 DC EV chargers on Electricity Transmission's (ET) operational estate in support of the commercial fleet electrification programme.

● FY23
● FY24

1.11 All band A-C company cars to be Zero Emission Vehicles (ZEVs).

● FY23
● FY24

1.12 Phase out the use of diesel generators where commercially and technically viable.

● FY23
● FY24

Our 2026 commitments

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Progress against the implementation milestones is on track.



Progress is delayed but it is likely to be achievable before the end of the regulatory period.



Roll over the panels below to find out how we performed over FY23 and FY24.

FY23 19.1% reduction in our business carbon footprint from a FY19 baseline (excluding losses).

FY24 17% reduction in our business carbon footprint from a FY19 baseline (excluding losses).

FY23 20.5% reduction in SF₆ emissions from a FY19 baseline achieved.

FY24 16.3% reduction in SF₆ emissions from a FY19 baseline achieved.

FY23 Tender in development.

FY24 From October 2023, we put a Power Purchase Agreement (PPA) in place to buy 100% renewable energy.

FY23 Energy surveys completed at 30 sites.

FY24 Energy surveys completed at 130 sites.

FY23 22.7% reduction in carbon emissions from our office energy use achieved against an FY20 baseline.

FY24 33.2% reduction in carbon emissions from office energy use achieved against FY20 baseline.

FY23 11% of our fleet was replaced with ZEVs.

FY24 22% of our fleet was replaced with ZEVs.

FY23 21.5% reduction in carbon emissions from business travel from 2013-2020 averages.

FY24 30.1% reduction in carbon emissions from business travel from 2013-2020 averages.

FY23 153 tCO₂e/£m was our capital carbon intensity.

FY24 Gap analysis to PAS2080 and compensation strategy developed.

FY23 73% of UK-allocated suppliers (within top 250 by category/spend) engaged through CDP have carbon reduction targets.

FY24 67% of UK-allocated suppliers (within top 250 by category/spend) engaged through CDP carbon reduction targets. Suppliers with SBT targets to be reported in FY25.

FY23 447 EV charging bays installed at 79 sites.

FY24 466 EV charging bays installed at 82 sites.

FY23 71% of band A-C manager company cars are ZEVs.

FY24 95.7% of band A-C manager company cars are ZEVs.

FY23 Trials commenced for zero-emission alternatives.

FY24 Our new policy states that alternative technology is preferred over diesel. Construction partners must also now report fuel and energy consumption data to track diesel usage.

Enabling the energy transition

We are fully committed to making tangible progress in reducing carbon emissions, mitigating the impacts of climate change and being a key facilitator in the transition to a net zero economy.

To decarbonise the energy system, we are upgrading the electricity networks at a pace and scale not seen for generations. We are investing in essential infrastructure and growing our networks to connect new renewable energy sources and clean technologies to support the clean energy transition.

Boosting our grid connections

In FY24, we made more than 800 connection offers to our customers, and it took us on average 69 days to do this. In the race to connect enough renewable power to the grid to help Great Britain reach net zero, we are always looking for ways to reduce the time customers will wait for a connection.

In November 2023, Ofgem agreed to a major change in the way that the pipeline of projects wanting to connect to the grid is managed, allowing non-viable or stalled projects to be removed to speed up the process. With this policy, projects will now have milestones to meet – and deadlines for doing so – for example, for securing their planning consent and finalising project investment decisions. Where projects do not meet these milestones, they can be removed from the connections pipeline.

This ‘queue management’ policy change is a welcome development and means network capacity will be used more efficiently. It’s great news for clean energy projects that are ready to connect, and for Britain’s net zero ambitions.



FY24 connections performance



22.2 GW
Total low carbon capacity connected as of the end of FY24



40.2%
of generation connected to our network is low carbon



1.35 GW
New low carbon generation connections
We connected the world’s largest offshore wind farm, Dogger Bank A, to our electricity transmission network. We also connected several solar projects. Altogether, this meant that we connected 1.35 GW of new low carbon generation to our network in FY24 – a step forward on the journey to a cleaner, more secure energy system.



7.2
Quality of connections score
Our quality of connections score reflects a year of challenging and encouraging developments in the connections landscape. Significant volumes of customers applying to connect impacted connection dates.



69
Number of days on average it took to develop and issue a customer offer



831
Connection offers made
60% of the offers made related to renewables and storage technologies (including hybrids) in support of the energy transition.

Upgrading the grid

The country's electricity grid was originally built with the purpose of transmitting electricity created from coal- and gas-fired power stations.

To successfully move the UK away from fossil fuels and increase clean energy generation, we'll need to upgrade the grid – this means upgrading existing infrastructure, as well as building new infrastructure, to connect low carbon and renewable energy sources, such as offshore wind.

Connecting renewables to support the decarbonisation of the UK electricity network is the biggest impact we have as a business and we are working at pace to facilitate this. As pace of delivery is our key driver we will be utilising sustainable solutions where possible, while ensuring we do not risk any impact on programme.

We are calling this work **The Great Grid Upgrade** – it will be the largest growth in the UK transmission network in the last 50 years. The Great Grid Upgrade comprises 17 major infrastructure projects that will both scale up the grid and update our existing networks. It will enable us to carry more clean, secure energy from where it's generated – like out in the North Sea by wind turbines – to where it's needed. These projects will play a vital part in achieving the UK Government's ambition of connecting 50 GW of offshore wind by 2030.



2 GW

Eastern Green Link 2 will provide 2 GW of HVDC

Case study

Eastern Green Link 2: Unlocking renewable energy

One of our Great Grid Upgrade projects is **Eastern Green Link 2 (EGL2), a 2 GW High-Voltage Direct Current (HVDC) electrical 'superhighway' cable link to be built between Peterhead in Aberdeenshire, Scotland and Drax in North Yorkshire, England.**

It's a joint venture between NGET and Scottish and Southern Electricity Networks (SSEN) Transmission. This will be the longest HVDC cable in the UK, and the UK's single largest electricity transmission project ever.

In February 2024, the project reached a significant milestone after sealing contracts with specialist HVDC cable supplier, Prysmian, and with Hitachi Energy and BAM for the supply of converter stations at either end of the project. Construction work is planned to commence in 2024.

EGL2 will unlock the rich renewable energy capacity of Scotland and significantly increase the UK's capacity to deliver clean energy for around two million homes in the UK.



Source: The Great Grid Upgrade: Plugging the whole country (advert)



Scope 1 and 2 emissions

Our scope 1 (direct) emissions relate to:

- fugitive emissions from the leakage of sulphur hexafluoride (SF₆) used as an insulating gas in high-voltage equipment (approximately 92 per cent of our emissions)
- the fuel we use for business transport (approximately 2 per cent of our emissions).

Our scope 2 (indirect) emissions relate to:

- the energy used in our buildings (approximately 6 per cent of our emissions)
- transmission losses, which we report and are included in our Science-Based Target (SBT), but don't get accounted for in our 2026 Environmental Action Plan target.

Figure 1. Understanding our scope 1, 2 and 3 emissions

Scope 1: Direct

Downstream:

- SF₆ leaks from electric equipment
- Fuel use for transport

Scope 2: Indirect

Upstream:

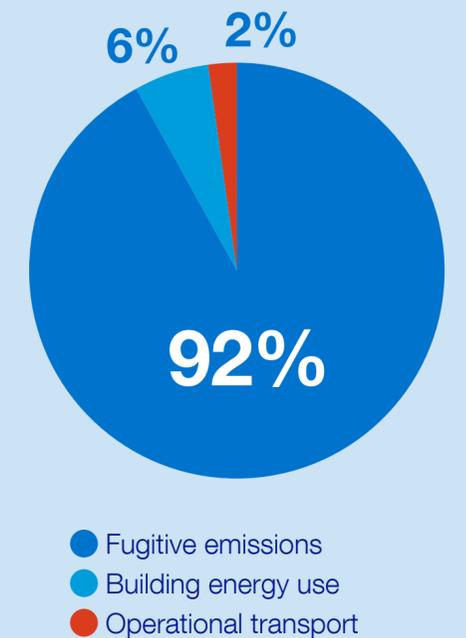
- Line losses
- Facilities use of electricity

Scope 3: Indirect

Upstream and Downstream:

- Purchased goods and services
- Capital goods
- Fuel- and energy-related activities
- Waste generated in operations
- Business travel
- Employee commuting

Figure 2. Scope 1 and 2 emissions (excluding losses)



The road to net zero

Climate change is the greatest challenge facing society. To avert the worst impacts, the world needs to transition to net zero by 2050.

We play a dual role in the transition to a low carbon economy and in achieving net zero. We are supporting long-term, national decarbonisation goals, while continuing to manage our own environmental performance responsibly.

To support the UK's target to achieve net zero by 2050, we are committed to serving as a leader in the energy transition, working with others across the sector and around the world to come together to deliver clean, fair, and affordable energy.

To decarbonise our own operations, we have a Science-Based Target (SBT) in line with keeping global warming to 1.5 degrees:

- Our medium-term target is to achieve 50 per cent reduction in scope 1 and 2 emissions from a FY19 baseline by 2030.

We also set long- and short-term targets:

- Our long-term target is to reach net zero by 2050, limiting our use of offsetting to get there.
- Our short-term target is to reduce our controllable scope 1 and 2 emissions by 34 per cent by 2026 from a FY19 baseline.

FY24 performance

Our scope 1 and 2 emissions totalled 248,482 tCO₂e (excluding emissions from electricity line losses, which we have little control over). This represents a 17 per cent reduction from our FY19 baseline. This is under our annual reduction target of 20.4 per cent.

Our scope 1 and 2 emissions increased by 2.8 per cent from FY23 to FY24. This was a challenging year in pursuit of our target to reduce SF₆ emissions. Whilst 13 of the top 20 leaking assets were repaired, system access constraints prevented the repairs from being completed until the second half of the year. For more information on our approach to SF₆, please read [page 13](#).

We are continuing to make good progress in other areas and have achieved reductions in emissions across our transport and office energy use.

Figure 3. Business carbon footprint (excluding transmission losses)

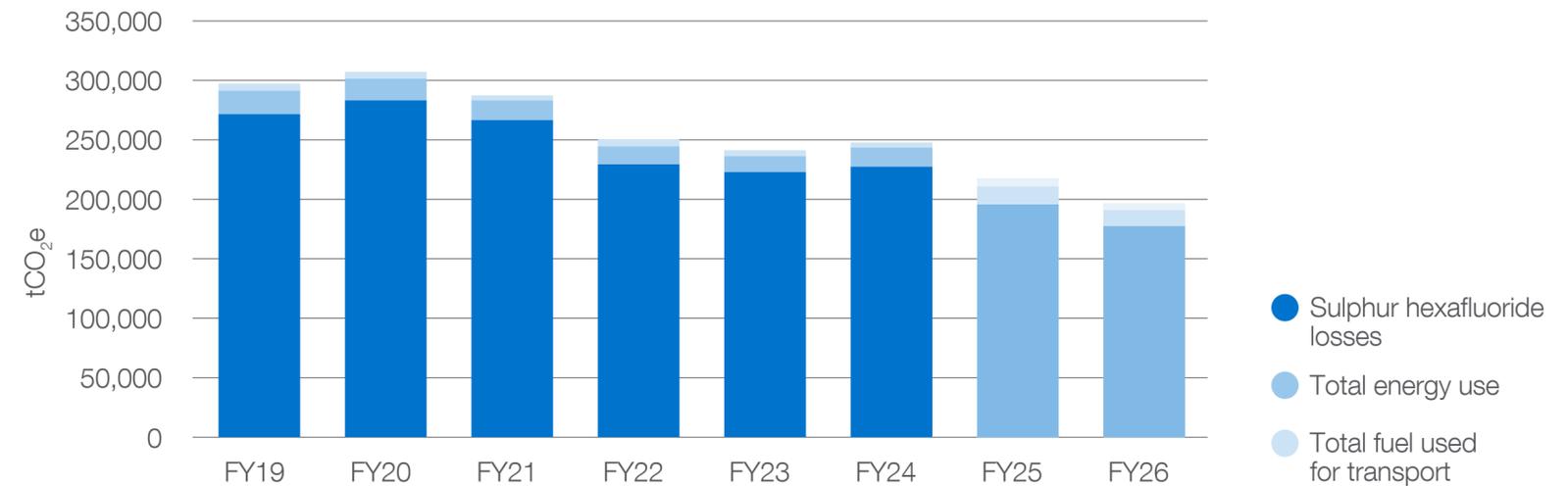


Table 1. Scope 1 and 2 emissions

Emissions in tCO ₂ e	Specific area	2018/19 baseline	FY21/22	FY22/23	FY23/24
Scope 1 – Fugitive emissions	IIGs (tCO ₂ e)	272,114	229,528	223,003	227,666
Scope 1 – Operational transport	Direct commercial vehicles (tCO ₂ e)	6,798	5,255	5,155	4,913
Scope 1 – Fuel combustion	Diesel and natural gas (tCO ₂ e)	Not split out	308	242	577
Scope 2 – Metered building energy use (location-based approach)	Buildings – office/depots electricity (tCO ₂ e)	20,006	1,849	1,505	1,141
	Substation electricity (tCO ₂ e)		12,984	11,817	14,185
Scope 2 – Metered building energy use (market-based approach)	Buildings – office/depots electricity (tCO ₂ e)	-	-	2,841	998
	Substation electricity (tCO ₂ e)	-	-	22,314	11,708
Scope 2 – Electricity losses		1,295,484	1,152,795	1,299,340	1,228,468
Total emissions including losses (tCO₂e) location-based approach		1,594,402	1,402,719	1,541,062	1,476,951
Total emissions excluding losses (tCO₂e) location-based approach		298,918	249,924	241,723	248,482



17%

reduction in Scope 1 and 2 emissions since FY19

Insulating and interruption gas (IIG) emissions

Sulphur hexafluoride (SF₆) is a highly stable gas that has a global warming potential (GWP) of 23,500* times that of carbon dioxide (CO₂)

It's been used within high-voltage electricity equipment for decades due to its excellent insulating and current interruption properties. Although sealed, our equipment is prone to small leaks of SF₆ to the atmosphere, particularly as they age.

Our transition to net zero is heavily reliant on our SF₆ strategy and performance. We are focusing on leak identification and repairs, and investment in SF₆ alternatives.

Our commitment

Reduce SF₆ emissions from our operations by 50 per cent by 2030, from a FY19 baseline.

FY24 performance

Our total IIG emissions were 227,666 tCO₂e in FY24, a decrease of 16.3 per cent from a FY19 baseline and an increase of 2.1 per cent since FY23. Our SF₆ leakage rate remained at 1 per cent in FY24.



50%

We are committed to reduce SF₆ emissions by 50% by 2030

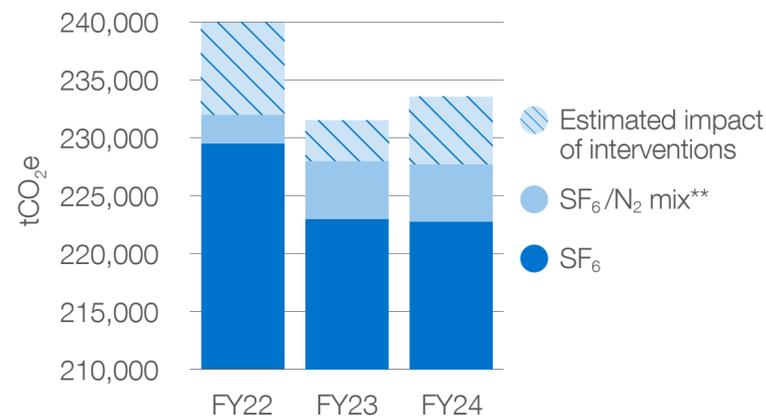
*according to IPCC Fifth Assessment Report, 2014 (AR5).

Our planned leak repair programme has continued to contribute to significant improvements in the overall leak rate, and therefore lower emissions since FY19. 83 interventions were made in FY24 to prevent SF₆ leaks, helping to avoid the release of 5,849 tCO₂e.

However, whilst 13 of the top 20 leaking assets were repaired, system access constraints prevented the repairs from being completed until the second half of the year and therefore the full benefit was not reflected in the full-year emissions.

With FY24 repairs continuing to benefit overall emissions reduction, and SF₆ abatement work already planned for next year, we expect FY25 to demonstrate a significant improvement and realign us to our Science-Based Target (SBT) pathway.

Figure 4. IIG emissions



**Most equipment uses 100 per cent SF₆. However, in some cases we can add nitrogen (N₂) to the mix to reduce SF₆ usage.

Case study

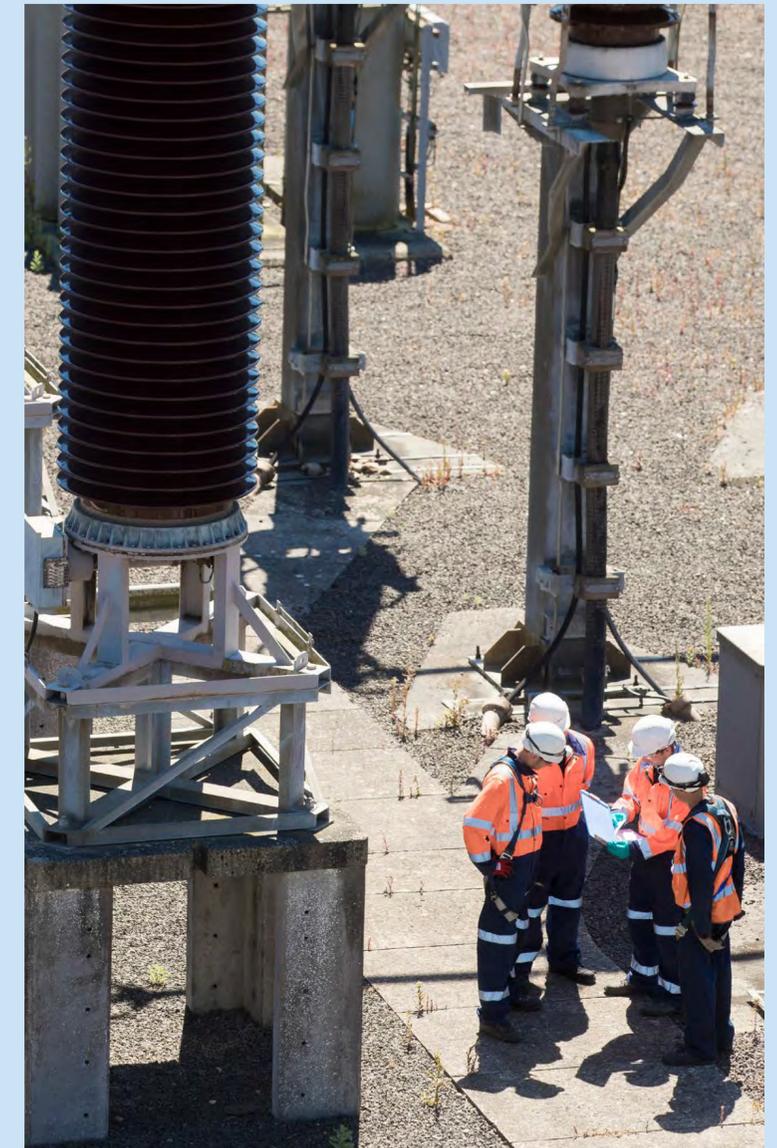
Trialling a new SF₆ leak repair technology at Sellindge

To be successful in reducing SF₆ emissions, it is critical that we have an array of SF₆ leak repair technologies and strategies, including solutions that allow the equipment to remain in service.

Working with a company called Mastergrid, we trialled a new SF₆ leak repair solution at our Sellindge 400kV substation. Mastergrid initially attended site to 3D scan the known leak points and used this data to design and manufacture their solution, which is attached around the equipment to create a new external encapsulation with a gas tight seal. Mastergrid started works on site where they installed their solutions, and fixed the leak in October 2023.

Previous efforts to fix the issue were unsuccessful. Finding a solution that could be applied while the equipment remained in service, at 400,000 volts, was a critical consideration throughout the development of the repair. The fix, so far, appears to have been successful, stopping around 35kg of SF₆ emissions per month leaking from the network – this is around 9,879 tCO₂e. The repairs will continue to be monitored alongside the planning of future repairs.

Click [here](#) to read about our overall approach to tackling SF₆ emissions.



Curbing emissions from transport

Although transport only accounts for approximately 2 per cent of our business carbon footprint, we are committed to supporting the adoption of Zero Emission Vehicles (ZEVs).

So far, we've reduced our emissions from operational transport by 27 per cent in FY24, against an FY19 baseline.

Replacing our commercial fleet

We have made a commitment to replace 60 per cent of our commercial fleet to ZEVs by 2026. As of the end of FY24, 181 (22 per cent) of our light duty fleet vehicles were replaced by ZEVs compared to 97 at the end of FY23.

We experienced challenges regarding 30 vehicles not being able to enter operations due to a voltage battery issue. The vehicles are currently at the build centre waiting on a manufacturer recall. We will be purchasing 160 vehicles in FY25 from a different manufacturer that have slightly improved range. We remain confident in achieving the 60 per cent target by 2026.

Decarbonising company cars

All band A-C company cars will be ZEVs by 2026. We are on track to meet this target, as 95.7 per cent of band A-C company cars were ZEVs by the end of FY24. This is a significant increase from FY23 (71 per cent).

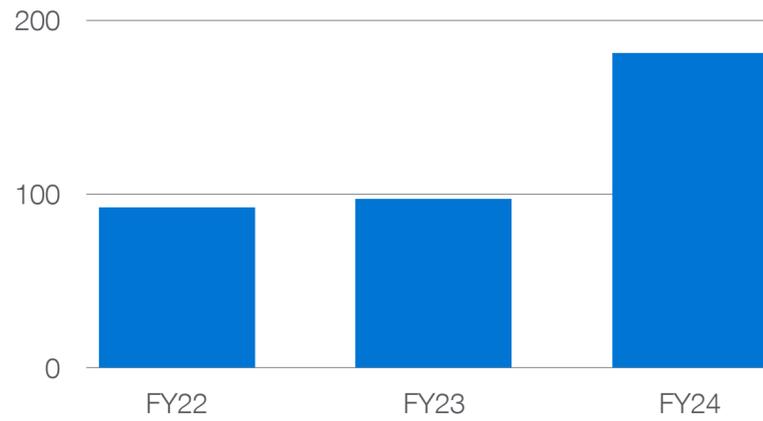
We are part of the

CLIMATE GROUP
EV100

Charging our fleet

Our goal is to install 1,430 AC electric vehicle (EV) charging bays and 40 DC EV charging bays. We have now installed 466 charging bays to 82 of our sites. These bays are supplied with 100 per cent renewable energy and are available to our employees and visitors.

Figure 5. Number of commercial vehicles replaced with ZEVs (cumulative)



95.7%
of senior managers' cars are ZEVs



27%
Reduction in operational transport emissions from our FY19 baseline

Energy usage

We are committed to enhancing energy efficiency in our operations and offices to reduce the carbon emissions that result from energy usage.

This means using the least amount of energy possible whilst keeping our substations and office buildings running as normal.

Using less energy in our offices

We are focusing on an efficiency-first approach to decrease the carbon emissions from our office energy use by 20 per cent from a FY20 baseline. Emissions from the energy used in our office buildings saw a reduction of 33.2 per cent from a FY20 baseline, compared with 22.7 per cent last year. We continue to see the benefits of last year's measures.

Purchasing renewable energy

Cutting the carbon emissions associated with energy usage is not only about using less energy, but also ensuring that the energy used is increasingly supplied from low carbon or renewable sources.

From October 2023, we put a Power Purchase Agreement (PPA) in place to ensure we buy 100 per cent renewable energy, including both electricity and gas for our metered estate. Our electricity is being generated at Moray East, an offshore wind farm in Scotland. In the first six months, we saved 2,542 tCO₂e.

We currently report on emissions from metered energy use and aim to start reporting on unmetered energy use from FY25. As part of the energy efficiency programme described in the case study, we worked with AECOM to further understand substation electricity usage. From this work, it was estimated that 8,716 tCO₂e resulted from unmetered electricity usage in FY24.



33.2%

reduction in emissions from office energy use from a FY20 baseline



100%

of the energy we buy is renewable

Case study

Substation Energy Efficiency Programme

We want to ensure that our 300+ substations are as energy efficient as possible; this is critical to our efforts to reduce scope 2 emissions and tackle climate change. That's why we set up the Energy Efficiency Programme and appointed AECOM to conduct energy efficiency audits of our substation estate across the UK. The aim was to identify which energy saving measures we could implement to reduce domestic energy use, cost and carbon emissions.

AECOM conducted 130 site audits in two phases throughout FY24, covering 50 per cent of our total estate. A number of potential energy saving opportunities were identified, such as switching to LED lighting, replacing windows and doors, and solar panel installation.

Two sites have been selected to trial the identified energy-saving opportunities in FY25. The information that we have collected throughout these audits and through these trials will enable us to set our energy saving commitment for 2026 onwards.



Our transmission losses strategy

When electrical currents travel on our network, some energy is dissipated in the form of heat and is ‘lost’ due to the electrical resistance in the network – this is known as a transmission loss.

The generation of electricity to compensate for transmission losses leads to additional greenhouse gas emissions. In fact, the majority of our scope 1 and 2 emissions result from transmission losses across our network.

Transmission losses are largely outside of our control and are predominantly determined by where electricity is generated (for example, electricity generated closer to where it is needed would result in lower losses across the network).

The growth in recent years of large, remote wind farms has tended to increase transmission losses because, when the wind blows, the power generated needs to be brought to demand, most of which lies around large, heavily populated areas away from the wind farms. In the near term, there will be considerable growth in our transmission and network. As a result, we expect our electricity network losses to grow.

However, as new low carbon generation displaces existing fossil fuel plants, and by making proactive investments in more efficient networks now, we will see significant reductions in emissions over time. With the reduction in the carbon intensity of electricity outweighing the growth in network losses, our emissions will fall.

Despite the progress we do not expect reductions in scope 2 losses to be linear as we progress towards our targets. Our emissions from electricity losses decreased by 5 per cent from last year and from a FY19 baseline.

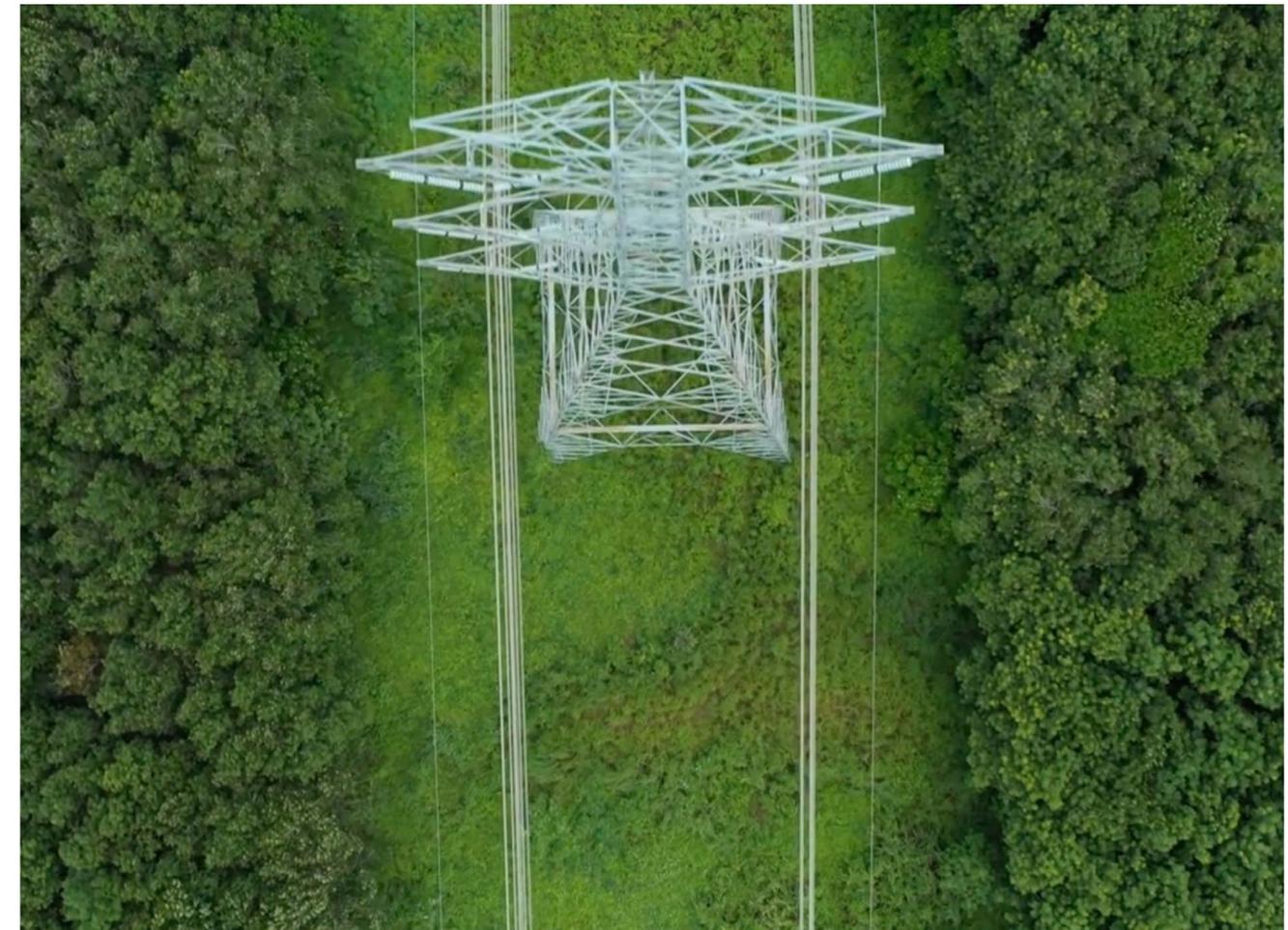
Our approach

Our strategy outlines how we account for transmission losses in equipment specifications and procurement processes, as well as for investment decision-making. Furthermore, it details our planned asset replacement programmes and new technologies, allowing us to plan for and mitigate the associated impacts on transmission losses in the future.

Transmission losses are one of several factors considered when selecting the most economic and efficient transmission solutions. The increase in transmission losses and cost resulting from increased transmission capacity must be considered alongside the capital saving of avoiding new lines built to meet system requirements.

Table 2. Transmission losses

Transmission losses figures	Unit	FY22	FY23	FY24
Annual losses	TWh	5.4	6.7	5.9
Share of total electricity	%	2.08	2.51	2.35
tCO ₂ e emissions	tCO ₂ e	1,152,795	1,299,340	1,228,468



5%

Our emissions from electricity losses decreased by 5% from last year

Scope 3 emissions

We recognise our huge responsibility to cut carbon emissions in our value chain as we continue to build the new electricity networks of the future.

Improving our scope 3 inventory

We expect our scope 3 emissions to increase in line with increased investment in new energy infrastructure, and therefore we work to continually improve the accuracy of our inventory to ensure that it reflects our evolving business activities.

In FY24, we improved our methodology for calculating emissions from purchased goods and services/capital goods. We have better aligned our expenditure with emissions categories, resulting in reported emissions that give a clearer picture of our actual emissions.

This work forms part of a long-term plan to improve our scope 3 reporting. In future, we intend to work towards supplier specific data to better reflect our actual emissions and allow us to show the impact of our work to reduce supply chain emissions.



70%

Purchased goods and services and capital goods account for 70% of our total scope 3 emissions

Emissions data

Our scope 3 emissions totalled 945,385 tCO₂e in FY24 – this is 39 per cent of our total carbon footprint (scope 1, 2 and 3). Although we updated our methodology in FY24, our most material scope 3 categories have not changed:

- Purchased goods and services
- Capital goods
- Fuel-and energy-related activities

A significant proportion of emissions come from the materials we use in construction, such as steel, aluminium, and concrete.

Business travel emissions

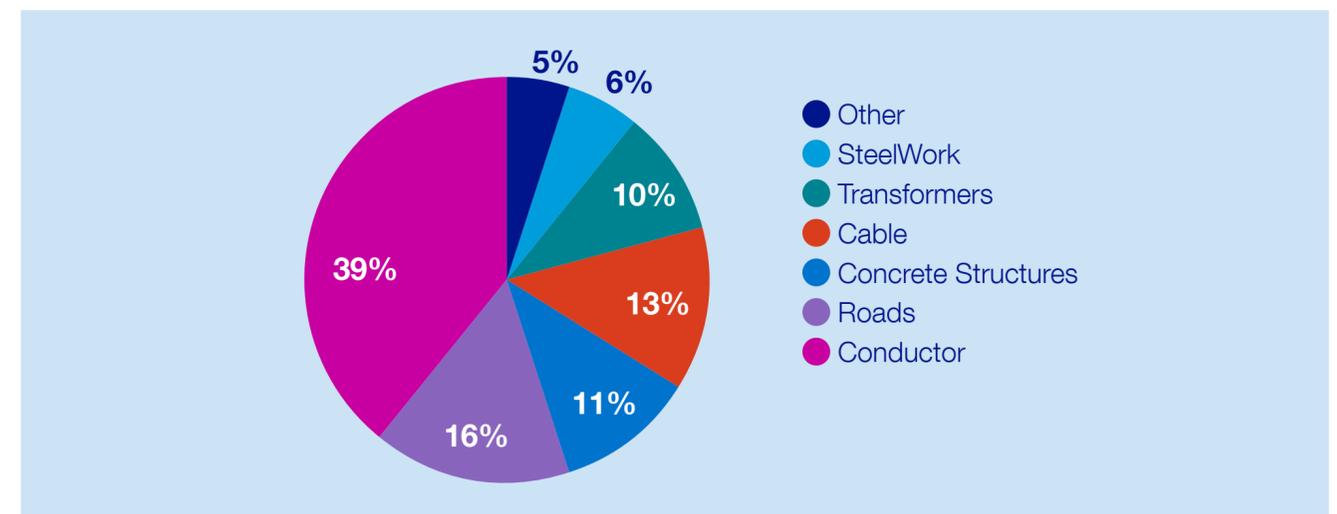
Our business travel emissions account for 0.1 per cent of our total scope 3 emissions in FY24. Although our business travel has steadily increased since 2021, we are still significantly under our pre-COVID-19 pandemic baseline with employees using digital tools like Teams to communicate, as opposed to driving for short meetings. As a result, we've reduced our business travel emissions by 30.1 per cent on 2013-2020 averages.

Table 3. Scope 3 emissions

[Click for pie chart](#)

Scope 3 by Greenhouse Gas Protocol category	FY24 emissions (tCO ₂ e)	Reporting maturity	Materiality
1: Purchased goods and services & 2: Capital goods	665,814	Medium	High
3: Fuel and energy related activities	276,406	High	Medium
5: Waste generated in operations	569	High	Low
6: Business travel	936	High	Low
7: Employee commuting	2,229	Medium	Low
Total	945,385		

Figure 7. Carbon hotspots of completed projects



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Figure 6. NGET's scope 3 emission breakdown (tCO₂e)

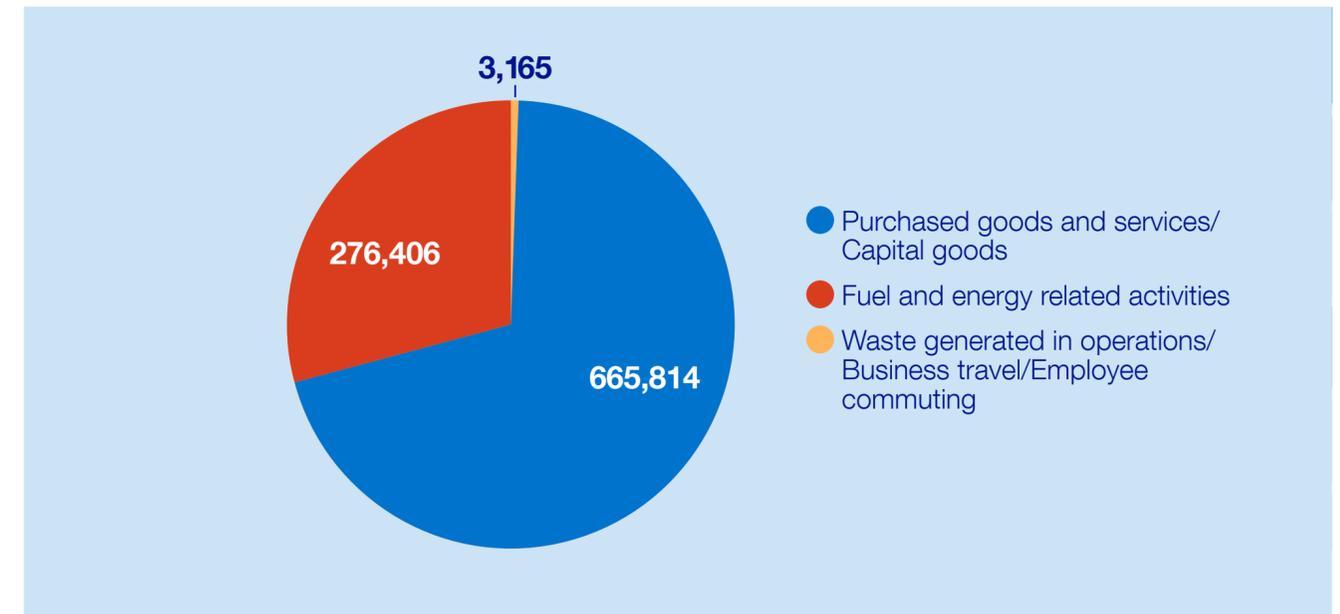
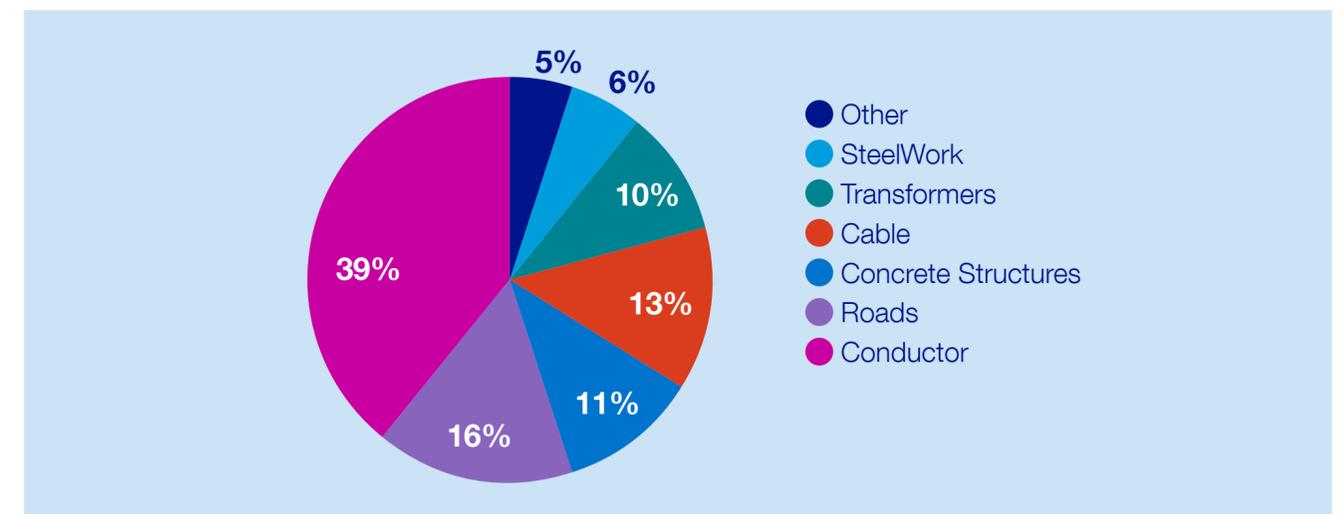


Figure 7. Carbon hotspots of completed projects



Reducing supply chain emissions

Working with our suppliers

In line with our Group Responsible Business target, we aim for our suppliers that are a part of the 80 per cent of Group suppliers by emissions to commit to setting a formal Science Based Target (SBT) by FY26.

In FY24, 67 per cent of our UK-allocated suppliers that submitted data through CDP had carbon reduction targets. This is less than in FY23 (73 per cent) because less suppliers responded through CDP in FY24. We are unable to report the percentage of suppliers with SBT targets due to the change in methodology for calculating emissions of our purchased goods and services. This has affected the emissions profile, leading us to revise our list of carbon strategic suppliers. We will report on our progress to meet our SBT supply chain engagement targets in FY25.

We understand members of our supply chain are in different stages on their journey to net zero and we help educate them on areas to focus to reduce their own emissions. We continue to embed sustainability criteria into all elements of our strategic sourcing process.

Supply Chain Sustainability School

Launched in 2012, the Supply Chain Sustainability School is a virtual learning platform that aims to upskill contractors across environmental, social and economic topics. We have a bespoke learning pathway via the school for our suppliers as part of our Science-Based Target (SBT) programme. Our suppliers are provided with support to develop their own decarbonisation strategy, which in turn helps us to reduce our supply chain emissions.



Case study

Cutting carbon through revised concrete standards

Concrete is the most widely used substance on Earth after water and it accounts for 8 per cent of global carbon emissions. It also happens to be one of the most carbon intensive materials for our construction projects.

In FY24, we mandated the use of low carbon concrete (defined as Low Carbon Concrete Group (LCCG) rating grade B or above for structural concrete and A or above for non-structural) on all new projects. We are one of the first organisations to adopt this industry-wide benchmarking system, published as part of the Institution of Civil Engineers (ICE's) overall route map to decarbonising concrete.

It is also the first time that carbon has been used as a criteria in our requirements. Focusing our attention on the carbon intensity of concrete acts as a strong incentive for innovation in the sector, and will lead to improved data quality and greater availability of lower carbon concretes.

The new standard will apply to all new projects. We estimate that this policy change will help us to achieve up to a 4 per cent reduction in emissions from concrete use across the portfolio.



Phasing out diesel

The use of diesel generators, which are used as back-up to power substations and construction sites, result in the release of harmful greenhouse gas emissions and toxic gases. The generators are important, particularly during winter, to ensure that we can run our operations in the event of a power disruption.

Our commitment is to phase out the use of diesel generators where commercially and technically viable in our operations and construction projects.

Our approach

In FY24, we published new guidance encouraging operational sites to move to Hydrotreated Vegetable Oil (HVO) for standby generators. While the initial cost of HVO is higher, it has a longer shelf life, as well as a reduced environmental impact, decreasing emissions by up to 95 per cent.

We are also working with our construction contractors to find alternatives with a low carbon footprint. Our contractors successfully used HVO instead of diesel in FY24 on three of our construction sites – Twinstead, Barking and Elstree, making these sites diesel free.

We request that all our potential construction contractors provide details of plans to reduce emissions as part of the tender process. From FY24, we requested all construction projects to report fuel usage to our Contractor Sustainability Portal. This will allow us to track our progress towards phasing out the use of diesel and identify our diesel-free sites.



Source: J. Murphy & Sons Limited

“The future of energy is undeniably green, and the transition from diesel generators is at the forefront of this shift. As technology develops and costs become even more competitive, shifting towards a greener energy landscape is one of our environmental priorities.”

Alison Fulford
Carbon Technical Lead



Diesel

Phasing out the use of diesel generators



Guidance

New guidance encourages sites to use Hydrotreated Vegetable Oil (HVO)

Low carbon construction

As we grow our network to ensure that it is fit for purpose for a net zero future, we continue to focus on how we can reduce the carbon emissions of our construction projects.

Our approach

In 2021, we committed to achieve carbon-neutrality across all our construction projects. Three years on, we maintain a reduction first approach, prioritising reducing emissions as much as is feasibly possible. However, due to the high carbon intensity of some of the materials we use, we will need to compensate for residual emissions.

Since we set our target, the language, and maturity of the sector with regards to low carbon construction has evolved significantly. Therefore, in September 2023 we consulted leading carbon experts from industry and public sector to inform our approach to achieving carbon-neutral construction, what we should call our target, and our approach to carbon compensation.

Based on the feedback from carbon experts, we will update the language of our target to better reflect what we are doing in early 2025. We will be publishing this in our 2025 Environmental Action Plan update and will also be launching a roadmap that showcases our commitments and actions.

Our compensation approach is to invest in projects in the UK that deliver wider benefits to nature and communities. For example, we are investing in the development of woodlands across England and supporting energy efficiency activities in low-income housing. This approach is sustainable and supports long-term carbon abatement.

However, in our consultation, stakeholders have fed back that carbon neutrality is not the right terminology as the compensation we will be delivering during this regulatory period will not be fully realised by 2026. We will support the developing UK nature/carbon markets through existing compensation projects with near term carbon benefits, as well as new project creation that will provide longer term carbon benefit, such as new woodland, rewilding and peatland restoration.



Six strategic priority areas

This year we launched our six strategic priority areas for action in net zero construction:

- Fit for purpose tools, data and reporting**
Ensuring that our data and tools are optimised and readily available
- Industry and project-level carbon reduction action plan**
Supporting decarbonisation via industry action
- PAS2080-aligned carbon management system**
Aligning with standards to achieve best practice
- Carbon knowledge and capability**
Building carbon literacy across the business
- Carbon compensation delivery plan**
Developing an investment plan for compensation projects
- Whole life carbon beyond 2026**
Defining our approach to whole life carbon beyond 2026

Capital carbon performance

In FY24, our carbon intensity was 145 tCO₂e/£m*, a decrease from FY23 (153 tCO₂e/£m). We've used alternatives to materials with a high carbon intensity such as concrete and steel and refurbished assets where it has been possible to do so.

The pace of project delivery is an important consideration when planning for the use of low carbon technology, the associated carbon benefit of which could be outweighed by that lost through a delay in the decarbonisation of our network.



*reporting only includes project that started post April 21 and have been completed within FY24.

Advancing low carbon innovation

Decarbonising our electricity network provides us with exciting opportunities to invest in new technologies and form strong partnerships with other companies and organisations.

Our innovation and Research & Development (R&D) portfolio enables us to identify and target carbon savings for our operations. We are focusing on areas where we can make the biggest difference, such as our fugitive emissions and the carbon content of our construction materials.

“It’s critical we are innovating to allow us to test and prove novel technologies and methods for decarbonising the electricity system. By doing things differently, innovation can allow us to accelerate decarbonisation.”

Gary Stockdale
Net Zero Innovation Manager

Innovating to support the low carbon transition

As part of our regulatory innovation portfolio funded by Ofgem’s Network Innovation Allowance (NIA), we invested £12.1m in FY24 in a range of projects that support decarbonisation and the transition of the energy system to net zero. From this investment, £2m was spent on projects that aim to reduce SF₆ emissions. We also spent £1m on climate resilience projects that aim to ensure that our assets are protected against extreme weather-related events.

In line with our low carbon construction targets, we designed a specific portfolio of innovation projects that focus on reducing the environmental impact of our construction activities.



£12.1m

invested in projects that support decarbonisation

Case study

Assessing the potential of Vehicle to Grid technology

Our Innovation Team, as part of the Vehicle to Grid (V2G) project, have been developing an energy system model to help us understand and predict the demand from electric vehicles in 2023 and 2025. V2G technology is the process of feeding the energy stored in an electric vehicle’s battery back into the National Grid.

It offers the potential to reduce peak demand, however, its success is based on consumer behaviours, the availability of charging points and the range of tariffs on offer. Modelling the demand profiles helps us to identify when and where electric vehicle uptake is likely to arise, and therefore how useful V2G technology might be in the future.

“This project will help us to understand the potential of V2G in reducing peak electricity demand as well as identifying cost-effective whole system planning strategies for the GB transmission network so that we invest in the right place at the right time.”

Neha Moturi
Associate Innovation Engineer



29

innovation projects supporting decarbonisation commenced since 2021

Building resilience to climate change

We take our job of ‘keeping the lights on’ very seriously and therefore ensure that our network of pylons, cables and substations are resilient to flooding, storm conditions and extreme heat, all of which are made more likely by climate change.

We invest around £1.3 billion each year to adapt and develop our network. This includes upgrading and maintaining equipment, and routinely checking on the condition of our assets and the environment around them. Our teams work hard to plan ahead, making sure the network is in good condition before extreme weather sets in.

Managing the risk of flooding

We protect our substations against flooding by installing flood defences and elevating them off the ground and out of danger. We are also planning to install flood risk sensors to all sites that are at risk of flooding.



Case study

Project ICECREAM

In FY24, we launched project ICECREAM – an Investigation into the Coastal and Estuarine Climate change Risks on Electricity Asset Management.

Via this project, we are establishing which of our assets are at risk of flooding from sea-level rise, coastal storm activity and salt marsh encroachment, and a timeline of when these risks may arise. We'll produce detailed asset-based maps to assess future hazards and their potential impacts, which will allow us to put mitigation measures in place to protect our assets from the worst impacts of climate change.



£1.3 billion

Amount we invest each year to adapt and develop our network

Sustainable use of resources

Our energy networks require finite resources, such as steel for pylons and aluminium for overhead lines.



Hover over for more information



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Sustainable use of resources



In this section

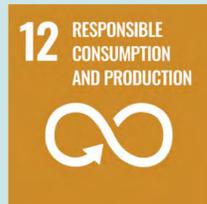
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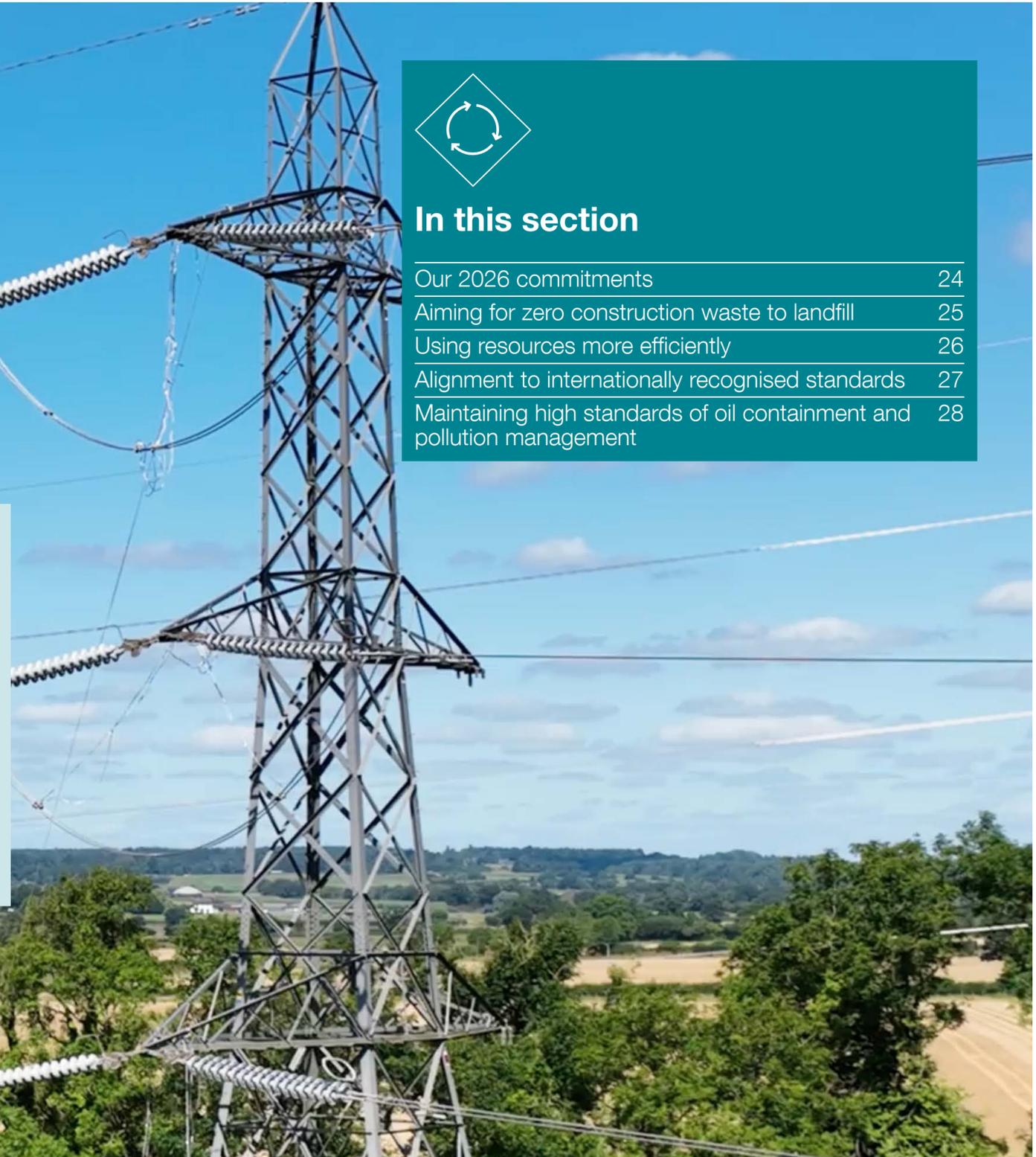
As the competition for resources increases, it's essential that we make the most of all the materials we use. Within our construction, operations and office locations, we are focusing on:

- Maintaining our landfill diversion rates
- Increasing our recycling rates
- Reducing the amount of waste created
- Reducing our water use
- Aligning to external industry standards

We are doing this by influencing a change in behaviour with our employees, contractors, and suppliers.



Hover over for more information



Our 2026 commitments

To enable effective monitoring of objectives and measures, the following RAG status definitions are used:



Progress against the implementation milestones is on track.



Progress is delayed but it is likely to be achievable before the end of the regulatory period.



Target not set.

Roll over the panels below to find out how we performed over FY23 and FY24.

2.1 Achieve zero waste to landfill across our construction projects.

● FY23
● FY24

2.2 All construction projects to report on waste avoidance opportunities.

- FY23
● FY24

2.3 Maintain an 80% recycling rate in construction.

● FY23
● FY24

2.4a Increase our operational recycling rates from 45% to 60%.

● FY23
● FY24

2.4b Increase our office recycling rates from 46% to 60%.

● FY23
● FY24

2.5a Reduce the waste tonnage (from a FY20 baseline) at our offices by 20%.

● FY23
● FY24

2.5b Reduce water use (from a FY20 baseline) at our offices by 20%.

● FY23
● FY24

2.6 Pilot and implement circular economy principles by aligning our business to international recognised standards, e.g., BS:8001 Circular Economy Standards.

● FY23
● FY24

2.7 Align our Procurement Strategy to international recognised standards, e.g. ISO 20400 Sustainable Sourcing Standard.

● FY23
● FY24

2.8 Maintain our high standards of oil containment and pollution management.

● FY23
● FY24

Our 2026 commitments

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Progress against the implementation milestones is on track.

Progress is delayed but it is likely to be achievable before the end of the regulatory period.

Target not set.

Roll over the panels below to find out how we performed over FY23 and FY24.

FY23 99.8% construction project waste diverted from landfill compared to a FY19 baseline.

FY24 99.4% construction project waste diverted from landfill compared to a FY19 baseline.

FY23 Target set in FY23.

FY24 One construction project identified waste avoidance opportunities.

FY23 71.6% construction recycling rate and we set a target to maintain an 80% recycling construction rate.

FY24 86.5% recycling rate for construction waste.

FY23 53% operational waste recycling rate.

FY24 78% operational waste recycling rate.

FY23 43% office waste recycling rate.

FY24 54% office waste recycling rate.

FY23 37% reduction in waste tonnage at our offices from a FY20 baseline.

FY24 33% reduction in waste tonnage at our offices from a FY20 baseline.

FY23 35% reduction in water use at our offices from a FY20 baseline.

FY24 19.7% reduction in water use at our offices from a FY20 baseline.

FY23 Gap analysis not reviewed in FY23 due to resource constraints.

FY24 Outcomes of the BS:8001 Circular Economy Standard were socialised with internal stakeholders and an ambition will be proposed in our T3 business plan.

FY23 Gap analysis completed in 2021 and will be reviewed every 2 years.

FY24 3 year supply chain sustainability strategy developed in line with ISO 20400.

FY23 59 environmental engagement visits carried out.

FY24 52 environmental engagement visits were carried out.

Aiming for zero construction waste to landfill

Our construction projects produce the largest proportion of waste across our business.

We are prioritising ways to improve our recycling rates, reduce our waste intensity and ensure as much of our construction waste is diverted from landfill as possible. This is important as landfill has several detrimental impacts, including soil and water contamination, air pollution and the loss of valuable habitats and open spaces. We want to minimise these impacts and have set a target to achieve zero waste to landfill across our construction projects.

In FY24, 99.4 per cent of construction waste was diverted from landfill and either recycled or recovered. Our landfill diversion rate has slightly reduced from FY23 due to the presence of Japanese Knotweed in some of our soil and stones waste. This is a controlled waste that has to be disposed of at licensed landfill sites and therefore cannot be reused or recycled. Additionally, due to the location of our cable replacement project in Dinorwig and the lack of suitable recycling facilities nearby, there were commercial and logistical constraints that prevented some waste being diverted from landfill.

86.5 per cent of construction waste was recycled in FY24. A large proportion of the waste diverted from landfill is soil and stone that is recovered/reused on our projects. Other wastes are recycled such as wood and metal (see table 4 to see our individual recycling targets).

Improving our performance

We will continue to work collaboratively with our supply chain to improve the accuracy of the data and work on a joint solution to improve recycling, reduce the waste we create and deliver improved resource efficiency in our construction schemes. We will be rolling out an externally accredited construction environment management course to equip our employees with the knowledge to identify recycling and recovery opportunities on our projects.

Table 4. Waste stream recycling targets and performance

Case study

Using tunnelling spoil to support habitat restoration

We are building 30km of cable tunnels stretching from Wimbledon in southwest London to Crayford in southeast London as part of our London Power Tunnels 2 project.

The cable tunnels are needed to replace three existing electricity circuits that are coming to the end of their life. To avoid sending large amounts of soil and stones to landfill, we transported 220,000 tonnes of tunnelling spoil from this project to Pitsea to support habitat restoration in the area.

The material will be used by the RSPB and Veolia to restore the former Pitsea landfill to a grassland habitat and incorporate it into the surrounding nature reserve.

Approximately 230,000 tonnes of spoil was also sent to Hermitage Quarry as part of its restoration. This is the equivalent of 284 tCO₂e had we sent the waste to landfill. The imported material is used to fill the void created by the quarrying activities, restoring it to farm or woodland.



99.4%

Construction waste diverted from landfill



86.5%

Construction waste recycled

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Table 4. Waste stream recycling targets and performance

Waste stream	Recycling targets (%)	FY24 performance (%)
Concrete	100	99.3
Wood	100	99.8
Soil and stones	85	77.4
Mixed construction & demolition waste	95	99.8



99.4%

Construction waste diverted from landfill



86.5%

Construction waste recycled

Using resources more efficiently

We are continuing to prioritise resource use within our operations and our offices, increasing our recycling rates, reducing the amount of waste created, and reducing our water use.

We are doing this by influencing a change in employee behaviour, and across our supply chain and contractors.

Recycling more waste

We regularly conduct reviews of our operational waste sources to ensure completeness of our dataset. In FY24, we identified and included two additional waste streams. These are predominantly recycled and this resulted in an increase in our overall recycling rate.

We achieved a recycling rate of 54 per cent at our offices in FY24 and a waste reduction of 33 per cent compared with a FY20 baseline.

Using less water

Water use in our offices saw a reduction in volume of 19.7 per cent from a FY20 baseline and an increase in volume of 24 per cent compared with FY23.

This increase was due to a water leak at one of our office locations. Investigations are ongoing and the leak will be fixed as soon as the source is identified.

A small amount of mains water is used to serve our operational sites. Freshwater is also abstracted under licence at several sites to provide cooling for high voltage underground cables. One example is St Johns Wood substation in London which abstracts water from the Regents Canal. Cable cooling operates in a closed loop system so withdrawal volume is equal to that discharged.

Water consumption for construction projects is not currently captured, but we are adding this as a new requirement for projects in FY25 to have a better understanding of our water footprint.

Case study

Donating unsold food from our offices

We provide on-site catering and hospitality at four of our core office sites and work with our partners, Mitie and Gather & Gather, to manage food waste responsibly. In addition to avoiding food waste through stock control and careful menu planning, we have partnered with Olio to donate unsold food.

Each week, Olio volunteers collect surplus food from our sites and redistribute it to families in the local community. This way, we help to put spare food on tables, as opposed to disposing of it.



78%

Operational waste recycled in FY24



54%

Office recycling rate in FY24

Alignment to internationally recognised standards

Alignment to ISO 20400

Since 2017, we have been undertaking a bi-annual self-assessment against ISO 20400 guidance for Sustainable Procurement to assess our approach to embedding sustainability into our procurement function.

In line with our latest assessment in 2023, we developed a three-year strategy to further empower our Procurement Team to embed sustainability into sourcing activities by enhancing sustainability processes, policies and procedures. This includes but is not limited to enhancing our approach to supplier onboarding, tender questionnaires, and due diligence. We keep engaging with our suppliers and partner organisations to further drive sustainable procurement across our value chain.

Alignment to BS:8001

In 2022, we did our first gap analysis to the BS:8001 Circular Economy Standard to understand the adoption of the principles of circular economy within our business. This determined that the business is currently at 'Level 1 – Basic'.

In FY24, we reviewed our gap analysis again and the outcomes of the BS:8001 Circular Economy Standard were socialised with internal stakeholders and an ambition was agreed and will be presented in our RIIO-T3 business plan proposals.

We also started to review a circular approach for SF₆, re-using it from decommissioned assets to reduce/eliminate procurement of virgin gas. We are engaging with our suppliers to implement a model for the future.



Three-year

In line with our latest assessment in 2023, we have developed a 3-year strategy plan aligned with ISO 20400



SF₆

Circular SF₆ approach to reduce/eliminate virgin gas



Maintaining high standards of oil containment and pollution management

Our aim is to maintain our high standards of oil containment and pollution management.

We are actively working to prevent pollution that may result from our activities and continually improve our Environmental Management System (EMS) to protect the environment and reduce risks of environmental incidents.

Managing environmental incidents

We have an internal environmental incident classification which enables us to classify any environmental incidents from the least severe (good catches) to most significant (Category 1).

In FY24, 23 category 1 and 2 environmental incidents were reported compared with 16 in FY23 (excluding SF₆ top-ups).

In FY24, we had one category 1 incident, which involved an oily water release into a watercourse. The incident is described in more detail in table 5.

We understand the importance of investigating environmental incidents and near misses to ensure we can identify lessons learnt to prevent incidents occurring again in the future.

We work with our employees and contractors to ensure that they have the knowledge to accurately report so that we can learn from incidents with the aim to reduce the risk of environmental harm.

Our approach to reducing the risks associated with oil leakage

At our substations, electricity voltage is stepped up or down by equipment called transformers. Many of these transformers are insulated with highly refined mineral oil. Older electricity cables also contain oil to improve their insulation properties and to enhance cooling. This oil can be lost from our electrical assets for a number of reasons such as advanced age, design load and temperature. Leaking oil can be harmful to flora and fauna.

In order to reduce the risks associated with oil leaks from transformers, bunds and interceptors are installed on all our sites to capture and contain any oil leaks. In the event of failure, penstock valves are used to isolate the flow of water to remain on site and stop a pollution release. We've also developed a new dashboard using oil-top information and records from site, together with an environmental risk assessment to show where intervention can be planned and prioritised.



Click to view

Case study

Tackling oil leaks on transformers



Table 5. Category 1 environmental incidents

We are part of the Energy Networks Association (ENA) Fluid-Filled Cables Liaison Group which was established to provide a forum within the electricity networks sector to assist ENA Member Companies to meet their legal duties with respect to the management and environmental impact of fluid-filled cable assets.

More recently the liaison group has carried out a full review of the Operating Code on the Management of Fluid Filled Cables, which is a collective partnership agreement between the ENA liaison group members and the Environment Agency to provide effective co-operation between the two groups in the prevention of water pollution from fluid filled cables. The Liaison group also explore innovations regarding fluid filled cables including types of fluids used and methods for the detection of leaks.

Engaging with our sites to maintain high standards

We regularly visit our operational sites to ensure we continually maintain our high standards of oil containment and pollution management and to develop effective relationships between our site-based operational, construction and environmental colleagues.

In FY24, our Environment & Sustainability Team conducted a total of 52 site visits. These visits are an opportunity to share environmental good practices, provide an update on our performance against our EAP commitments and encourage engagement across our business to drive improvements on site. By building these colleague relationship networks, we manage our environmental risk better by ensuring support is available where needed, and our operational and construction colleagues know who to turn to when specialist environmental advice is required.

Our operational teams also carry out planned periodic environmental checks to ensure the controls in place are effective, and have planned environmental maintenance of our drainage systems to ensure they are working correctly and free of potential contaminants.



52

Environmental site engagement visits conducted

Maintaining high standards of oil containment and pollution management

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Case study

Tackling oil leaks on transformers

Our Innovation Team is working on implementing a solution to tackle oil leaks on transformers. The solution makes use of low melting point alloys, known as M3, and is available as a spray. M3 Spray was developed by our former supply chain partner Rawwater – it has already been successfully deployed to tackle SF₆ leaks on our network.

M3 can be used to cover leaks on the flanged lid and radiator bank on transformers. The spray can be applied manually, but we are also working on a semi-autonomous robotic application solution which will enable operators to access hard-to-reach surfaces on leaking transformer equipment.

Following the successful completion of laboratory scale tests, we'll conduct further tests on our assets to determine how successful this solution could be in tackling oil leaks and extending the life of our transformers.



52

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Maintaining high standards of oil containment and pollution management

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Click to view

Case study

Tackling oil leaks on transformers



Table 5. Category 1 environmental incidents

Incident type

Oil release

Number of incidents

1

Incident description

Oily water was released into a culvert (a manmade channel) which runs through the site. The oily water was then discharged to a local watercourse via the site drainage outfall point. Emergency mitigation measures put in place and clean-up of pollution carried out. The incident was fully investigated as per our incident investigation procedures to ensure root cause determined and learnings identified to prevent recurrence.

Engaging with our sites to maintain high standards

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52

Environmental site engagement visits conducted

Nature positive

Set by the United Nations, nature positive by 2030 is one big global goal for nature.



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Nature positive



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Nature positive is a global goal for nature. The goal includes halting nature loss from a baseline of 2020 and reversing decline by 2030.

This goal is important as nature is rapidly declining due to the impacts of human activity, such as land use changes, pollution and climate change.

Biodiversity loss and climate change are twin crises that share many causes and solutions. Protecting and restoring nature and biodiversity help in the fight against climate change.



We are committed to:

Enhancing the environmental value of our non-operational land

Delivering environmental net gain (including biodiversity) associated with our construction activities

Better understanding the nature-based risks and dependencies within our supply chains

These commitments help us to deliver a positive contribution towards to the wider global nature positive goal.



Hover over for more information

Our 2026 commitments

To enable effective monitoring of objectives and measures, the following RAG status definitions are used:



Progress against the implementation milestones is on track.



Progress is delayed but it is likely to be achievable before the end of the regulatory period.



Target not set.

Roll over the panels below to find out how we performed over FY23 and FY24.

3.1 Increase environmental value of non-operational land by 10% against a natural capital and biodiversity baseline.

FY23  **FY24** 



3.2 Deliver net gain of least 10% or greater in environmental value (including biodiversity) on all construction projects (including those delivered by third parties building on our land).

FY23  **FY24** 



3.3 Work collaboratively with other transmission owners to agree a consistent approach to measure biodiversity impact and dependencies in the supply chain (inc. water).

- FY23  **FY24** 




Our 2026 commitments

To enable effective monitoring of objectives and measures, the following RAG status definitions are used:



Progress against the implementation milestones is on track.



Progress is delayed but it is likely to be achievable before the end of the regulatory period.



Target not set.



Roll over the panels below to find out how we performed over FY23 and FY24.

FY23 3.2% increase in environmental value of non-operational land achieved.

FY24 3.2% increase in environmental value of non-operational land achieved.

FY23 100% of projects committed to deliver 10% net gain or greater.

FY24 100% of projects committed to deliver 10% net gain or greater.

FY24 Accenture have been appointed as a partner to develop a supply chain innovation project, which is scheduled to start in FY25.



Minimising the impact of construction and delivering net gains

We are at the heart of the energy transformation. We have a duty to ensure that our construction projects that we are working on will not only deliver a greener future, but also avoid as much environmental harm as possible and deliver a positive outcome for biodiversity and local communities.

In order to do this, we apply the principles and tools of Biodiversity Net Gain (BNG) to underpin and inform our actions and deliver wider environmental benefits. This approach sets out to leave natural environments in a better condition prior to development.

We calculate the impacts of our construction projects using the Department for Environment, Food and Rural Affairs (DEFRA) biodiversity metric calculator. This industry standard tool allows us to understand and quantify the impact and then inform the design of ecological mitigation and enhancement plans for each project. For more information, please see pages 12-13 of our [Methodology Annex](#) for each project, seeking



10%

We are committed to delivering a net gain of at least 10% or greater in environmental value (including biodiversity) on all construction projects.

opportunities to incorporate nature based solutions, such as screening, surface water management and climate resilience into our actions both on or offsite.

Delivering our net gain commitments

In FY24, all of our construction projects in scope that were sanctioned committed to deliver a 10 per cent net gain, with 6 committing to gains of 15 per cent or above. We are also working closely with our ecological contractors and a wide range of external stakeholders to identify opportunities to deliver off-site gains that align with wider strategies and landscape scale initiatives.

What's next?

Collaboration and partnerships are key to the effective delivery of our net gain commitments. Nature and climate are intrinsically linked and as a business we must coordinate actions to address both of these global crises.

We are working together with UK Procurement to create a new framework of organisations that we can work with to deliver our net gain and carbon commitments and facilitate our contribution to local nature recovery and climate and community strategies.

We are also developing a number of pilot projects working with our grantors, vegetation management contractors and wider partners to implement new ways to manage our network that can deliver better outcomes for nature and climate. We will utilise outcomes from these pilots to inform the scale of opportunity and our future approach.

Case study

Delivering net gain across the Shire Brook Valley nature reserve

We are planning to replace three existing underground cables between Pitsmoor, Wincobank and Templeborough substations in Sheffield as these cables are approaching the end of their lifecycle. The scheme crosses a wide range of urban, suburban and natural environments, and therefore it is important that we mitigate the environmental impacts and deliver on our environmental net gain commitment.

We engaged with Sheffield City Council (SCC) to identify local opportunities to work together to deliver our net gain commitments.

SCC were developing a species recovery project with a range of partners, which would improve habitats and natural ecosystems in Shire Brook Valley Nature Reserve and neighbouring sites, covering over 400 acres and providing a wide range of wider benefits including flood risk reduction, climate resilience and access to nature for all ages. Animals such as harvest mice, bats and hedgehogs, reptiles, amphibians and birds will benefit from enhancement to their habitats.

We used our net gain calculations to inform a financial contribution, which was used as match funding to support the bid from SCC. Over £1m was awarded in March 2024 to deliver the project which started the following month.

Our contribution to this project will help facilitate habitat improvements, and lasting community benefit far in excess of our 10 per cent net gain commitment. We are also providing some practical action and members of the cables project team have already got to work on site as part of a volunteering event.

This is a great example of how engaging and working in collaboration with local partners can ensure the best outcome for nature and communities.



Table 6. Delivering environmental net gain

Minimising the impact of construction and delivering net gains

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Project name	Baseline units	Post intervention units	Total net increase	% net change
Harker	44.5	79.9	35.4	79.4
Minety	35.0	50.3	15.3	43.6
Norwich Main	71.8	84.5	12.7	17.7
Hylton Castle	62.5	72.8	10.3	16.0
Uxbridge Moor	97.5	113.1	15.6	16.0
PITS-WIBA-TEMP – Sheffield Cable Replacement	16.0	18.5	2.5	15.6
Balwen – Thornton	8.1	9.1	1.0	12.3
NORM4 Grid Park	0.9	1.0	0.1	11.0
Wallend	8.4	9.3	0.9	10.7
Braintree	1.6	1.8	0.2	10.6
4TM – Keadby – West Burton	10.0	11.0	1.0	10.2
Yorkshire Green	1,176.0	1,295.0	119.0	10.1
VIP North Wessex Downs	238.5	262.5	24.0	10.1
Penrhos	Data not available	Data not available	Data not available	Data not available



Table 6. Delivering environmental net gain

Increasing the environmental value of our land

We own around 1,800 hectares of non-operational land which is made up of a variety of rich natural habitats from hedgerows and ancient woodland to wildflower meadows and peat bogs.

It is our duty to manage this land responsibly and proactively and therefore we have committed to improve the environmental value of our UK non-operational land by at least 10 per cent by 2026.

We measure environmental value via a 'natural capital' tool that was developed by us to quantify ecosystem service change and track our performance. For more information, please see pages 11-12 of our [Methodology Annex](#).

Progressing towards 2026

Since FY21, we've achieved a 7.9 per cent* improvement in the environmental value of non-operational land, with a 3.2 per cent improvement made in FY24 alone.



7.9%

Improvement in the environmental value of non-operational land since FY21

Partnering to restore ecosystems

To achieve our commitment and deliver wider social value, we are focusing on connecting people to the environment and achieving habitat enhancement through strategic partnerships with local community groups and specialist environmental organisations. These organisations provide expertise and help us to find new ways to improve land value and positively affect local communities. In FY24, we were proud to introduce five new strategic partnership agreements and identified additional improvement opportunities within three of our existing agreements.

Supporting the pollinators

It's no secret that pollinators are a vital part of biodiversity – they pollinate our crops and are therefore essential to food supply. We have a large portfolio of grassland habitats across our non-operational estate – this provides us with an opportunity to enhance their environmental value and in turn, develop habitats for pollinators. In FY24, we introduced land management practices at 10 of our sites to help diversify approximately 20 hectares of grassland.

We have beehives at several of our sites, including our head office at National Grid House. At Eakring Training Centre the honey from the hives is harvested and served in the site restaurants, and once production increases, jars will be sold from the centre with the proceeds being donated to charity.

*this value differs from the value published in the [Annual Responsible Business Report](#) due to the differences in timing of consolidation.

Case study

Partnering with Prenton Rugby Club to bring a claypit back to life

In FY24, at our Birkenhead substation, we joined forces in a 10-year partnership agreement with Prenton Rugby Club.

The club, in conjunction with Wirral Wildlife, will manage approximately 5 hectares of our non-operational land. The aim is to restore the natural beauty of the Prenton Claypit, install new paths and open up an educational nature trail for the local residents, schools and community groups to enjoy. The claypit is home to a variety of birds and butterflies, as well as species such as great crested newts.

Prenton Rugby Club will introduce an enhanced habitat management plan and a community engagement programme, which will facilitate environmental education and wellbeing events on our land. This will result in at least 2,000 people from the local community accessing nature via our site.

“We have a big commitment to sustainability and have a number of green projects throughout the country. The Prenton project is particularly special as it will have a big environmental impact as well as a societal one.”

Helene Parpworth

Land Sustainability Strategy Manager



Measuring biodiversity impact and dependencies in the supply chain

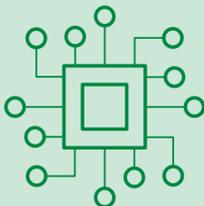
The Kunming-Montreal Global Biodiversity Framework (GBF), adopted in December 2022, sets the standard for businesses to monitor, assess and disclose their risks and dependencies on biodiversity across their operations, supply chains and portfolios and take action to progressively reduce negative impacts.

Up until now, we've been focused on mitigating the direct impacts of our operations on biodiversity and nature. We haven't yet considered the biodiversity impacts that occur in our supply chain, such as those impacts linked to the materials that we purchase.

As a direct response to the GBF, together with Scottish and Southern Electricity Networks (SSEN) and Scottish Power Energy Networks (SPEN), we launched a call via the Engineering Innovation Centre (EIC), for innovators to better understand nature-based risks and dependencies within our supply chains and develop a new and innovative approach for transmission networks.

We want to focus primarily on the upstream biodiversity and nature impacts of the products that are necessary to upgrade the network to enable the achievement of the net zero by 2050 target.

Such as:

	
Transformers	Cables
	
Conductors	Electronic systems

We went through a tender process with 14 bidders and, after some consideration, selected Accenture as the winning bidder.

Work is now underway to better understand our biodiversity risks, impacts and dependencies across our supply chains, using data from across the sector. This in turn will help us to prioritise our areas of focus and opportunity. Informed by the project and tools, we will work together to set and agree suitable targets to reduce our most significant nature impacts and dependencies.



Reducing the visual impact of our assets

We want to play our part in conserving and enhancing the natural beauty of the English and Welsh landscape.

Existing transmission lines

We consider the visual impact of our existing infrastructure in National Parks and National Landscapes (formerly Areas of Outstanding Natural Beauty, AONBs) through the ‘Visual Impact Provision’ (VIP) project.

The project is making use of a £465m provision by Ofgem to carry out work that reduces the impact of existing transmission lines in English and Welsh National Landscapes and National Parks. The most important task for us is to use this provision to achieve the maximum enhancement to our nation’s precious landscapes while avoiding unacceptable environmental impacts.

To ensure that we get this right and maximise the potential of the VIP project, we are working closely and collaboratively with stakeholders and managing assets in a way that benefits local communities and nature.

Our main VIP projects in FY24:

Click on the links to find out more information on our VIP projects.

- [Cotswolds VIP](#)
- [Dorset VIP](#)
- [Snowdonia VIP](#)
- [North Wessex Downs VIP](#)
- [Landscape Enhancement Initiative](#)

New assets

As the high voltage electricity network owner for England and Wales, we have recently seen a significant increase in connection applications.

This shift in volume has meant greater numbers of required network reinforcements including new assets potentially planned across our network to accommodate connections. When deciding on the best location for a new asset, we seek to mitigate it’s visual impact by using the natural features of the landscape. We also conduct extensive species studies on any land identified, and ensure the habitats are well understood, accounting for any protected characteristics and assessing mitigating measures like providing alternative habitats.

Table 7. Visual amenity

Visual amenity aspects	FY22	FY23	FY24
Removal of overhead lines (km)	0	12	0
Non-technical mitigation projects started (#)	11	11	5
Non-technical mitigation projects (£m)	1.2	1.4	2.5

Case study

Removing 4.8km of overhead power lines in the North Wessex Downs

In FY24, as part of the VIP project, we secured planning consent that will allow the removal of 4.8km of existing overhead lines. Subject to Ofgem’s final approval of the project, these will be replaced with underground cables in the National Landscape. Since the project began in 2019, we have been working with local stakeholders, including the North Wessex AONB Partnership, Natural England, Wiltshire Council, Historic England, and the local town and parish councils.

Construction is due to be completed with all 13 pylons removed by the end of 2026.

“We would like to thank Wiltshire Council and local stakeholders for the constructive advice given to us throughout the development process. From the outset, our proposals have been very much shaped by stakeholders, and we now have the positive outcome we had hoped for.”

Chris Carr
North Wessex Downs Project Manager



Leadership for change

We strive to be an environmental leader in the industry.



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Hover over for more information

Leadership for change



We strive to be an environmental leader in the industry. We are taking proactive steps to drive positive change and lead by example. Our leaders and employees are at the forefront of this.

We are focusing on:

Having a workforce that engages on environmental issues

Reducing our SF₆ emissions

Maintaining high standards of environmental management

Working collaboratively with transmission owners

Being an environmental leader



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Hover over for more information

Our 2026 commitments

To enable effective monitoring of objectives and measures, the following RAG status definitions are used:



Progress against the implementation milestones is on track.



Progress is delayed but it is likely to be achievable before the end of the regulatory period.

Roll over the panels below to find out how we performed over FY23 and FY24.

4.1 Have an engaged workforce on environmental issues that lead by example.

● FY23
● FY24

4.2 Take bold steps to tackle our SF₆ emissions and stimulate the market to more rapidly meet our stakeholders needs.

● FY23
● FY24

4.3 Maintain a certified Environmental Management System (EMS).

● FY23
● FY24

4.4 Work collaboratively with other transmission owners to find common solutions and develop a consistent approach to sustainability issues.

- FY23
● FY24

4.5 Be an environmental leader for the energy industry by actively contributing and shaping the discussions in external working groups.

● FY23
● FY24



Our 2026 commitments

To enable effective monitoring of objectives and measures, the following RAG status definitions are used:

Green
Progress against the implementation milestones is on track.

Yellow
Progress is delayed but it is likely to be achievable before the end of the regulatory period.

Roll over the panels below to find out how we performed over FY23 and FY24.

- FY23** 74% employee engagement score on responsible business.
- FY24** 78% employee engagement score on responsible business.

- FY23** No further procurement of SF₆ when there is a commercial alternative.
- FY24** Sites will now need to apply for a technical deviation to use SF₆ if an alternative isn't available. Six technical deviations for SF₆ use were accepted in FY24 due to a lack of alternative solutions.

- FY23** ISO 14001 recertification obtained.
- FY24** We developed and implemented an Integrated Management System which includes ISO 14001.

- FY23** Target set in FY23.
- FY24** We have created a quarterly Sustainability Forum with SSEN and SPEN to work together on common sustainability goals.

- FY23** Environmental leadership for the energy industry demonstrated by our contribution to, and shaping discussions in, external working groups/events.
- FY24** Environmental leadership for the energy industry demonstrated by our contribution to, and shaping discussions in, external working groups/events.



A workforce that engages on environmental issues

For us, leading the way means, firstly, having our senior leadership take accountability for our environmental performance. It also means having a workforce that is engaged on environmental issues and collaborates with key stakeholders to drive performance.

Employees leading the way

We are responsible for building the networks that will support a net zero economy by 2050, playing a huge part in the UK achieving its climate change targets. We could not do this without our incredible team of people who play a crucial part in building the net zero power grid of the future.



UK Sustainability Leadership Alliance founded in FY24
A forum in which employees can come together to collaborate on all things sustainability.

Increasing environmental awareness

We provide all employees with access to an array of internally developed training courses on a range of environmental issues such as carbon management, waste management, net gain and substation oil loss. One of the courses (delivering our environmental future) is mandatory for all employees. The other courses are mandatory for identified key roles within the business, however, are available to all colleagues if they wish to develop in those areas. These courses play a crucial role in equipping our employees with the knowledge and skills to identify environmental risks and opportunities within our business, as well as deepening their awareness of the environmental challenges that we face.

We also host internal interactive webinars on environmental topics and issues, where employees are invited to take part in discussions, ask subject matter experts questions, and share best practice.

Do we behave in a responsible way? We asked our employees

Through our independently managed annual colleague listening process, Grid:voice, we asked our colleagues if they thought we behaved in a responsible way. The results of this survey showed that we have a 78 per cent engagement score on responsible business, an improvement from 74 per cent last year.



78%
employee engagement score on responsible business

Sustainability training modules/courses

	Delivering our environmental future	91% completion rate
	Delivering net zero – carbon management	61% completion rate
	Delivering our net gain commitments	59% completion rate
	Waste management	79% completion rate
	Substation oil loss	90% completion rate

Finding alternatives to SF₆

Alternative technology is rapidly evolving and benefits from the use of alternative gases with much lower carbon impact than SF₆. Together with the other Transmission Owners in Great Britain, we are leading the way on implementing alternative technologies to SF₆ – all of which have at least 100 times lower carbon impact than equivalent SF₆ filled equipment.

We adopt SF₆-free technology as soon as it becomes available in a bid to move away from SF₆ as rapidly as possible. All of our new 132kV equipment is now SF₆-free and we were among the first transmission utilities to adopt fully SF₆-free gas-insulated 400kV switchgear for our Bengeworth Road and Harker substation projects.

We are keen to further reduce SF₆ usage, but recognise that this is dependent on the development and availability of new SF₆-free technology by equipment manufacturers. We seek to collaborate with manufacturers to find viable alternatives and will adopt these as early as we can.

“The production and disposal of SF₆ both have significant environmental impacts, therefore we should be reusing as much as possible.”

Robert Mills
Commercial and Portfolio Manager

Stepping up on our SF₆ ambition

In 2019, we introduced a new policy to mandate the use of alternative technology to SF₆ where it is technically and commercially viable. Where this is not possible, a deviation shall be sought. In FY24, six technical deviations for SF₆ were accepted due to a lack of suitable alternatives. In 2024, we updated our policy so that the procurement of virgin SF₆, either directly or as a sub-item of a larger project, is no longer acceptable unless reclaimed (recycled) SF₆ is unavailable. We are engaging with the external market to reduce reliance on virgin SF₆.



400kV

We are amongst the first to adopt 400kV fully SF₆-free gas-insulated switchgear



Reducing

reliance on virgin SF₆



Supporting

the use of reclaimed/recycled SF₆

Case study

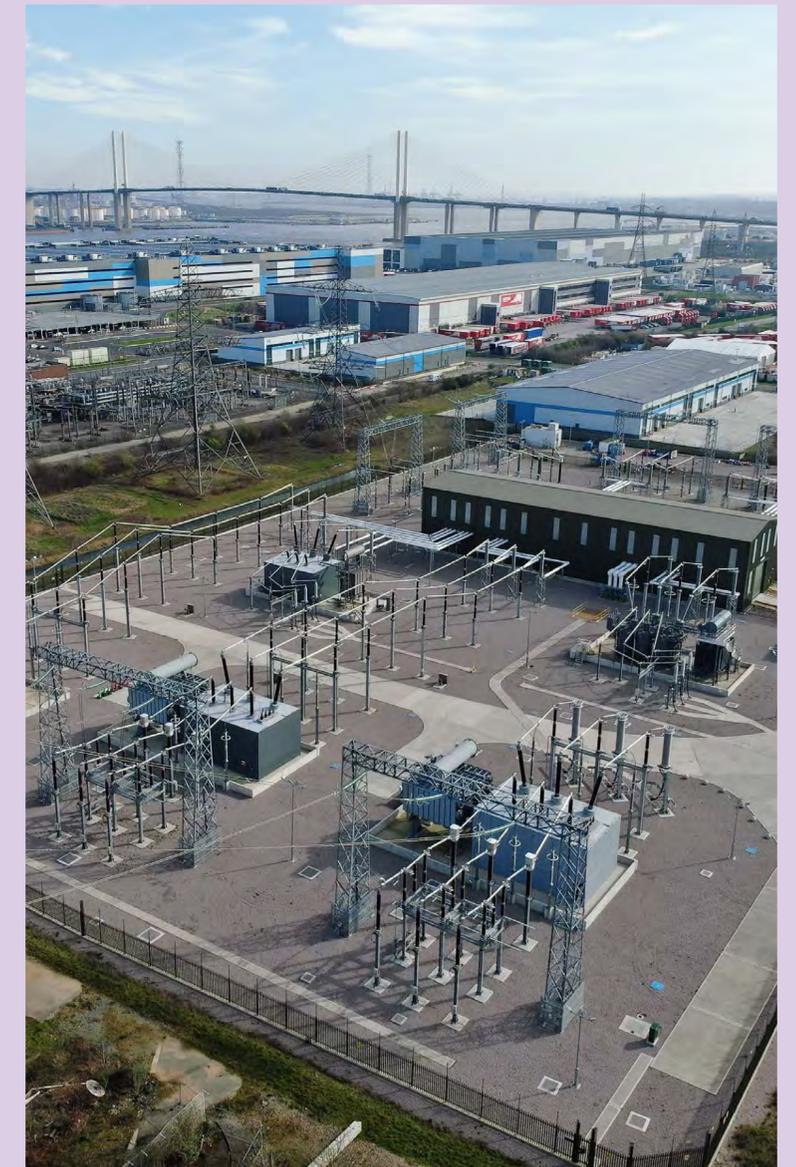
Littlebrook substation engineers save 131,600 tCO₂e

Littlebrook substation was constructed fifty years ago and was becoming difficult to maintain due to its reliance on SF₆.

As part of a new substation build, busbars were filled with an innovative replacement gas called g3, provided by GE Grid Solutions. This prevented a total of 5.6 tonnes of SF₆ gas, saving around 131,600 tCO₂e.

The project also used other net zero construction innovations to reduce the environmental impact of the works, including steel manufactured in Britain, solar powered electrics, electric vehicle charging points, biodiversity net gain for the local area and an onsite biodigester to manage wastewater.

The project is now looking at how SF₆ from the decommissioning project could be reused across our network. The reuse of SF₆ provides both sustainability and commercial benefits, and will set a precedent with future projects to reuse assets wherever possible.



Maintaining our high standards of environmental management

We use an Environmental Management System (EMS) to both understand and manage our environmental responsibilities.

We have maintained an EMS for many years, externally certified to ISO14001. More recently, we have developed and implemented an Integrated Management System to ensure it works efficiently, in accordance with legal and other requirements and good practice, satisfying the requirements and expectations of our stakeholders and customers.

Our Integrated Management System includes ISO 14001:2015 for environmental management, ISO 9001:2015 for quality management, and ISO 45001:2018 for occupational safety and health management. In September 2023 we successfully received certification of all three ISO certificates we hold with no major non-conformance raised.



3

In September 2023 we successfully received certification of all three ISO certificates we hold with no major non-conformance raised.



Working collaboratively with transmission owners

We work closely with our colleagues in Scottish & Southern Electricity Networks (SSEN) and Scottish Power Electricity Networks (SPEN) to share best practice and learnings, helping to drive performance and further sustainability across the sector.

Transmission Owner Sustainability Forum

Together with SPEN and SSEN, we joined forces to create the Transmission Owner Sustainability Forum. Within the forum, we established subject-specific working groups:



Supply chain sustainability



Nature



Data



Carbon



RIIO-T3

Every four months, we come together in person to formalise our approach to sustainability across the sector, review our joint commitments and drive consistency in reporting to ensure that our data is comparable. The last few months of FY24 were focused on ensuring a consistent approach for the next regulatory period. The nature working group also agreed some common definitions and terminology and agreed on a reporting approach and a range of common commitments across each business.

Transmission owners

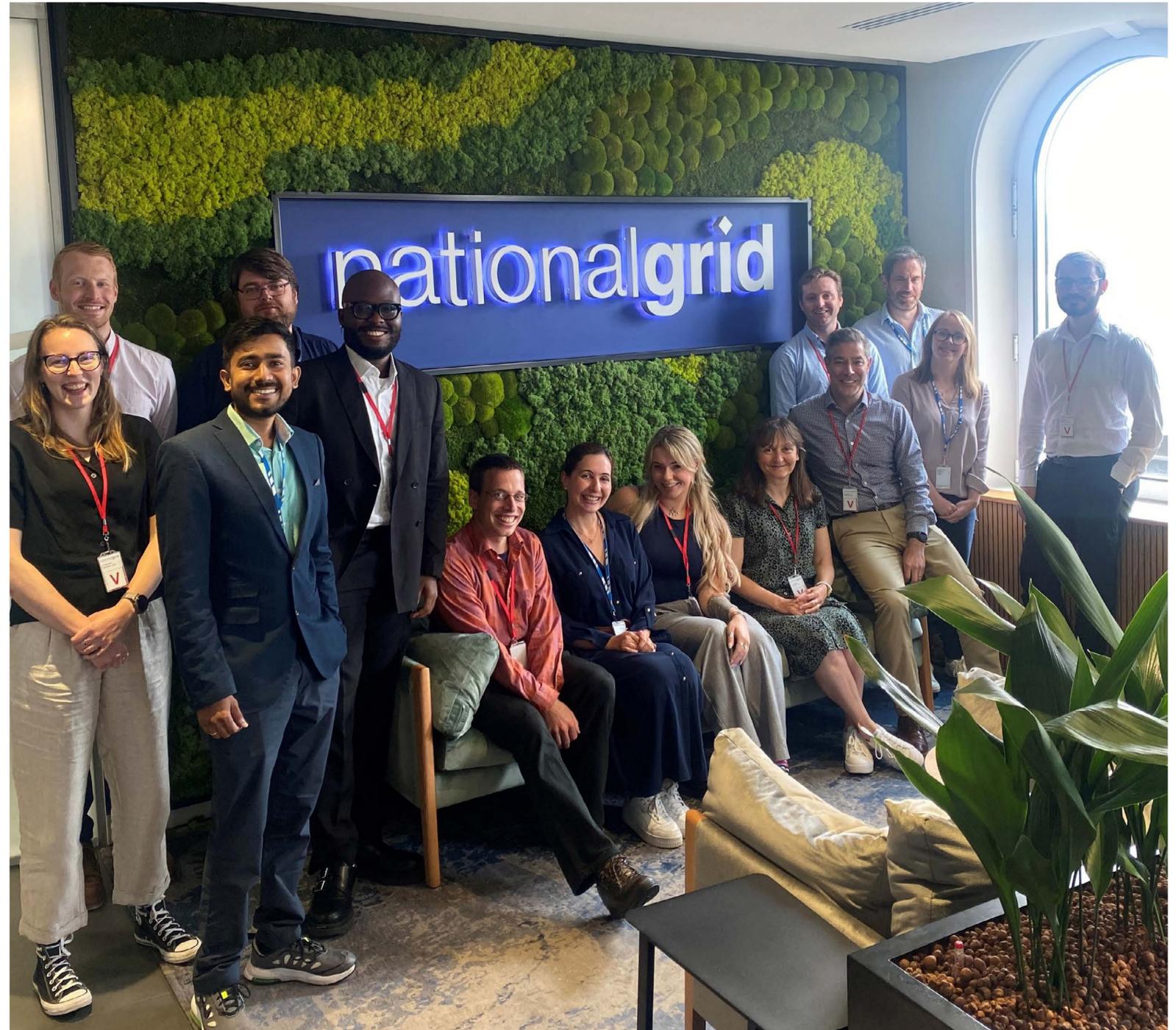


nationalgrid



“Collaboration for sustainability has never been more important. Sustainability issues require large-scale action to create more meaningful impact. By working together, we are setting common goals and making a more significant impact that we could ever do individually.”

Carolyn Helm
Sustainability Manager



Being an environmental leader

Part of being an environmental leader means engaging with key stakeholders on environmental topics to gain valuable insights, identify risks and opportunities, and make informed decisions that aim to minimise environmental impacts.

Our memberships

We appreciate the importance of collaboration and partnerships for delivering our environmental sustainability agenda. That is why we are long-term members of a number of organisations:

- Business in the Community (BITC)
- Contaminated Land Applications in Real Environment (CL:AIRE)
- Natural Capital Taskforce
- Institute of Environmental Management and Assessment (IEMA)
- Supply Chain Sustainability School (SCSS)
- Valuing Nature Network
- Energy Networks Association (ENA)
- Roundtable for Europe's Energy Future
- Carbon Capture and Storage Association
- Corporate Leaders Group
- Zemo Partnership
- Infrastructure Client Group (ICG) Carbon Taskforce
- Institution of Engineering and Technology (IET)
- UK Business Biodiversity Forum.

Case study

National Grid at COP28

In 2023, 10 representatives from National Grid participated in COP28, the United Nations Climate Change Conference held in Dubai.

Across 16 different panels and roundtables, we listened to concerns about how to ensure the transition to net zero is just and equitable.

We also spoke about the investment needed in grids globally, and how we can develop more strategic arrangements with our supply chains as well as new regulatory frameworks and policies to support this growth.



Case study

ICG Concrete Decarbonisation Accelerator Programme

Together with nine other members, we founded the Infrastructure Client Group (ICG) Concrete Decarbonisation Accelerator Programme – lasting six months.

The aim of this group is to reduce the carbon intensity of our concrete by:

- aligning on the delivery of concrete decarbonisation through a set of commitments;
- providing the supply chain with the confidence to invest in concrete decarbonisation measures;
- exploring the potential for new and existing UK-level mechanisms to fund and support initiatives that deliver faster concrete decarbonisation.

The accelerator programme was launched at an event held at the Institute of Chartered Engineers in London in June 2024, attended by client and contract organisations.

The output was an aggregated demand across the clients involved to send a clear signal to the market (8Mt of concrete needed per year over the next 10 years) and a consistent set of 'commitments' for us all to align to.



Our accreditations



FTSE4Good

United Nations
Global CompactSCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



DISCLOSURE INSIGHT ACTION

CLIMATE GROUP
EV100WE MEAN
BUSINESS
COALITION

Being an environmental leader

Case study

Harker substation: Leading on environmental commitments

Our substation at Harker, near Carlisle in Cumbria has been in service since the 1960s. The equipment has aged and the demand on the network is increasing. We are therefore replacing and rebuilding the substation, reconfiguring the overhead lines, adding new conductors and refurbishing the existing pylons so that the substation can continue to serve as a critical asset in the UK energy network.

We are committed to minimising and mitigating the environmental impact of this construction project across three key areas, carbon, nature and waste, in support of achieving our EAP commitments.

Carbon

As part of our commitment to delivering low carbon construction, we are taking several steps to reduce the carbon footprint of the construction activities:

- Use 90 per cent recycled steel (approximately 300 tonnes).
- Use low emission site energy solutions, including HVO and a battery system instead of diesel. The team is also exploring an on-site solar array to see if they can transition to renewable energy.
- Install energy-efficient LED flood and road lighting.
- Use GE's g3 gas as an alternative to SF₆ for gas-insulated switch gear. This has a global warming potential 98 per cent less than SF₆.
- Make use of a mix of diesel, electric and hybrid vehicles, as well as public transport and car-sharing arrangements.
- Temporary road surfacing will be reused or repurposed.



17%

Harker aims to reduce its carbon emissions by 17 per cent from baseline

Nature

The project is looking to significantly exceed our commitment to delivering a net gain of 10 per cent in environmental value (including biodiversity) by delivering a range of activities within the landscape plan and creating new habitats and features that provide wider benefits for biodiversity and the business. These include woodland, scrub and hedgerow planting, the introduction of a wildflower meadow and a small pond.

Reducing waste

We are looking to re-use 20,000 m³ of topsoil as part of a Landscape And Ecology Management Plan (LEMP). In addition to reducing waste, this will save over 1,000 return trips to a local waste management facility and 2,000 miles of transport (~5 tonnes of tCO₂e). We are also planning to re-use approximately 20,000 m³ of site material (i.e. soil, aggregates and gravel); significantly reducing the demand for natural resources.

“When considering designs for the extension of our substation at Harker, we challenged our contractors to deliver on low carbon alternatives and enhancing the natural environment. It’s great to visit the site to see our plans come to life in construction.”

Martin Bretherton

Senior Project Manager at Harker





Looking ahead

In this section	
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Hover over for more information

Looking ahead

In this section

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We are proud of the progress made in FY24 towards achieving our commitments. We took several steps forward but recognise that there is still work to be done to further contribute to a more sustainable planet for present and future generations. As we look towards FY25 and beyond, we are excited about the positive impact we will make.



Hover over for more information



Responding to a changing world

Changes to our commitments in FY24

We recognise that our success depends on understanding and responding to the changing world in which we operate.

In January 2024, we carried out a third review of our EAP. We looked at feedback from internal/external stakeholders including the outcomes of COP28 – UN Climate Change Conference, the UK’s Environmental Improvement Plan, as well as our maturity and FY23 performance.

We are proud of the progress that we have made in FY24. Looking ahead to next year, we retired three commitments that we have already successfully achieved:

-  Purchase 100% of electricity we use from renewables
-  Work collaboratively with the other Transmission Owners to develop and pilot a common and robust methodology for assessing Natural Capital Impacts and opportunities (associated with Electricity Transmission)
-  Work collaboratively with the other Transmission Owners to develop a consistent approach to capital carbon management

We also added two new commitments:

-  Identity species-focused initiatives aligned with local priorities as part of construction delivery
-  Work collaboratively with the other Transmission Owners to find common solutions and develop a consistent approach to sustainability issues

Looking ahead to FY25 and beyond

We have a huge responsibility to reduce our carbon emissions, drive innovation and set new standards for the infrastructure industry as we build the new electricity networks of the future. We are committed to delivering solutions that meet these demands and continue to reach greater heights across our business and beyond, particularly around SF₆ emissions and construction carbon.

Based on our learnings and the changing external context, we also see an opportunity to evolve our environmental sustainability strategy and action plan towards 2031, and we will be engaging with a range of stakeholders to help us develop our thinking on our plans.

Refreshing our commitments

In 2023, we refreshed our Responsible Business Charter to provide clarity on what matters to us and our stakeholders, helping us to meet the evolving demands of delivering the clean energy transition. The charter outlines our commitments to responsible business across three pillars, one of which focuses on caring for the natural environment.

We also review our Environmental Action Plan each year to ensure that we are managing our network in a responsible and environmentally sustainable way. In April 2024, we refreshed our EAP to provide clarity on the changes we made over the years.



There are a number of dependencies to achieving our targets

Meeting our targets will require a combination of the actions we take ourselves, along with the necessary policy and regulatory support. Reductions are also dependent on a variety of technological factors. Furthermore, the landscape has changed since we first set our targets, with the volume of our planned

infrastructure work to support the decarbonisation of the electricity sector increasing significantly.

Finding more sustainable alternatives or implementing low carbon construction methods can be challenging due to limited availability, higher costs and potential regulatory barriers. We work closely with our regulator and engage proactively with technology providers and supply chain to reduce some of the barriers.

Performance tables

Roll over the panels below to find out how we are doing

To enable effective monitoring of objectives and measures, the following RAG status definitions are used:

- R Progress against milestones is at significant risk and highly likely to be missed
- A Progress is delayed but likely to be achievable before the end of the regulatory period
- G Progress against the implementation milestones is on track

Net zero carbon emissions

Sustainable use of resources

Nature positive

Leadership for change

EAP commitment	Metric	Description and expected benefit	Implementation milestones					RAG	FY24 Status update
			FY22	FY23	FY24	FY25	FY26		
Achieve net zero for our scope 1 and 2 emissions by 2050, with interim targets of: 34% by 2026 and 50% by 2030.	% reduction in tCO ₂ e.	Reduction in scope 1 and 2 emissions (excluding losses) in line with a 1.5 trajectory.	-6.8%	-13.60%	-20.40%	-27.20%	-34%	A	17% reduction in our business carbon footprint from a FY19 baseline (excluding losses).
Reduce SF ₆ emissions from our operations by 50% by 2030 (realistic SF ₆ abatement pathway – SF ₆ kg) from a FY19 baseline.	SF ₆ leakage (kg).	Reduction in SF ₆ leakage from our operations.	10,900kg	9,759kg	9,108kg	8,458kg	7,997kg	A	16.3% reduction in SF ₆ emissions from a FY19 baseline.
Purchase 100% of electricity we use from renewables.	% of renewable energy supplied.	No greenhouse gas emissions from fossil fuels.	Prepare for the Power Purchase Agreement (PPA) to be in place.	PPA tendered for.	100% of renewable energy supplied.			G	From October 2023, we put a Power Purchase Agreement (PPA) in place to buy 100% renewable energy.
Create a substation energy efficiency programme.	Programme with annual milestones established.	Achievement of optimal carbon savings and return on investment.	Set up programme strategy.	Obtain Energy Performance Certificates for 50 nominated sites and utilise the recommendations to provide a plan.	Energy audits to be completed at 130 sites.	Energy efficiency pilot to be implemented at 2 sites.	Energy efficiency programme established for T3.	G	Energy surveys completed at 130 sites.
Focus on an efficiency-first approach to decrease the carbon emissions from our office energy use by 20% from a FY20 baseline.	% reduction in tCO ₂ e from energy use.	Reduction in carbon emissions from energy use in our offices.	-4%	-8%	-12%	-16%	-20%	G	33.2% reduction in carbon emissions from office energy use achieved against FY20 baseline.
Replace 60% of our fleet with Zero Emission Vehicles (ZEVs).	% of vehicles replaced with ZEVs.	Reduction in carbon emissions from operational travel.	+10%	+19%	+27%	+43%	+60%	A	22% of our fleet was replaced with Zero Emission Vehicles.
Reduce carbon emissions for our business transport by 10% on 2013-2020 averages.	% reduction in tCO ₂ e.	Reduction in carbon emissions from business travel.	-2%	-4%	-6%	-8%	-10%	G	30.1% reduction in carbon emissions from business travel from 2013-2020 averages.
Deliver carbon-neutral construction.	Net zero construction is achieved by emissions reductions and offsetting.	Reduction in capital carbon from our construction projects.	10% year-on-year reduction.	10% year-on-year reduction.	Internal gap analysis against PAS2080 standard.	Implement recommendations from gap analysis.	PAS2080 certification achieved and residual emissions compensated.	G	Gap analysis to PAS2080 completed. Developed a compensation strategy and established a working group to develop a procurement approach.
Encourage 75% of National Grid's top 250 suppliers (by category/spend) to have carbon reduction targets and for 80% (by emissions) of these to have Science-Based Targets (SBT).	% of suppliers with carbon reduction targets.	Reduction in carbon emissions from our supply chain.	+70%	+72%	+73%	+74%	+75%	A	67% of UK-allocated suppliers (within top 250 by category/spend) engaged through CDP and 36% of them have carbon reduction targets. Suppliers with SBT targets to be reported in FY25.
Install 1,430 AC electric vehicle (EV) charging bays and 40 DC EV chargers on Electricity Transmission's (ET) operational estate in support of the commercial fleet electrification programme.	# of EV chargers installed.	Reduction in carbon emissions from operational travel.	35	70	70	70	Target achieved	G	We installed 466 charging bays to 82 sites.
All band A-C company cars to be Zero Emission Vehicles (ZEVs).	% of band A-C company cars that are EVs.	Reduction in carbon emissions from operational travel.	35%	58%	73%	93%	100%	G	95.7% of band A-C manager company cars are ZEVs.
Phase out the use of diesel generators where commercially and technically viable.	% reduction in diesel generator use.	Reduction in carbon emissions from diesel generators.	N/A	Alternative fuels to diesel trials.	Diesel free trials and diesel usage data collection.		Diesel free trials and diesel usage data collection.	G	Our new policy states that alternative technology is preferred over diesel. Construction partners must now report fuel and energy consumption data.

Performance tables

Roll over the panels below to find out how we are doing

To enable effective monitoring of objectives and measures, the following RAG status definitions are used:

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- G Progress against the implementation milestones is on track

Net zero carbon emissions

Sustainable use of resources

Nature positive

Leadership for change

EAP commitment	Metric	Description and expected benefit	Implementation milestones					RAG	FY24 Status update	
			FY22	FY23	FY24	FY25	FY26			
Achieve zero waste to landfill across our construction projects.	% diverted from landfill.	Zero waste to landfill in our construction projects.	Achieve 100% diverted from landfill.	Maintain 100% diverted from landfill.					A	99.4% of construction waste diverted from landfill compared to a FY19 baseline.
All construction projects to report on waste avoidance opportunities.	# of project reporting.	Reduction in waste in construction projects.	Baselining and set target for rest of T2.	Set target.	Introduce a waste avoidance opportunity.	Waste avoidance opportunities identified.		A	One construction project identified waste avoidance opportunities.	
Maintain an 80% recycling rate in construction.	% increase in recycling and composting rates.	Increase in waste recycling in construction projects.	Baselining and set target for rest of T2.	Set target for T2 as not delivered in FY22.	Construction recycling target set as 80%.	Maintain 80% recycling rate.		G	86.5% recycling rate for construction waste.	
Increase in operational and recycling rate from 45% to 60%.	% increase in recycling rates.	Increase in waste recycling across our operations and offices.	+48%	+50%	+53%	+57%	+60%	G	78% operational waste recycling rate. 54% office waste recycling rate.	
Reduce the waste tonnage and water use (from a FY20 baseline) at our offices by 20%.	% reduction in waste tonnage & % reduction in water use.	Reduction in waste tonnage and water use at our office.	-2%	-4%	-6%	-8%	-20%	G	33.3% reduction in waste tonnage at our offices from a FY20 baseline. 19.7% reduction in water use at our offices from a FY20 baseline.	
Pilot and implement circular economy principles by aligning our business to internationally recognised standards, e.g. BS:8001 – Circular Economy Standard.	Alignment to BS:8001 Circular Economy Standard.	Minimisation of waste and carbon.	Gap analysis against standard developed.	Socialise outcomes of gap analysis to be shared in FY24.	Socialise outcomes of gap analysis and agree ambition and next steps.	TBC	TBC	G	Outcomes of the BS:8001 Circular Economy Standard were socialised with internal stakeholders and an ambition has been agreed, which we will be using for our T3 Environmental Action Plan proposal.	
Align our Procurement Strategy to internationally recognised standards e.g. ISO 20400 Sustainable Sourcing Standard.	Alignment to ISO 20400 Sustainable Procurement Guidance Standard.	Increase in sustainable sourcing – sustainable use of materials.	Gap analysis carried out against standard and carry out process improvements against agreed action plan.					G	3-year Supply Chain Sustainability Strategy developed in line with ISO 20400.	
Maintain our high standards of oil containment and pollution management.	We actively work to prevent pollution that may result from our activities.	Visit 50 sites to undertake environmental support visits.	Visit 50 sites to undertake environmental support visits.					G	52 environmental engagement visits were carried out.	

Performance tables

Roll over the panels below to find out how we are doing

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- G Progress against the implementation milestones is on track

Net zero carbon emissions

Sustainable use of resources

Nature positive

Leadership for change

EAP commitment	Metric	Description and expected benefit	Implementation milestones					RAG	FY24 Status update
			FY22	FY23	FY24	FY25	FY26		
Increase environmental value of non-operational land by 10% against a natural capital/biodiversity baseline.	% increase in environmental value.	Land is managed in ways that protect and enhance the natural environment whilst also creating value for stakeholders and local communities.	+1%	+3.15%	+5.50%	+7.75%	+10%	G	+7.9% increase in environmental value of non-operational land achieved.
Deliver net gain by at least 10% or greater in environmental value (including biodiversity) on all construction projects (including those delivered by third parties building on our land).	% of projects delivering net gain.	Biodiversity enhancements that contribute towards local, regional and national objectives for nature conservation.	100% of projects meet 10% net gain.	100% of projects meet 10% net gain.	100% of projects meet 10% net gain.	100% of projects meet 10% net gain.	100% of projects meet 10% net gain.	G	100% of projects committed to deliver 10% net gain or greater.
Work collaboratively with other transmission owners to agree a consistent approach to measure biodiversity impact and dependencies in the supply chain (inc. water).	Qualitative progress made.	The nature and biodiversity risks and dependencies of our sector supply chain are understood, priorities for targeted actions are identified – innovation outcomes are shared within energy networks and wider forums.	N/A	N/A	Launch of supply chain innovation project.	Completion of innovation project and industry engagement.	Range of opportunities identified to inform setting of reduction targets.	G	Accenture have been appointed as a partner to develop a supply chain innovation project, which is scheduled to start in FY25.

Performance tables

Roll over the panels below to find out how we are doing

To enable effective monitoring of objectives and measures, the following RAG status definitions are used:

- R Progress against milestones is at significant risk and highly likely to be missed
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- G Progress against the implementation milestones is on track

Net zero carbon emissions

Sustainable use of resources

Nature positive

Leadership for change

EAP commitment	Metric	Description and expected benefit	Implementation milestones					RAG	FY24 Status update
			FY22	FY23	FY24	FY25	FY26		
Have an engaged workforce on environmental issues that lead by example.	Employee engagement survey satisfaction score.	An engaged workforce.	75%	78%	80%	83%	85%	A	78% employee engagement score on responsible business.
Take bold steps to tackle our SF ₆ emissions and stimulate the market to more rapidly meet our stakeholders' needs.	No procurement of SF ₆ when there are alternatives available in the market.	SF ₆ alternative market stimulation.	No further procurement of new assets containing SF ₆ for use on the 132kV, 66kV and 13kV (tertiary) systems.					G	Sites will now need to apply for a technical deviation to use SF ₆ if an alternative isn't available. Six technical deviations for SF ₆ use were accepted in FY24 due to a lack of alternative solutions.
			No further procurement of new gas insulated busbar (GIB) and gas insulated line containing SF ₆ at any voltage.						
			Secure business commitment to progress the procurement and installation of non-SF ₆ assets where available.			Stop using 275/400kV SF ₆ assets in new builds by 2024 (once 2 solutions are available).	No further procurement of 275kV or 400kV circuit breakers containing SF ₆ (AIS & GIS) from 2026.	G	
			Maintain external certification to ISO 14001.		Maintain external certification to ISO 14001 as part of our Integrated Management System.				
Maintain a certified Environmental Management System.	Certification to ISO 14001.	Maintain high levels of environmental management.						G	We developed and implemented an Integrated Management System which includes ISO 14001.
Work collaboratively with other transmission owners to find common solutions and develop a consistent approach to sustainability issues.	Quarterly attendance at forums.	Cross collaboration and consistency in our approaches.	Establish working groups for carbon and nature.	Establish common methodologies for capital carbon and natural capital.	Establish sustainability forum to ensure consistency across carbon, nature, reporting, resource use and T3.	Agreement of sectoral commitments for T3.	Implementation of solutions and best practice sharing.	G	We have created a quarterly Sustainability Forum with SSEN and SPEN to work together on common sustainability goals.
			Full disclosure of memberships, influencing networks, and working groups – and any outputs associated to them e.g. contributing to developing standards and informing government.						
Be an environmental leader for the energy industry by actively contributing and shaping the discussions in external working groups.	# of groups and meetings attended externally on environmental sustainability.	Shaping external discussions on environmental issues.						G	Environmental leadership for the energy industry demonstrated by our contribution to, and shaping discussions in, external working groups/events.

Data tables

Roll over the panels below to find out how we are doing



Net zero carbon emissions



Sustainable use of resources



Nature positive

Emissions in tCO ₂ e	Specific area	2018/19 baseline	FY21/22	FY22/23	FY23/24
Scope 1 – Fugitive emissions	IIGs (tCO ₂ e)	272,114	229,528	223,003	227,666
Scope 1 – Operational transport	Direct commercial vehicles (tCO ₂ e)	6,798	5,255	5,155	4,913
Scope 1 – Fuel combustion	Diesel and natural gas (tCO ₂ e)	Not split out	308	242	577
Scope 2 – Metered building energy use (location-based approach)	Buildings – office/depots electricity (tCO ₂ e)	20,006	1,849	1,505	1,141
	Substation electricity (tCO ₂ e)		12,984	11,817	14,185
Scope 2 – Metered building energy use (market-based approach)	Buildings – office/depots electricity (tCO ₂ e)	-	-	2,841	998
	Substation electricity (tCO ₂ e)	-	-	22,314	11,708
Scope 2 – Electricity losses		1,295,484	1,152,795	1,299,340	1,228,468
Total emissions including losses (tCO₂e) location-based approach		1,594,402	1,402,719	1,541,062	1,476,951
Total emissions excluding losses (tCO₂e) location-based approach		298,918	249,924	241,723	248,482

Transmission losses	FY22	FY23	FY24
Annual losses (TWh)	5.4	6.7	5.9
Share of total electricity (%)	2.08	2.51	2.35
CO ₂ e emissions (tCO ₂ e)	1,152,795	1,299,340	1,228,468

Net zero carbon emissions headlines	FY22	FY23	FY24
Annual change in insulation and interruption gas emissions (%)	13.8	2.9	2.1
Low carbon and renewable energy capacity connected to the network (MW)	1,869	0	1,350
Investment into innovation activities primarily supporting decarbonisation and/or protecting the environment (£m)	0.4	6.6	12.1

Capital carbon	FY22	FY23	FY24
Capital carbon intensity (tCO ₂ /£m)	163	153	145

Supply chain	FY22	FY23	FY24
Percentage of suppliers meeting our supplier code (%)	74	73	67
Percentage of suppliers that have their own sustainability metrics (%)	74	73	67

IIG type	FY22	FY23	FY24
Total IIG emissions (tCO ₂ e)	231,997	228,023	227,666
SF ₆ emissions (tCO ₂ e)	229,528	223,003	222,708
SF ₆ /N ₂ (tCO ₂ e)	2,468	5,020	4,958
Leakage rate (%)	1.06	1.01	1.00
Interventions per annum (#)	29	44	83
Estimated impact of interventions (tCO ₂ e avoided or abated)	9,996	3,609	5,849

Data tables

Roll over the panels below to find out how we are doing

Net zero carbon emissions

Sustainable use of resources

Nature positive

Waste generation (tonnes)	FY22 (tonnes)	FY22 (%)	FY23 (tonnes)	FY23 (%)	FY24 (tonnes)	FY24 (%)
Construction	781,686	99.75	761,686	99.76	224,449	97.93
Operational	1,908	0.24	1,769	0.23	4,653	2.03
Office	61	0.01	84	0.01	91	0.04
Total	783,655	100	763,539	100	229,193	100

*Includes excluded European Waste Catalogue data which accounts for 613 tonnes. Please see pages 7-10 of our methodology annex to read more on the methodology.

FY24 Top 10 global categories of spend (%)	Spend by (%)
IT & Telecommunication related services (excl. consultancy)	13.30
Substation services	12.17
Overhead line services	10.33
Building, civil engineering & associated services	9.93
Underground cable services	8.35
Consultancy (excl. engineering consultancy)	8.15
Engineering consultancy	7.74
Unclassified	6.15
Business & administrative services	4.50
Other engineering services	3.78
Computer equipment & supplies	3.72

Oil top-ups (litres)	FY22	FY23	FY24
Oil in service	>100 million	>100 million	>100 million
Cable oil top-ups	15,807	11,229	8,149
Transformer oil top-ups	740,777	732,607	701,579

Category 1 environmental incidents	FY22	FY23	FY24
Oil loss	Three	Two	One
SF ₆ leak	None	Two	None
Wildlife	One	None	None

Data tables

Roll over the panels below to find out how we are doing

Net zero carbon emissions

Sustainable use of resources

Nature positive

Project name and location	Description	Ecosystem benefit(s)	Baseline NCV (£) of ecosystem services annual flow	Post-intervention NCV (£) of ecosystem services annual flow	Timeline	
Abham substation, TQ1 1LB	Partnership agreement with Groundwork to introduce an enhanced habitat management plan across c.4ha. Introduction of a community environmental education engagement programme.	Wild species/biodiversity Pollination Recreation	10,667.00	397,912	10-year agreement	
Birkenhead substation, CH43 3BU	Partnership agreement with Prenton Rugby Club to introduce an enhanced habitat management plan across c.5ha. Introduction of a community engagement programme.		8,460	1,902,104		
Stoke Bardolph substation, NG14 5JX	Partnership agreement with Gedling Conservation Trust to introduce an enhanced habitat management plan across c.4ha of land. Target to increase the number of guided walks, educational and volunteering days.		0	430,762		
Nursling substation, SO1 6AA	Partnership agreement with TCV to introduce enhanced habitat management of c.5ha of non-operational land. Improvements to the condition of the Public Rights of Way which run through the site to increase accessibility to local communities. Introduction of a community volunteering programme.	Wild species/biodiversity Pollination Recreation Timber harvesting	15,155	584,881		
Wymondley substation, SG4 7JJ	Partnership agreement with TCV to introduce an enhanced management plan across c.5ha of non-operational land. TCV will be improving the condition of the Public Rights of Way which runs around the perimeter of the site. A community volunteering programme will also be introduced.	Wild species/biodiversity Pollination Recreation Carbon Air quality Community	1,273,582	2,766,813		
Bishops Wood Environmental Education Centre, DY13 9SE	Uplifted the existing 10-year partnership agreement with the Field Studies Council introduced in FY22 to facilitate additional environmental educational and volunteering activities for the local community – additional 2,000 visits per year	Recreation	11,770,909	13,610,114		
Skelton Grange Environmental Education Centre, LS1 1RR	Uplifted the existing 10-year partnership agreement with the Field Studies Council introduced in FY22 to facilitate additional environmental educational and volunteering activities for the local community – additional 1,000 visits per year		8,096,178	9,015,781		
Ninfield substation, TN33 9BJ	Uplifted the existing 10-year partnership agreement with the Conservation Volunteers introduced in FY22 to enable habitat management and community engagement activities to increase from fortnightly to weekly at the site – additional 144 visits per year		132,423	264,846		
Capenhurst substation, CH1 6HE	A change in land management introduced to actively manage existing grassland for the benefit of biodiversity and pollination – diversifying existing monoculture grassland and reducing cutting regimes.	Wild species/biodiversity Pollination	5,885	98,370		Ongoing agreement
Iron Acton substation, BS37 9TX			6,621	108,571		
Jordanthorpe substation, S8 8JR			5,150	54,395		
Kitwell substation, B32 3AN			13,978	112,525		
Knaresborough substation, HG5 9JA			6,253	105,920		
Lewingdon Wood substation, RG8 9RD			735.68	200,046		
Rayleigh, SS11 8TZ			9,932	223,698		
Ryhall substation, PE9 4QD			2,207	144,879		
Washway Farm substation, L4 6JG			0	45,911		
Whitfield, ST6 8UW			0	259,506		
Eaking Training Centre, NG22 0DA			Introduction of a beehives to increase local pollination levels and provide honey to the training centre restaurant.	Pollination	0	
Baseline NCV			21,358,135	Post intervention NCV	30,472,201	
				Change in NCV	3.24%	

Project name	Baseline units	Post intervention units	Total net unit change	% net change
Harker	44.5	79.9	35.4	79.4
Minety	35.0	50.3	15.3	43.6
Norwich Main	71.8	84.5	12.7	17.7
Hylton Castle	62.5	72.8	10.3	16.0
Uxbridge Moor	97.5	113.1	15.6	16.0
PITS-WIBA-TEMP – Sheffield Cable Replacement	16.0	18.5	2.5	15.6
Balwen – Thornton	8.1	9.1	1.0	12.3
NORM4 Grid Park	0.9	1.0	0.1	11.0
Wallend	8.4	9.3	0.9	10.7
Braintree	1.6	1.8	0.2	10.6
4TM – Keadby – West Burton	10.0	11.0	1.0	10.2
Yorkshire Green	1,176.0	1,295.0	119.0	10.1
VIP North Wessex Downs	238.5	262.5	24.0	10.1
Penrhos	Data not available	Data not available	Data not available	Data not available

Nature positive	FY21/22	FY22/23	FY24
Investment in schemes to enhance/restore local environmental quality (£m)	0.3	0.2	0.3
Hectares of land enhanced in natural capital value (Ha)	95	35	44

Let us know what you think

The future of energy affects all of us. So, we would like to hear from you – our communities, customers, employees, investors and suppliers.

Our [Environmental Action Plan](#) is a collaborative programme, so we need your feedback to make sure we continue to focus on the right areas and deliver the results that matter the most.

We share updates, successes and insights along the way on our website.

If you would like to contact us about any aspect of our Annual Environmental Report, please email: .box.ET.Environmental@nationalgrid.com

For more information on our approach to responsible business, click [here](#).

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