

nationalgrid

Our Reporting Methodology

Responsible
Business Report
2022/23



Overview

This document explains the definitions, scope and calculation methodology for preparing and assuring the key performance metrics and disclosures reported within the 2022/23 Responsible Business Report (RBR), GRI Index and our KPI disclosure tables in Excel (Excel Data Book), all available on our website:



Further reading
2022/23 Responsible Business Report



Further reading
GRI index



Further reading
Excel disclosure tables

Please note that the bases of reporting for the EU Taxonomy, Green Financing and Sustainability Accounting Standards Board (SASB) are maintained within the respective reports and are therefore outside the scope of this document. For more details, please refer to the following:



Further reading
EU Taxonomy Report



Further reading
Green Financing Report



Further reading
SASB Report

Foundations of reporting

Scope of reporting

Our RBR covers all parts of our business operations globally, including UK Electricity Distribution (UK ED, formerly WPD) which was acquired during the previous period (see Acquisitions, Mergers and Disposals below). Our UK and US businesses report in line with a financial year (1 April to 31 March) with the exception of US regulatory reporting which is reported on a calendar year basis (1 January to 31 December). As such, our environmental metrics have been calculated on a financial year basis in the UK and a calendar year basis in the US, unless stated otherwise. All other metrics are in line with the financial year unless otherwise stated. All metrics include the results of the Company and its subsidiaries. We have excluded data for all joint ventures, but for the following exceptions:

- Emerald Joint Venture (Emerald) data has been included on the basis that we own at least a 50% stake and we have operational control of the entity, in line with our interpretation of the Greenhouse Gases (GHG) Protocol definition.¹
- Joint venture interconnectors data has been included in the 'Interconnector Reliability – percentage availability' metrics. This is because reliability is such a significant priority given the crucial role interconnectors play in the UK transmission system and in providing system flexibility in a future of high variable renewable energy integration.

Where specific sites, operations or subsidiaries have been excluded from the scope of certain metrics, clear justification has been provided within the relevant metric section of this document.

Acquisitions, mergers and disposals

For newly acquired businesses and new operations, our policy is to include these within the metric reporting of our RBR as soon as practically possible and, ideally, no later than the reporting period after the first full financial year of ownership. Therefore, depending on the timing of acquisition and commencement of operations, this could be up to two years following the event, at the latest. As a result, we have consolidated UK ED, which was acquired in June 2021, into our Group numbers in this reporting period.

Newly sold or disposed operations will be removed from our reporting from the start of the reporting year that they leave the Group. This is because post National Grid ownership ceasing, we may not have access to an entity's data, for reporting, control and assurance purposes. As a result, data for The Narragansett Electric Company (NECO) and National Grid Gas plc (NGG), whose disposals have been finalised in the 2022/23 reporting year, have been excluded in this reporting period.

Due to the level of their materiality, and our commitment to align with the GHG Protocol, we have adjusted prior year comparatives for all GHG emissions and consumption metrics to reflect the changes in the 2022/23 figures. Prior year comparatives have not been adjusted for any other metrics. The restated metrics include:

- Scope 1, 2 and 3 greenhouse gas (GHG) emissions by category
- SF₆ emissions (tCO₂e)
- Energy consumption (GWh)

Refer to the Changes to global operations section below for more details on changes relevant to the scope. Any additional exceptions to how acquisitions and disposals are handled within our reporting will be clearly stated and explained within the relevant metric section of this document.

1. <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>



Overview continued

Assurance

All metrics reported within the RBR data tables are subject to our internal quality control review and approval processes. Further to this, we have commissioned PricewaterhouseCoopers LLP (PwC) to provide independent limited assurance over our most material RBR metrics. Its Assurance Opinion for our 2022/23 RBR can be found on our website.

All reported RBR and SASB metrics that have not been covered by PwC are in scope for second line assurance.

Changes to global operations

The main changes to our global operations within the last two years are:

- The acquisition of UK ED (previously WPD) in June 2021. We have fully consolidated UK ED data into our metrics for 2022/23, unless otherwise stated, in line with our policy.
- The sale of our Rhode Island electricity and gas business, NECO, was finalised in May 2022. In line with our policy, NECO data has not been included in our 2022/23 RBR metrics.
- The sale of majority interest (60%) in our UK gas transmission and metering business (NGG), was finalised in January 2023. In line with our policy, NGG data has not been included in our 2022/23 RBR metrics. However, as the Group has owned NGG for 10 months in the reporting year and continues to own 40% of the entity as at the reporting date, we will disclose NGG material emissions data separately as a footnote to Group emissions for transparency.
- North Sea Link (NSL), our subsea interconnector linking the electricity systems of the UK and Norway, became operational in October 2021. However, the maintenance contract sat with Hitachi for one year since operations began and was handed over to National Grid in October 2022. In line with our policy, we have excluded NSL data in this year's RBR as we gained operational control in October 2022, but will aim to include its complete contributions in all our key performance metrics within our 2023/24 RBR.

Reporting standards

In addition to reporting KPIs to measure our progress against our Responsible Business Charter (RBC) targets, we have also produced reporting to align with a number of established sustainability reporting standards frameworks. Details of these have been described below:

Global Reporting Initiative (GRI)

Our 2022/23 RBR has been prepared in accordance with the GRI Standards. Further details on the requirements and our disclosures can be found in our [GRI index](#).



Other reporting disclosures

Separate to the RBR, and therefore this document, we have prepared the sustainability reporting disclosures described below:

Taskforce on Climate-Related Financial Disclosures (TCFD)

We have prepared our sixth consecutive TCFD report in full compliance with FCA listing rule (LR) 9.8.6R(b), which describes our climate change related governance, strategy, risk management and metrics and targets, including details of our short-, medium- and long-term risks and opportunities. This disclosure can be found in our [Annual Report and Accounts](#).



EU Taxonomy

We have published our second EU Taxonomy disclosure in accordance with the EU developed classification system which establishes the percentage of Group turnover, operating expenditure and capital expenditure that can be defined as green in relation to climate change mitigation- and adaptation-aligned activities.



Sustainability Accounting Standards Board (SASB)

We have prepared separate disclosures in accordance with the Sustainability Accounting Standards Board (SASB) utilities sub-sector standards. Further details on the requirements and our disclosures can be found in our [SASB report](#).



Basis of Reporting – RBR Metrics

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1.6	UK office waste	17
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1. Environment



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1.1 Scope 1 and 2 greenhouse gas emissions

The reporting of National Grid's total carbon emissions in our Annual Report and Accounts is a legal requirement under The Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013.

Our Scope 1 and Scope 2 emissions are calculated and reported in line with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (Revised)² and the GHG Protocol Scope 2 Guidance: An amendment to the GHG Protocol Corporate Standard.³ Refer to Scope below for more information on our application.

1.1.1 Metrics

We record our Scope 1 and Scope 2 emissions (in ktCO₂e) for each of our business units and report a consolidated total. The data we report is:

- Scope 1 emissions (ktCO₂e)
- Scope 2 Location-based emissions (ktCO₂e)
- Scope 2 Market-based emissions (ktCO₂e)

The additional metrics also covered by this methodology are as follows:

- SF₆ emissions (ktCO₂e)
- Total energy consumption (GWh) – Consumption figures from Table 2 are taken before multiplying by emission factors. The same process is followed for the breakdown metrics below:
 - Total electricity consumption (GWh)
 - Total operational consumption (GWh)
 - Total heating consumption (GWh)
 - Total transport consumption (GWh)
 - Total fuel consumption from non-renewable sources (GWh)
 - Total fuel consumption from renewable sources (GWh)
 - Total energy consumed – US Generation data (GWh)
 - Total consumption (GWh)

- Total global Scope 1 and 2 emissions in tCO₂e per million £ of revenue (tCO₂e/£m) – Simple mathematic calculation to divide the total Scope 1 and 2 location-based emissions figure by total Group revenue in the Annual Report and Accounts (ARA). The external revenue figure of £21,476 million for 2022/23 is calculated in line with our policy for sustainability reporting for acquisitions, mergers and disposals, i.e. Group revenue from continuing operations before exceptional items and remeasurements of £21,659 million (per ARA Note 3), less revenue from our Rhode Island business which was sold on 25 May 2022 of £183 million.
- Carbon intensity of our generation metric – CDP (tCO₂e/GWh) – We used the Scope 1 emissions (tCO₂e) from (1) gas and fuel powered electricity generation on Long Island under the Long Island Power Authority (LIPA) agreement, (2) US wind-powered electricity generation and (3) US solar-powered electricity generation as the numerator, and the GWh of gross electricity from the same US Generation businesses as the denominator, to calculate the tCO₂e/GWh, using the relevant emission conversion factors.

1.1.2 Definitions

Scope 1 emissions are direct emissions from the operational activities of National Grid.

Scope 2 emissions are indirect emissions from the energy purchased and consumed (including electricity system losses consumption) by National Grid. Scope 2 emissions are reported on a market basis and location basis, and line losses make up the vast majority. The sources of conversion factors are set out in Table 2 below.

2. <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

3. https://ghgprotocol.org/sites/default/files/ghgp/standards/Scope%202%20Guidance_Final_0.pdf



1. Environment continued

1.1.3 Scope

The operational control principle as set out by the GHG Protocol is applied across all our emissions and environment metrics. All operations where National Grid has 100% of operational control, and the full authority to introduce and implement its operating policies, are included within the reported metrics. BritNed and Nemo interconnector operations are incorporated joint ventures where we do not have operational control and are therefore excluded.

Table 1 presents the scope in terms of emissions sources included for Scope 1 and 2 emissions reporting.

Table 1: Scope of National Grid's Scope 1 and 2 emissions sources and business included

Emissions scope	Scope – emissions sources for inventory	Metrics included	Scope by region
Scope 1	Electricity generation on Long Island under the Long Island Power Authority (LIPA) agreement	<ul style="list-style-type: none"> Total energy consumed – US Generation data Carbon intensity of our generation metric – CDP Scope 1 emissions 	US
	Fugitive and vented release of natural gas from our gas pipeline systems and Liquefied Natural Gas (LNG) facilities	<ul style="list-style-type: none"> Scope 1 emissions 	UK, US
	Sulphur hexafluoride (SF ₆) leaks from our electric equipment	<ul style="list-style-type: none"> SF₆ emissions Scope 1 emissions 	UK, US
	Fleet vehicles use	<ul style="list-style-type: none"> Total transport consumption Scope 1 emissions 	UK, US
	Company car emissions where vehicle is used for business travel	<ul style="list-style-type: none"> Total transport consumption Scope 1 emissions 	UK, US
	Company owned plane and helicopters	<ul style="list-style-type: none"> Total transport consumption Scope 1 emissions 	UK, US
	Energy consumption at our facilities/sites	<ul style="list-style-type: none"> Total fuel consumption from non-renewable sources (there are other contributions to this metric besides consumption at facilities/sites) Total operational consumption Total heating consumption Scope 1 emissions 	UK, US
	Additional fuel combustion activities	<ul style="list-style-type: none"> Scope 1 emissions 	UK, US
Scope 2	Line losses from our electricity transmission and distribution lines and our interconnectors	<ul style="list-style-type: none"> Scope 2 Location-based emissions Scope 2 Market-based emissions 	UK, US
	Electricity consumption at our facilities	<ul style="list-style-type: none"> Total electricity consumption Scope 2 Location-based emissions Scope 2 Market-based emissions 	UK, US

UK emissions are reported in line with the financial year (1 April to 31 March) and US emissions are reported in line with the calendar year (1 January to 31 December). This reflects the regulatory reporting requirements and processes for the US.



1. Environment continued

1.1.4 Calculation methodology

Annual Scope 1 and 2 emissions data is added together from our major business units to get the Group level totals (in kilotonnes of CO₂e). See Table 2 below for detail on how emissions relevant to each source in our emissions inventory are calculated.

Table 2: Calculation methodology for Scope 1 and 2 emissions

Emissions scope	Emissions activities	Calculation methodology overview
Scope 1	Electricity generation on Long Island under the Long Island Power Authority (LIPA) agreement	<p>US gas and fuel powered electricity generation: CO₂ emissions tracked using the Continuous Emissions Monitoring System (CEMS) from the combustion of generation fuels.</p> <p>Tier 4 Stationary Combustion</p> <ul style="list-style-type: none"> Description: Combustion turbines, reciprocating engines, tangentially fired steam-electric boilers and emergency generators across the US fuel generation portfolio using a mix of natural gas, residual fuel oil no. 6, distillate fuel nos. 1 and 2, and diesel. Emission factor: US Environmental Protection Agency (EPA) Subpart NN -1. EPA GHG Emission Factors Hub (April 2022). <p>Tier 2 Stationary Combustion Gas Fuel</p> <ul style="list-style-type: none"> Description: Natural gas consumed by industrial boilers. At the major generation stations, each station has what is referred to as a 'house boiler'. These units, consuming natural gas, provide building heating when the generating unit boilers are not firing. Emission factor: 40 CFR 98 Subpart NN – Table NN-1. EPA GHG Emission Factors Hub (April 2022). <p>US Generation Mains Fugitive EDG</p> <ul style="list-style-type: none"> Description: Fugitive emissions across EF Barrett, Northport and Port Jefferson based upon the mileage of protected steel pipeline that delivers the fuel to the power plant. Emission factor: EPA U.S. Inventory of GHG Emissions and Sinks – Annex 3.6: Methodology for Estimating CH₄, CO₂, and N₂O Emissions from Natural Gas Systems (Tables 3.6-2 and 3.6-12).
	Fugitive and vented release of Natural Gas from our gas pipeline systems and LNG facilities	<p>UK LNG Facility: Volume of natural gas vented. Emissions calculated using the following formula: kg methane vented x GWP of CH₄.</p> <p>UK Fugitive and Venting Emissions</p> <ul style="list-style-type: none"> Description: Venting of compressors at Grain can be process or safety venting. Emission factor: n/a. <p>US Gas Distribution Methane Leakage: Emissions from methane leakage are estimated using approved EPA methodologies.</p> <p>US Gas Distribution Mains & Services</p> <ul style="list-style-type: none"> Description: Mileage of mains by pipe type and count of services by pipe type. Emission factor: EPA U.S. Inventory of GHG Emissions and Sinks – Annex 3.6: Methodology for Estimating CH₄, CO₂, and N₂O Emissions from Natural Gas Systems (Tables 3.6-2 and 3.6-12). <p>US Gas Distribution Equipment (Meters, M&R, T-D Stations)</p> <ul style="list-style-type: none"> Description: Count of assets. Emission factor: EPA U.S. Inventory of GHG Emissions and Sinks – Annex 3.6: Methodology for Estimating CH₄, CO₂, and N₂O Emissions from Natural Gas Systems (Tables 3.6-2 and 3.6-12) and Subpart W methodology-based leak surveys. <p>US Gas Distribution Equipment (Meters, M&R, T-D Stations)</p> <ul style="list-style-type: none"> Description: Count of assets. Emission factor: EPA U.S. Inventory of GHG Emissions and Sinks – Annex 3.6: Methodology for Estimating CH₄, CO₂, and N₂O Emissions from Natural Gas Systems (Tables 3.6-2 and 3.6-12) and Subpart W methodology-based leak surveys. <p>US Gas Distribution Pneumatic & Non-Routine Venting</p> <ul style="list-style-type: none"> Description: Count of pneumatic assets by type and total system mileage. Emission factor: API Compendium and EPA U.S. Inventory of GHG Emissions and Sinks – Annex 3.6: Methodology for Estimating CH₄, CO₂, and N₂O Emissions from Natural Gas Systems (Tables 3.6-42 and 3.6-45) and URS Documentation Tables 5 to 15. <p>US Gas Distribution Other Fugitive Emissions</p> <ul style="list-style-type: none"> Description: Count of compressors, mileage of other pipe by type and mileage of transmission pipeline. Emission factor: EPA U.S. Inventory of GHG Emissions and Sinks – Annex 3.6: Methodology for Estimating CH₄, CO₂, and N₂O Emissions from Natural Gas Systems (Tables 3.6-2 and 3.6-12). <p>US Gas Distribution LNG Venting</p> <ul style="list-style-type: none"> Description: Volume of gas standard cubic feet (scf) vented from LNG facilities. Based on hours tanks were vented, times LNG pump blew/cooled down and times LNG truck was offloaded. Emission factor: Title 40, Code of Federal Regulations Equations W-35 and W-36 to Subpart W of Part 98.



1. Environment continued

Emissions scope	Emissions activities	Calculation methodology overview
Scope 1 continued	SF ₆ leaks from our electric equipment	<p>US and UK Transmission and Distribution Systems (including interconnectors): Mass of SF₆ (kg) measured from SF₆ cylinders used to top-up equipment as well as any losses arising from equipment failure or replacement x AR5 GWP of SF₆.</p> <p>UK and US Fugitive SF₆ Emissions</p> <ul style="list-style-type: none"> Description: SF₆ leakage from switch gear in the electrical system. Emission factor: Intergovernmental Panel on Climate Change (IPCC) AR5 GWP for SF₆.
	Fleet vehicles use	<p>UK: Fuel purchased is recorded by volume. The associated emissions are calculated by multiplying this volume by the relevant carbon conversion factor. Department for Environment, Food & Rural Affairs (DEFRA) / Department for Business, Energy & Industrial Strategy (BEIS)⁴ conversion factors applied for petrol, diesel and aviation fuel.</p> <p>UK Mobile Combustion</p> <ul style="list-style-type: none"> Description: UK fleet combustion by fuel volume (litres), mostly through aggregating fuel cards and fuel dispensed data. Emission factor: Government conversion factors for company reporting of GHG emissions – Fuels > Volume – Petrol and Diesel (Biofuel Blend). <p>US: Fuel used for fleet is recorded on a fleet services system and converted to kt CO₂e using EPA conversion factors.</p> <p>US Mobile Combustion</p> <ul style="list-style-type: none"> Description: US fleet combustion by fuel volume (US gallons) and mileage driven, mostly through aggregating fuel cards data or fleet management systems. Emission factor: EPA GHG Emissions Factors Hub – Tables 2, 3, 4 and 5.
	Company car emissions where vehicle is used for business travel	<p>UK only: The business policies that underpin the Company car emissions activity differ between the UK and the US, and as a result, we have direct influence over UK company car emissions. US company car activities have been considered under Scope 3 emissions.</p> <p>UK Mobile Combustion by Distance</p> <ul style="list-style-type: none"> Description: Mobile combustion by distance covers all cars (company and own use business) whose mileage is claimed through the UK mileage expenses system and payroll mileage claims. Emission factor: Government conversion factors for company reporting of GHG emissions – Passenger vehicles category – 8 fuel types x 4 engine sizes.
	Company owned plane and helicopters	<p>UK and US owned aviation: Used primarily for aerial surveillance of our electricity lines.</p> <p>UK Mobile Combustion by Volume Aviation</p> <ul style="list-style-type: none"> Description: UK helicopter combustion by fuel volume (litres) for aerial surveillance of electricity lines, including external charter and testing. Emission factor: Government conversion factors for company reporting of GHG emissions – Fuels > Volume – Aviation Turbine. <p>US Mobile Combustion by Volume Aviation</p> <ul style="list-style-type: none"> Description: US aviation gasoline fuel volume (US gallons) for aeroplane and helicopter use. Emission factor: EPA GHG Emissions Factors Hub – Tables 2 and 5.

4. <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>



1. Environment continued

Emissions scope	Emissions activities	Calculation methodology overview
Scope 1 continued	Energy consumption at our facilities	<p>UK property: Utility energy in the form of gas is contract metered by suppliers.</p> <p>UK Stationary Combustion by Energy Utility Contracted</p> <ul style="list-style-type: none"> Description: We employ an energy management organisation to manage utilities. Gas invoices for UK buildings are contract metered, and consumption is taken from these invoices. Emission factor: Government conversion factors for company reporting of GHG emissions > Fuels > Gaseous Fuels – Natural Gas kWh Gross Calorific Value (CV). <p>US: Energy consumption obtained from vendor invoices and using industry-standard methodologies to estimate where measures data is not available.</p> <p>US Tier 1 Stationary Combustion Liquid Fuel</p> <ul style="list-style-type: none"> Description: Volume of propane and distillate fuel oil no. 2 fuel (US gallons) combusted at facilities, which is often a de-minimis quantity. Emission factor: EPA GHG Emissions Factors Hub – Table 1. <p>US Tier 1 Stationary Combustion Gas Fuel</p> <ul style="list-style-type: none"> Description: Therms of natural gas fuel combusted for energy at facilities in New England, New York and Washington DC. Where we are billed by a supplier for our gas consumption, the amount is extracted from those bills. At the few sites where measured data is not available, the square footage of the National Grid occupied space is measured, type of site identified, and a gas consumption per square footage emission factor utilised from the Energy Information Administration (EIA) Commercial Buildings Energy Consumption Survey. Emission factor: EPA GHG Emissions Factors Hub – Table 1. <p>Global</p> <p>Global HFC Emissions (HVAC systems)</p> <ul style="list-style-type: none"> Description: National Grid includes an annual emission of 10,000 tCO₂e from heating, ventilation and air conditioning (HVAC) systems and the related emissions. HVAC systems use Hydrofluorocarbons (HFCs) due to their refrigeration properties. HFCs are one of the GHGs (or GHG groups). National Grid commissioned URS to undertake a survey in 2012 (as part of our initial total global inventory definitions) of its HVAC fleet and the GHG emissions are based upon an assumption that we release 100% of the HFCs from each of our HVAC units in all our global operations, per year. This is an overestimation as HVAC systems are more efficient in terms of leakage of HFCs. Emission factor: No emission factor as the estimation metric is already tCO₂e.



1. Environment continued

Emissions scope	Emissions activities	Calculation methodology overview
Scope 1 continued	Additional fuel combustion activities	<p>Energy consumption obtained from vendor invoices and using industry-standard methodologies to estimate where measured data is not available.</p> <p>UK:</p> <p>UK Fuel Combustion – Mobile Generators for Electricity Distribution</p> <ul style="list-style-type: none"> Description: Volume of diesel/gas oil (litres) in mobile generator use: backup generators and small plant equipment consolidated using purchased record volumes. Emission factor: Government conversion factors for company reporting of GHG emissions > Fuels > Combination of liquid fuels. <p>UK Interconnectors Onsite Fuel</p> <ul style="list-style-type: none"> Description: Volume of diesel and petrol fuel (litres) used at interconnector sites for site machinery and backup diesel generators. Emission factor: Government conversion factors for company reporting of greenhouse gas emissions/fuels/liquid fuels/diesel (100% mineral diesel)/petrol (100% mineral petrol)/litres. <p>UK DEFRA Stationary Combustion by Energy – Isle of Grain</p> <ul style="list-style-type: none"> Description: Our Isle of Grain LNG import and storage facility uses compressors to move the facility gas and these compressors are gas turbine compressors. Volumes of gas (SCM) that fuel the compressors at each of the three phases are recorded in gas volumes. This can then be converted to energy using a Calorific Value (CV) as energy per unit volume, and then further to CO₂e by means of an Emission factor (EF) as CO₂e per unit energy. Emission factor: Phase specific CV – Volume to Energy Conversion MJ/SCM and Phase Specific Emission Factor – Energy to CO₂e units tCO₂e/TJ. <p>US:</p> <p>US Tier 1 Stationary Combustion Gas Fuel</p> <ul style="list-style-type: none"> Description: Volume of gas (SCF) fuel consumed by line heaters and standby generators. Emission factor: EPA GHG Emissions Factors Hub – Table 1. <p>LNG Tier 3 Stationary Combustion Gas Fuel</p> <ul style="list-style-type: none"> Description: Volume of natural gas (SCF) consumed by boilers/heaters, vaporisers, backup generators and many other assets in the operation of the LNG business. Emission factor: EPA GHG Emissions Factors Hub – Table 1. <p>US Tier 1 Stationary Combustion Liquid Fuel (Nantucket Generators)</p> <ul style="list-style-type: none"> Description: Volume of petroleum distillate fuel oil no. 2 (US gallons) consumed by backup generators on the island of Nantucket. Emission factor: EPA GHG Emissions Factors Hub – Table 1. <p>Renewables Onsite Fuel</p> <ul style="list-style-type: none"> Description: Diesel and gasoline used at wind and solar sites for tractors, mowers and Utility Terrain Vehicles (UTVs). Emission factor: EPA GHG Emission Factors Hub / Table 2: Mobile Combustion CO₂ – Diesel and Gasoline / Table 5: Mobile Combustion CH₄ and N₂O for Non-Road Vehicles / Gallons of diesel and gasoline consumed.



1. Environment continued

Emissions scope	Emissions activities	Calculation methodology overview
Scope 2	Line losses from our electricity transmission and distribution lines and our interconnectors.	<p>When electrical currents travel on a network there is an inherent resistance as the lines are not 100% conductive, some energy is dissipated in the form of heat, and is “lost” due to the electrical resistance in the network. This energy is known as line losses.</p> <p>UK:</p> <p>UK Electricity Transmission Line Losses</p> <ul style="list-style-type: none"> Description: Electricity System Operator (ESO) calculates energy losses on the GB Transmission network by Transmission Owner. This is multiplied by the DEFRA/BEIS published carbon intensity of electricity factor. Energy losses (kWh) x electricity carbon intensity factor (gCO₂e/kWh). Emission factor: Government conversion factors for company reporting of GHG emissions > UK Electricity – Electricity generated, Electricity: UK kgCO₂e. <p>UK Electricity Distribution Line Losses</p> <ul style="list-style-type: none"> Description: Distribution System Operator (DSO) calculates energy losses on our UK Distribution Network/Licence Areas owned by UK ED. This is multiplied by the DEFRA/BEIS published carbon intensity of electricity factor. Energy losses (kWh) x electricity carbon intensity factor (gCO₂e/kWh). Emission factor: Government conversion factors for company reporting of GHG emissions > UK Electricity – Electricity generated, Electricity: UK kgCO₂e. <p>UK Interconnectors Line Losses</p> <ul style="list-style-type: none"> Scope: <ul style="list-style-type: none"> – IFA: Great Britain – France – Nemo: Great Britain – Belgium – BritNed: Great Britain – Netherlands – IFA2: Great Britain – France Description: Losses and their associated carbon emissions are calculated by taking the average intensity per hour of the exporting market multiplied by the energy losses per hour on the interconnector for both imports and exports. The hourly figures are aggregated together to give the total carbon from line losses for the time period required. Emission factor: Unlike the Electricity Transmission (ET) systems that have multiple connection points, interconnectors only have two. Therefore, the losses information is available on a more granular hourly basis from the generation intensity in the originating country (dependent on whether it is a GB export or import) over that time period. This results in more accurate measurement and accounting methodology. <p>US: Energy losses on the US Transmission and Distribution networks multiplied by the published EPA eGrid factors for the relevant region. Electricity losses (kWh) x eGRID/2204.62 (conversion from lbs to grams).</p> <p>Electricity Transmissions and Distribution Line Losses</p> <ul style="list-style-type: none"> Description: Amount of electricity lost (MWh) across our Electric Transmission and Distribution networks. Emission factor: EPA Emissions & Generation Resource Integrated Database (eGRID) Summary Tables – Table 1 – egrid2021_summary_tables.



1. Environment continued

Emissions scope	Emissions activities	Calculation methodology overview
Scope 2 continued	Electricity consumption at our facilities	<p>Electricity consumption multiplied by DEFRA/BEIS and EPA carbon intensity of electricity factors. Consumption sourced from bills or meters when available; otherwise, the square footage of the National Grid occupied space is measured, type of site identified and an electricity consumption per square footage emission factor utilised.</p> <p>UK Property:</p> <p>UK DEFRA Electricity Consumption Utility Contracted</p> <ul style="list-style-type: none"> Description: We employ energy management organisations to manage utilities. Electricity invoices for UK buildings are contract metered and so consumption is taken from these invoices. Emission factor: Government conversion factors for company reporting of GHG emissions > UK Electricity – Electricity generated, Electricity: UK kgCO₂e. <p>UK DEFRA Electricity Consumption Utility Contracted</p> <ul style="list-style-type: none"> Description: Our Isle of Grain facility produces Nitrogen on site that is used as ballast for the LNG prior to entering the UK Gas Transmission System. LNG can come from sources where the gas is 'rich' and therefore does not meet UK gas quality specifications, hence the ballast of Nitrogen. To produce and store Nitrogen (in liquid tanks) requires a large amount of energy. Emission factor: Government conversion factors for company reporting of GHG emissions > UK Electricity – Electricity generated, Electricity: UK kgCO₂e. <p>US Property:</p> <p>Energy consumed (kWh) multiplied by the published EPA eGrid factors for the relevant region. Electricity consumption (kWh) x eGRID/2204.62 (conversion from lbs to grams).</p> <p>Office Electricity Consumption</p> <ul style="list-style-type: none"> Description: Electricity consumed at the National Grid US facilities in New England, New York and Washington DC. Where buildings have electricity bills or meters, the electricity consumption is collated from the bills or meters. Where bills or meters are not available, the square footage of the National Grid occupied space is measured, type of site identified and an electricity consumption per square footage emission factor utilised from the Energy Information Administration (EIA) Commercial Buildings Energy Consumption Survey. Emission factor: EPA Emissions & Generation Resource Integrated Database (eGRID) Summary Tables – Table 1. <p>LNG Electricity Consumption</p> <ul style="list-style-type: none"> Description: Electricity consumed at the LNG plants. Emission factor: EPA Emissions & Generation Resource Integrated Database (eGRID) Summary Tables – Table 1 – egrid2021_summary_tables. <p>US Renewables Electricity Consumption</p> <ul style="list-style-type: none"> Description: Electricity consumed at our US renewables generation sites. Emission factor: EPA Emissions & Generation Resource Integrated Database (eGRID) Summary Tables – Table 1 – egrid2021_summary_tables.



1. Environment continued

1.2 Scope 3 greenhouse gas emissions

Our Scope 3 emissions are calculated and reported in line with the GHG Protocol Corporate Accounting and Reporting Standard (Revised),⁵ the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard⁶ and the Technical Guidance for Calculating Scope 3 Emissions: Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard.⁶

1.2.1 Metrics

The Scope 3 emissions metrics including the categories we report are:

- National Grid total Scope 3 emissions (ktCO₂e):
 - Cat. 1 (Purchased Goods and Services) emissions (ktCO₂e)
 - Cat. 3 (Fuel and Energy Related Activities) emissions (ktCO₂e)
 - Cat. 5 (Waste Generated in Operations) emissions (ktCO₂e)
 - Cat. 6 (Business Travel) emissions (ktCO₂e)
 - Cat. 7 (Employee Commuting) emissions (ktCO₂e)
 - Cat. 11 (Use of Sold Products) emissions (ktCO₂e)

There are two additional metrics that are separately disclosed but are calculated using Scope 3 emissions data from Cat. 6:

- GHG emissions and total air miles from air travel (ktCO₂e)
- Total miles from air travel – calculated by summing air travel distance figures from Table 3.

1.2.2 Definitions

Scope 3 emissions are defined as those which are not directly from our operations or activities but occur within our value chain and which we can have influence over. We report Scope 3 emissions across six categories as defined by the GHG Protocol (see Table 3 below).

1.2.3 Scope

National Grid applies the operational control principle to determine operations that are in scope for emissions and environmental reporting. See section 3.1.3 for further detail. For the purposes of reporting on our Scope 3 emissions, NGV operations are reported within our UK figures and US figures, where relevant.

Table 3 below presents the scope in terms of emissions sources included within each Scope 3 category.

Scope 3 emissions from Cat. 1, 3 and 11 made up >99% of our total Scope 3 emissions in 2022/23 and are therefore included within scope for external assurance. Cat. 5, 6 and 7 are currently excluded from independent assurance as these do not contribute materially to our total Scope 3 emissions.

UK emissions are reported in line with the financial year (1 April to 31 March) and US emissions are reported in line with the calendar year (1 January to 31 December). This reflects the regulatory reporting requirements and processes for the US.

Table 3: Scope of National Grid's Scope 3 emission sources by category and business included

Scope 3 emissions category (cat)	Scope – emissions sources for inventory	Scope by region
Cat. 1 (Purchased Goods and Services)	Includes all products and services purchased by National Grid Procurement, from stationery to construction products, apart from one exception. Due to being a recent acquisition, UK ED only includes Purchased Goods and Services GHG emissions for contracted spend and it has historically omitted other spend. We are in the process of integrating UK ED into the Group Procurement tool, so its full scope of emissions should be included from FY24.	UK, US
Cat. 3 (Fuel and Energy Related Activities)	Includes any emissions associated with the generation of electricity purchased and sold by National Grid to customers. This is calculated from metered supply and regional carbon factors.	US
Cat. 5 (Waste Generated in Operations)	Includes all waste generated from our operations including office waste, operational waste and construction waste by National Grid field operations. In some cases where waste stream classification is unknown, the waste emissions are estimated using an average emission factor.	UK, US
Cat. 6 (Business Travel)	Includes employee business travel, not in National Grid owned vehicles (air travel, hire cars, personal cars, taxis and rail travel). Business travel not recorded in our systems (e.g. not expensed) is not included; however, policies are in place to minimise this.	UK, US
Cat. 7 (Employee Commuting)	Includes emissions based on commuting distances of our employees to their offices and includes travel types such as bus, car and train.	UK, US
Cat. 11 (Use of Sold Products)	This includes any emissions associated with the use of gas and electricity sold by National Grid to its customers.	US

5. https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf

6. https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf



1. Environment continued

1.2.4 Calculation methodology

Annual Scope 3 emissions data across all categories reported is summed to get the Group-level total (in kilotonnes of CO₂e). See Table 4 below for detail on how emissions in each category are calculated.

Table 4: Calculation methodology for National Grid's Scope 3 emissions by category

Scope 3 emissions category	Calculation method
Cat. 1 (Purchased Goods and Services)	<p>Global annual spend on purchased goods (including capital goods) and services including purchased gas and electricity multiplied by Environmentally Extended Input-Output (EEIO) database factors for emissions based on spend. These factors are based on the University of Arkansas factors, and the NAICS industrial classification.</p> <p>Global</p> <ul style="list-style-type: none"> Description: Spend categories applied to each spend line were analysed and refined using the time adjusted Carbon Trust Environmentally Extended Input-Output (EEIO) database, based on the University of Arkansas factors, and the NAICS industrial classification. Each spend line (including relevant taxes) on the financial ledger is assigned to a spend category using UVDB information. Each spend category has then been allocated a relevant EEIO factor. The spend is in \$ as the EEIO factors are in kgCO₂e/\$. The Carbon Trust EEIO factors use cradle-to-gate emission factors by year. These are adjusted for global inflation and reflect the average global improvements in CO₂e/GDP as spend categories become less carbon intensive from year to year. Where a spend type cannot be mapped to a spend category to employ the specific EEIO factor then a weighted average factor is used. Emission factor: EEIO Spend Category kgCO₂e/\$, Spend to Spend Category mapping, GBP to USD where applicable.
Cat. 3 (Fuel and Energy Related Activities)	<p>Includes any emissions associated with the lifecycle emissions (excluding combustion) of electricity sold by National Grid to customers in the US. This is calculated from metered supply and US regional carbon factors.</p> <p>US Sold Electricity</p> <ul style="list-style-type: none"> Description: Emissions associated with the generation of electricity sold by National Grid to its customers. Metered supply pulled from CSS (billing system) is used to measure the MWh consumed and the regional carbon grid factors applicable to the customer's location. Third-party customers (transportation only) are not included in these emissions in line with the GHG Protocol. Emission factor: EPA Emissions Table 1 – egrid2021_summary_tables.
Cat. 5 (Waste Generated in Operations)	<p>Includes waste generated from our UK and US operations including office waste, operational waste and construction waste. The emissions are calculated from the measured units of each waste type multiplied by EPA GHG Emissions Factors Hub/DEFRA/BEIS factors for each waste type. An average emission factor is used where details of the Scope 3 waste stream are not available.</p> <p>UK</p> <p>UK Waste</p> <ul style="list-style-type: none"> Description: National Grid has a number of contracts with waste collection organisations covering the UK businesses, which provide data in volume or mass of waste. Emission factor: For waste in mass, BEIS factors > waste disposal (42 waste classes and seven disposal methods for each class ~300 factors depending on waste type and disposal)/volume > mass conversion source. <p>US</p> <p>US Waste</p> <ul style="list-style-type: none"> Description: Total waste generated in operations, including a breakdown by hazardous and non-hazardous waste generated as well as by disposal method – reuse, recycled, landfill and other methods. There are several waste streams (categories of waste types, e.g. hazardous waste, solid; oil with water; cleaning compound) from US businesses (Gas Distribution, Electricity Distribution, Shared Services, Electricity Transmission, and Generation). The waste quantities are measured in differing metrics dependent upon the category of waste (hazardous vs non-hazardous), and waste disposal method (reuse, recycled, landfill and other disposal methods). Emission factor: EPA GHG Emission Factors Hub – Table 9. Note that Emissions Factor Hub – Table 9 is based on AR4.



1. Environment continued

Scope 3 emissions category	Calculation method
Cat. 6 (Business Travel)	<p>Includes US and UK employee business travel classes (air travel, hire cars, personal cars used for company business, taxis, chauffeur and rail travel) but excludes National Grid company vehicles. Business travel that is not recorded in our systems (e.g. not expensed) is not included; however, policies are in place to minimise this. For each travel class, we collect travel data either in our own systems or our travel management suppliers provide the travel data x Regional (US/UK) EPA or DEFRA/BEIS emission factors.</p> <p>UK</p> <p>UK Business Travel – Personal car / Rail / Air / Hire car / Chauffeur / Sea travel / Freight goods</p> <ul style="list-style-type: none"> Description: Most National Grid employees use a system where employees can book a range of travel options, using third party travel providers. The distance (km) from the travel provider's report is multiplied by the emission factor. For UK ED, a separate, more manual expenses process is followed, but the calculation methodology is the same. Emission factor: Government conversion factors for company reporting of GHG emissions > Business Travel – Land > Rail/Air/Passenger vehicles/Ferry average passenger/Freighted goods. <p>US</p> <p>US Business Travel</p> <ul style="list-style-type: none"> Description: National Grid has a Travel Hub where employees can book a range of travel options. It uses a third-party Omega (US)/Agiito/Capital Travel provider through which these bookings can be made. As the details of the flight are specific, the distances can be recorded. The service provider supplies a monthly report for air travel with each specific journey distance classification along with the distance. The service provider uses the US EPA emission factors to calculate kgCO₂e per journey. EPA air emission factors are based on a journey distance classification in the US (unlike the short haul/long haul/domestic classification in the UK). Where flights are booked by individuals directly, the US DoT conversion factor is applied to estimate miles travelled from the amount spent and EPA air emission factors are then used based on the journey distance classification. Emission factor: EPA GHG Emission Factors Hub – Table 10: Scope 3 Category 6: Business Travel and Category 7: Employee Commuting.
Cat. 7 (Employee Commuting)	<p>Includes emissions based on commuting distances of our employees to their offices and includes travel types such as bus, car and train.</p> <p>Global</p> <p>Commuting</p> <ul style="list-style-type: none"> Description: We currently use survey results that have polled daily commute behaviours (frequency and miles travelled) and travel methods (e.g. car, train, bus, moped, etc) amongst a sample of employees (in 2015). Each method mileage is then: <ul style="list-style-type: none"> multiplied by the relevant UK BEIS emission factor (the use of 'regional' emission factors in line with the Protocol) for the transport type (relevant factor for the reporting year) extrapolated up to total number of employees from the sample size to give total employee per day CO₂e. The global number of employees is used in this calculation when reporting our global Scope 3 – Category 7 emissions (obviously this allows scaling should an individual business unit know its headcount) extrapolated up to total working days on the following working day assumption (52 weeks per year x 5-day week) – average annual leave days (25 assumed). In 2020, considerations were included to adjust for the reduced level of commuting and as a result the increased level of employees home working (due to the pandemic). Emission factor: EPA GHG Emission Factors Hub – Factors are applied per travel categories from Government/EPA conversion factors for company reporting of GHG emissions: <ul style="list-style-type: none"> Walk – 0 Single Occupancy Car: Passenger vehicles > Engine Size – Average Petrol Car Share: 50% of Passenger vehicles > Engine Size – Average Petrol Public Bus/Coach: Business Travel Land > Bus > Average Local Bus Train: Rail > National Rail Motorbike/Moped: Business Travel Land > Motorbike > Large Petrol.
Cat. 11 (Use of Sold Products)	<p>This includes any emissions associated with the use (combustion) of gas and electricity sold by National Grid to its customers in the US.</p> <p>US</p> <p>US Sold Gas</p> <ul style="list-style-type: none"> Description: Emissions associated with combustion of natural gas consumed by National Grid customers. Data on customer consumption is pulled from canned billing systems reports (MicroStrategy/CRIS Mainframe- CRIS Companies; PageCenter- (CSS Companies) and input into EIA Form 176 (part 6a). Total volumes sold for customers we do own are pulled for this calculation. The calculation involves conversion from volume to energy and energy to tCO₂e. Emission factor: EPA GHG Emission Factors Hub – Table 1.



1. Environment continued

1.3 Air quality – emissions from stationary sources

National Grid is required to monitor and report air emissions to regulatory bodies in both the UK Environment Agency (EA) and US (EPA) on an annual basis. As such, our air emissions reporting is carried out in line with the monitoring approaches and methodologies specified and approved by these regulators.

1.3.1 Metrics

Air emissions from stationary sources, including Nitrogen Oxide (NOx), Sulphur Oxide (SOx) and Particulate Matter (PM). The metrics we report are:

- NOx emissions (metric tonnes)
- SOx emissions (metric tonnes)
- PM emissions (metric tonnes)

1.3.2 Definitions

NOx, SOx and PM are air polluting gases released from combustion processes. Stationary sources of NOx, SOx and PM include the burning of natural gas and fuel oil to generate electricity (US Generation) and submerged combustion vaporisers (SCV) at our UK LNG facility.

1.3.3 Scope

NOx, SOx, and PM emissions from all UK sites are included and in the US emissions from all 64 of National Grid's emissions units are included.

Our Isle of Grain LNG business is included and only NOx emissions from this site are reported. NOx emissions from the Isle of Grain LNG site are included for Phase 1 (emissions from four submerged combustion vaporisers (SCVs), and Phases 2 and 3 (emissions from another six vaporisers and four SCVs respectively). SOx and PM emissions are not monitored at our LNG Grain site as the site is under the threshold required for regulatory reporting. Our air emissions reporting covers stationary sources (as defined above). Other sources may include air emissions from backup generators, small domestic boilers and process gas boilers on sites and from mobile sources (e.g. from our fleet). Air emissions from these potential sources are considered to be immaterial and are currently not monitored or included in our reporting. The following gases are included within our NOx, SOx and PM reporting:

- NOx – NO₂, NO
- SOx – SO₂
- PM – PM10, PM2.5

Only PM10 is measured and reported in the UK (reported as PM). In the US, PM10, PM2.5 and other particle sizes are measured, but reported as a consolidated PM amount.

Air emissions for all of our business units are reported on a calendar year basis (1 January to 31 December).



1. Environment continued

1.3.4 Calculation methodology

Annual NOx, SOx and PM emissions are added together from the relevant UK and US sites to get the Group-level total (in metric tonnes of each gas). See the Table 5 below for further information on how air emissions are calculated in each of our businesses:

Table 5: Calculation methodology for NOx, SOx and PM reporting across the Group

	UK Transmission and Distribution	US Transmission and Distribution	Isle of Grain LNG
NOx	<p>Calculated by a Predictive Emissions Monitoring System (PEMS). Combustion is monitored via automated systems on all gas turbines 24/7. An Environment Agency (EA) approved algorithm is applied to fuel flow data to calculate the NOx emissions for each unit.</p> <p>The system is calibrated via an extractive exhaust gas emission test every two to six years as required by our Environment Permits.</p>	<p>Some units have Continuous Emissions Monitoring Systems (CEMS) which automatically log actual NOx emissions on an hourly basis.</p> <p>On units that do not have CEMS, NOx emissions are calculated by: $\text{NOx} = \text{fuel consumption} \times \text{NOx emission factor}$.</p> <p>Fuel consumption is measured automatically by fuel meters or via fuel storage tank readings. The NOx emission factor is calculated from third-party stack testing.</p>	<p>For LNG Grain Phase 1, an average NOx emission rate is calculated via a timed spot sample to measure the kg of NOx per tonne of LNG throughput (measured quarterly). Data is extrapolated over the quarter to represent the LNG throughput of the SCV. Quarterly data is summed to calculate the annual NOx figure.</p> <p>For Phases 2 and 3, a CEMS is used. NOx is monitored via a probe and data recorded in our Process History Database (PHD). NOx is calculated as CEMS hourly mean for each vaporiser (kg/hr of NOx) multiplied by the number of operational hours.</p>
SOx	<p>Calculated as the amount of gas burnt (m^3) multiplied by the SOx emission factor. Amount of gas burnt (m^3) is calculated by the continuous automated monitoring of gas flow for combustion from fuel gas metering units.</p> <p>The emission factor is 0.0000078kg of SO_2 per kg of fuel burnt. This is calculated using the sulphur content of natural gas as specified by the UK Gas Safety Management Regulations (GSMR) and is representative of a 'worst case' scenario.</p>	<p>Calculated as oil consumption multiplied by the emission factor for SOx emissions from oil or $\text{SOx} = \text{gas consumption} \times \text{emission factor for SOx emissions from gas, depending on fuel}$.</p> <p>Oil/gas consumption is measured by fuel meters. Data is fed into our Data Acquisition and Handling System (DAHS) or manually via fuel storage tank readings.</p> <p>The emission factor for natural gas is specified by the EPA. The emission factor for oil is calculated from the sulphur content (analysed prior to delivery) and an EPA equation.</p>	n/a
PM	<p>Calculated as the exhaust gas volume (m^3) multiplied by the PM10 emission factor. Exhaust gas volume is calculated as the amount of gas burnt (m^3) plus the air required for combustion (m^3). The amount of gas burnt is calculated in the same way as for SOx (see above). The air required is calculated using a 30:1 ratio, amount of gas burnt to air required for combustion, which is industry best practice.</p> <p>The emission factor for PM10 is provided by our equipment manufacturer and is calculated as $1 \mu\text{g}/\text{m}^3$ stack gas. This was the limit of detection and therefore is a conservative approach.</p>	<p>Particulate emissions from each stack are measured on each site periodically in accordance with our permit requirements. Measurements are taken by an independent third party and Test Reports provided to National Grid US for our reporting.</p> <p>According to 40 CFR Part 75 Table LM-4 – Identical Unit Testing Requirements, the number of emission tests required varies depending on the number of identical units in the Group. When multiple tests of the identical units are performed during the calendar year, the highest average EF from one of the stack report tests are used for the reporting year.</p>	n/a



1. Environment continued

1.4 Electric vehicle fleet (light duty only)

1.4.1 Metric

Percent of National Grid's light-duty vehicle fleet that are electric vehicles (EVs).

1.4.2 Definitions

EVs are powered 100% by electricity and produce zero carbon emissions at the tailpipe.

Light-duty vehicles (LDVs) are those with a gross weight of less than 3.85 metric tons (8,500 lbs) if located in the US, or equal to or less than 3.5 metric tons (7,716 lbs) if located in the UK.

1.4.3 Scope

All LDVs owned by National Grid are included in this metric. Employees' company cars and vehicles heavier than the defined light-duty vehicle weight are excluded. The EV percentage of the light-duty vehicle fleet is reported on a financial year (FY) basis, ending March 31.

1.4.4 Calculation methodology

The UK and US data is separately aggregated to then calculate the percentage of EV LDVs, total number of EVs and total fleet size. The percentage that are EVs is then calculated as: (total number of EV LDVs / Total number of LDVs) × 100.

The total light-duty vehicle fleet (LDF) size and the number that are EVs are continuously tracked in our fleet management systems.

1.5 Total waste generated and breakdowns

We generate waste across a range of our activities and sources, including office and warehouse waste, vehicle maintenance, waste from distribution and transmission gas pipe and electricity line installations, repair and maintenance, capital construction project delivery and power generation. Waste is also generated by remediation of release incidents and legacy contaminated properties. The different categories of waste are summarised in the Metrics/Scope section.

Some waste produced is classed as 'hazardous waste'. This arises from the removal of contaminated land during commercial property activity and the disposal of oil and polychlorinated biphenyl (PCB) or lead-contaminated materials.

1.5.1 Metrics

Total waste generated in operations (tonnes), as well as the following breakdowns:

- Reuse (hazardous)
- Reuse (non-hazardous)
- Recycled (hazardous)
- Recycled (non-hazardous)
- Landfill (hazardous)
- Landfill (non-hazardous)
- Other disposal methods (hazardous)
- Other disposal methods (non-hazardous)

1.5.2 Definitions

Total waste involves the collection of data on the quantity, category and disposal method in order to understand the organisation's value chain and identify opportunities for waste prevention in the future.

Waste is any substance or object which the holder discards or intends or is required to discard.

1.5.3 Scope

All National Grid's businesses are included in the reporting of this metric with the exception of our UK interconnectors, National Grid Electricity Distribution and US Renewables businesses, which are out of scope for 2022/23, but will be incorporated into the scope in future years once a data collection process has been implemented.

For New England Road Spoil data, the data is unavailable in calendar year (CY) 2022 due to difficulty tracking loads entering our High Park, Everett and Lowell soil-processing facility locations. As a result, direct measurements are not feasible, and this portion of data will be omitted. There are ongoing efforts to track the loads accurately for the following year. Previously, non-hazardous waste data was provided by waste haulers; however, the contracts expired in 2022, with a new contractor managing US property waste. Data was provided for CY22 by the new company. Estimates of weight through counts of containers may be used instead of direct measurements. For office waste, estimations are needed when a US flagship office shares dumpsters with another facility. Estimations are needed when a US flagship office is in a leased building with other tenants and the waste is handled by the Management Company for the whole building.

Waste data for the RBR reporting year 2022/23 will be representative of CY22 for US businesses (1 January to 31 December 2022) and 2022/23 (1 April 2022 to 31 March 2023) for the UK businesses.

1.5.4 Calculation methodology

Total Group data is accumulated from a number of different waste disposal vendors. The data may arrive in a number of formats, so it is centrally compiled and converted to metric tonnes. It is then aggregated into the waste type and disposal processes in scope to identify the total volume generated.

All data is cross checked against the source data reports from the supplier/data provider and compared against the previous year's submission to check for any inconsistencies.

Each breakdown is then accumulated by filtering the associated data for each heading.

1.6 UK office waste

As this is an internal metric tracked for our UK businesses, we publicly release our performance. We are working to improve the quality of our US office data before reporting at a Group level (see 1.5 Total Waste, for assumptions made on US office data).

1.6.1 Metric

The two metrics related to UK Office Waste are as follows:

- Total UK office waste (metric tonnes)
- Percentage of UK office waste diverted from landfill (%)

1.6.2 Definitions

Offices are the primary locations (flagship offices) where our office-based business support services employees are based (as opposed to operational and field personnel). This does not include site offices or locations where National Grid does not directly manage waste disposal.

Waste is any substance or object which the holder discards or intends or is required to discard.

1.6.3 Scope

Only waste generated and disposed of from flagship offices is included in this metric.

Flagship offices occupied by our UK personnel are included. US flagship offices are out of scope this year.

Data is continuously monitored via internal waste reporting systems or through regular reporting by service providers where National Grid employs the services of third parties to manage office waste disposal.

Data from UK-based offices is reported in line with the financial year, 1 April to 31 March.



1. Environment continued

1.6.4 Calculation methodology

To calculate Total UK office waste

Waste for the UK reporting period is converted to metric tonnes and totalled to calculate the total UK flagship office waste.

To calculate Percentage of UK office waste diverted from landfill (%)

Total UK office waste data is aggregated by disposal process to identify the total volume of waste that is not sent to landfill upon disposal from the total office waste generated and the total office waste sent to landfill. The percent of office waste diverted from landfill is calculated as: $(\text{Total UK office waste not sent to landfill} / \text{Total UK office waste}) \times 100$.

1.7 Office energy consumption

1.7.1 Metric

Total energy consumed at flagship offices located across our service territories, and broken down for the US and UK respectively.

1.7.2 Definitions

Flagship office is defined as a property used primarily as a workspace and, therefore, excludes properties that include operation facilities, call centres, equipment storage, etc. Data collection at all facilities is being managed by National Grid's Workplace Experience and Property Services teams in the UK and US respectively. National Grid is directly liable for energy costs at the recognised flagship offices. Energy consumption refers to electricity, heating, cooling and steam purchased or self-generated, along with total fuel consumed.

1.7.3 Scope

The scope of this metric includes a set list of flagship offices that have been identified for the US and UK (inclusive of UK ED). Properties which are primarily operational in function are excluded from this metric. Non-flagship offices are not in scope. UK data is reported in line with the financial year, 1 April to 31 March. US data is reported in line with the calendar year, 1 January to 31 December.

1.7.4 Calculation methodology

Sources of data for this metric vary between the UK and US, largely because there are instances where National Grid supplies the energy for many US sites:

UK:

- Utility bills in most cases
- Direct meter data portals
- Manual site meter readings and fuel delivery notes

US:

- Utility bills where energy is provided by another utility. Values are recorded from bills received.
- Where National Grid is the utility, data from internal billing systems is utilised.
- Landlords provide billing data for some locations and estimates of National Grid's proportion are based on the percentage of building area (square footage) National Grid occupies. This methodology is utilised for both electricity and gas where applicable.
- At the few sites at which measured data is not currently available, estimates are made based on the square footage of sites according to industry-standard methodologies. Each site is assigned an appropriate use type based on the categories of emission factors available. The emission factors are sourced from the Energy Information Administration (EIA) Commercial Buildings Energy Consumption Survey (CBECS).

National Grid's Workplace Experience and Property Services teams provide the data to the Sustainability Group in the US and UK separately. The data for the UK and US is consolidated from meter readings and invoices where possible. The total energy consumption for the entire Group's flagship offices is aggregated at the end of the year for reporting purposes. The data is presented in gigawatt hours (GWh).

1.8 Renewable energy purchased

1.8.1 Metric

Percent of electricity supplied from renewable energy attribute certificates (EACs).

1.8.2 Definitions

Energy Attribute Certificates are contractual instruments (such as Renewable Energy Certificates (RECs), Renewable Energy Guarantee of Origin (REGOs) and Power Purchase Agreements (PPAs)) through which consumers of electricity can officially prove their renewable energy consumption credentials. Electricity supplied is the total in-scope electricity supply contracts, measured in kWh.

1.8.3 Scope

Electricity generated from biomass is considered renewable, but electricity produced using Carbon Capture and Storage (CCS) is not. The metric includes electricity contracts that National Grid procures directly and lists where competitive supply markets exist. Electricity contracts supplied by National Grid's landlords are excluded.

The percentage of electricity supplied from renewable tariffs is reported as at the financial year-end date, 31 March, for UK operations and at the calendar year-end date, 31 December, for US operations.

1.8.4 Calculation methodology

The total in-scope electricity supply contracts and the total in-scope renewable supply contracts are aggregated by the UK and US according to their respective year-end dates. The US and UK totals are then combined to create the Group totals.

The percent of electricity supplied from renewable tariffs is then calculated as: $(\text{Total electricity supplied from renewable tariffs} / \text{Total electricity supplied}) \times 100$.

1.9 New renewable energy connected to our electricity networks

1.9.1 Metric

This methodology covers the following metrics:

- New renewable energy connected to US Distribution grid
- New renewable energy connected to US Transmission grid
- New renewable energy connected to UK Distribution grid
- New renewable energy connected to UK Transmission grid

1.9.2 Definitions

US and UK transmission and distribution grids refer to the electricity transmission (ET) and electricity distribution (ED) networks located in the US and UK.

Renewable energy is defined as energy from sources that are zero carbon and naturally replenishing, including solar, wind, hydropower and geothermal generation.

Connected refers to new connections that have occurred in the reporting year.

1.9.3 Scope

Renewables connected are measured by the capacity of the facilities connected to the grids.

Nuclear and biomass are not included in the scope of renewables connected.

Connections are counted from the 'in-service' date, when National Grid physically provides back-feed service to the facility; data included in annual reporting begins at the first point the renewable energy source is interconnected.

UK data is reported in line with the financial year, 1 April to 31 March. US data is reported in line with the calendar year, 1 January to 31 December.



1. Environment continued

1.9.4 Calculation methodology

The data is collected and monitored continuously in the course of operations. Only the new annual connections made to each network within the reporting period are included and aggregated at the year end for the purpose of reporting.

1.10 Interconnector capacity (GW)

1.10.1 Metric

The total capacity of our UK interconnectors, transmitting electricity to and from various countries in Europe.

1.10.2 Definitions

Capacity is the intended maximum, full-load and sustained output of National Grid's interconnectors, measured in GW.

Interconnectors are high voltage cables that are used to connect the electricity systems of neighbouring countries.

1.10.3 Scope

All UK to Europe interconnectors in operation are in the metric and those under construction are excluded until they become operational. For 2022/23, these include:

- IFA (France)
- BritNed (Netherlands)
- Nemo (Belgium)
- IFA 2 (France)
- NSL (Norway)

Interconnector capacity is reported as at the financial year-end date, 31 March.

1.10.4 Calculation methodology

The GB Grid Operator (ESO) records all interconnectors connected to the GB grid in its Interconnector Register and shows the capacity of each link. The capacity (GW) is calculated as follows:

$$\text{Total Interconnector Capacity} = \sum_{n=1}^x (\text{Interconnector Capacity}, n)$$

x = (Number of NGV interconnectors commissioned)

The capacity data is collected and monitored in the course of normal operations. The capacity of each interconnector is aggregated at the year end for the purpose of reporting.

1.11 Renewables generation enabled by direct investment

1.11.1 Metric

New renewables in commercial operation and under construction within our renewables portfolio.

1.11.2 Definitions

Renewable generation considers energy supplied to the grid (MWh) through our National Grid Renewables business which develops, owns and operates large-scale renewable energy assets, including solar, onshore wind and battery storage across the United States.

1.11.3 Scope

Within scope are projects within the US-based National Grid Renewables business only.

1.11.4 Calculation methodology

This metric sums the hourly generation data for the assets within our renewable portfolio over the year to give the total renewable generation from our direct investment.

1.12 Greenhouse gas emissions avoided from renewables generation and connections (tCO₂e)

1.12.1 Metric

Greenhouse gas emissions avoided from renewables generation and connections across the UK and US.

1.12.2 Definitions

This metric considers the emissions from various greenhouse gases on the basis of their global-warming potential, by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming effect.

We recognise that the estimated tCO₂e emissions avoided reflects the result of actions undertaken not just by National Grid, but by other stakeholders in the energy industry, including energy producers and consumers. However, as the renewable installed capacity is enabled by our connections, we include 100% of the avoided emissions impact.

1.12.3 Scope

This impact calculation is performed for all major National Grid projects. This figure is therefore likely to be an underestimate given we exclude many smaller projects.

- UK: This includes projects which involve connecting customers to the grid.
- US: This includes projects connecting customers to the grid, but also construction of our own renewable capacity, for example, through our joint ventures and National Grid Renewables.

1.12.4 Calculation methodology

The estimated tCO₂e avoided represents the tCO₂e savings from the added installed capacity of renewable energy compared to the amount of CO₂ that would have been emitted by a generation plant of average carbon intensity. This is calculated as:

- the sum of the actual energy generation (MWh) produced from completion of relevant capital works within year,
- multiplied by the relevant carbon intensity factor.

1.13 Total water withdrawal / abstraction

1.13.1 Metric

Water withdrawal at National Grid sites.

1.13.2 Definitions

Water withdrawal is the sum of all water drawn from the following sources: surface water, groundwater, seawater or third party, for any use, over the course of the reporting period, in the UK and US. It is reported in Mm³.

1.13.3 Scope

UK: Third-party water withdrawal and water withdrawn for Electricity Transmission cable cooling.

US: Third-party water withdrawal, well extraction water and once-through seawater cooling water. Prior to this year, the process involved clerks and assigned individuals to go through bills and create consolidated spreadsheets, with little quality control. This year, to improve the quality of the data, National Grid hired a third-party data processor (Glynt.ai) to scrape utility bill data with optical character recognition to obtain accurate information from each bill, removing opportunity for human error. Additionally, there are about 40% of sites that require estimation due to missing bills, infrequency of billing (quarterly) and missed tracking from delayed bill payments.

National Grid Renewables and National Grid Electricity Distribution are excluded from this metric, but make up a tiny fraction of our total water withdrawal/abstraction.



1. Environment continued

1.13.4 Calculation methodology

UK: Total metered water withdrawal volume (m³) for each source is combined to calculate the total water withdrawal volume.

US: Total metered water withdrawal volume (gallons) for each source is combined to calculate the total water withdrawal volume then converted to m³.

The estimation performed for 40% of the sites uses square footage per site and applies an average volume per square foot of water consumption.

Group: The UK and US volumes are added together in m³.

1.14 Total water discharged (MCM)

1.14.1 Metric

Water discharge at National Grid sites.

1.14.2 Definitions

Water discharge is the sum of the effluents, used water and unused water released to surface water, groundwater, seawater or a third party, for which NG has no further use, over the course of the reporting period, in the UK and US. It is reported in m³.

1.14.3 Scope

UK: UK third-party water discharge and water discharged for Electricity Transmission Cable Cooling

US: US third-party water discharge, wastewater from unit operations and once-through seawater.

National Grid Renewables and National Grid Electricity Distribution are excluded from this metric, but make up a tiny fraction of our total water discharged.

1.14.4 Calculation methodology

Total water discharge volume (m³) for each source is combined to calculate the total water discharge volume.

As there is no metering of utility discharge volumes, it is assumed that all utility water discharge is equal to utility water withdrawal minus estimated water consumption.

1.15 Total water consumption

1.15.1 Metric

Total water consumption at National Grid sites.

1.15.2 Definitions

Water consumption is the sum of all water that has been withdrawn and incorporated into products; or generated as waste; has evaporated; transpired; or been consumed by employees, contractors or agency workers at our sites; or is polluted to the point of being unusable by other users, and is therefore not released back to surface water, groundwater, seawater or a third party over the course of the reporting period.

1.15.3 Scope

UK: Consumption of third-party water.

US: Consumption of third-party water.

1.15.4 Calculation methodology

National Grid has developed an assumption of water consumption, as follows:

- The Environmental Protection (EPA) agency has estimated that all people consume between 1 and 2 litres of water/day and 22% of office water is consumed through landscaping.
- Based on this information, we have assumed that 1.5 litres of water is consumed by each employee and 22% of the total utility water withdrawal is consumed through landscaping activities.
- In order to account for hybrid working, calculation (1) estimates water consumption during continued hybrid working conditions (based on the average occupancy survey), and calculation (2) assumes 100% of the employees are in the office.
- The water consumption percentage to be applied to utility water withdrawal is 22.3%, which is the average of calculations (1) and (2).

Total water consumption has therefore been estimated by multiplying the utility withdrawal volume by 22.3%.

Estimated water consumption across the UK and US offices is combined to calculate total water consumption.

In cases where National Grid operates in a closed loop system, water consumption is estimated to equal zero, where withdrawal volume is equal to discharge.



2. Communities



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2.1 Fatalities

2.1.1 Metric

Number of fatal injuries associated with work or activity undertaken by National Grid in the year.

2.1.2 Definitions

Fatal injuries are work-related injuries that directly result in death.

2.1.3 Scope

Employees, contractors and members of the public are in scope.

We do not include member of the public fatalities where they relate to our assets (on non-National Grid owned property) if an individual trespasses on a National Grid asset and is fatally injured, or a road traffic accident occurs where the vehicle came in contact with an asset and there was a fatality.

This metric is reported in line with the financial year, 1 April to 31 March.

2.1.4 Calculation methodology

All fatalities in the reporting period are extracted from our incident management systems, reviewed internally and then summed to give a total figure.

2.2. Lost time injury frequency rate (LTIFR)

2.2.1 Metric

Total number of lost time incidents (LTIs) incurred as a portion of total hours worked by the workforce, multiplied by 100,000 to give a frequency rate which is per 100,000 hours worked.

2.2.2 Definitions

Lost time incidents are defined as events which cause injury and a loss of time over the next shift or following day from when the incident occurred, consistent with the UK LTI definition. To be clear, this means that deferred lost time days or weeks after an incident is not included.

2.2.3 Scope

Employees, contractors and agency staff are in scope.

UK, US, NGV and Corporate Functions operations are covered by this metric.

Lost time injury figures are recorded, tracked and frequently reported via the Group's incident management systems.

This metric is reported in line with the financial year, 1 April to 31 March.

Note: UK ED's definition of an LTI differs from that of the rest of the Group. It is provided by the Energy Networks Association (ENA) which does not specify that the person must have lost time the next day and therefore LTIs are included in its population that do not result in time off the next day. In addition, UK ED accounts for the reduction of hours for holiday, sick leave and bank holidays, which is inconsistent with the rest of the UK business units.

2.2.4 Calculation methodology

The total number of lost time incidents throughout the reporting period is calculated from our multiple incident management systems for the 12 months to 31 March, divided by total hours worked by the workforce and multiplied by 100,000.

To ensure consistency, we state the US LTI result in terms of the UK definition in order to standardise the LTIFR metric across entities.

2.3 Member of the public injuries as a result of National Grid work

2.3.1 Metric

Number of major injuries associated with work or activity undertaken by National Grid.

2.3.2 Definitions

Major injuries are injuries that are attributable to National Grid if National Grid operations or the failure of National Grid assets contributed to the incident.

2.3.3 Scope

Members of the public associated with National Grid activities. We do not include member of the public injuries or fatalities where they relate to an unauthorised infringement on our asset, for example, if an individual trespasses on a National Grid asset and is injured, or a road traffic accident where the vehicle came in contact with an asset and there was an injury.

This metric is reported in line with the financial year, 1 April to 31 March.

2.3.4 Calculation methodology

All injuries in the reporting period are extracted from our incident management systems, reviewed internally and then summed to give a total figure.



2. Communities continued

2.4 Network reliability – percentage availability

2.4.1 Metric

The percentage availability of the following systems over the last year:

- US Electricity Transmission (US ET) (%)
- US Electricity Distribution (US ED) (%)
- UK ET (%)
- UK ED (%)

2.4.2 Definitions

For the UK:

- Potential availability: the maximum possible operational volume of our systems.
- Actual availability: The operational volume delivered over the relevant period.
- Time in period: total calendar year minutes in reporting year, based on a 365-day calendar year.
- The Customer Minutes Lost (excluding exceptions) data is based on planned and unplanned events and is calculated before exceptional events as finalised by Ofgem.

For the US:

- Time in period: total calendar year minutes in reporting year, based on a 365-day calendar year.
- Total circuits: the total number of transmission lines in system.
- Total Duration of Circuit Outages:⁷ the accumulated duration of transmission outages sustained in the system for the reporting year, in minutes.
- Total Customer Outage Duration:⁸ the accumulated customer hours impacted for the reporting year.
- Total Customer Hours serviced: a product of total customer count and total calendar year hours in reporting year.

7. Excludes all major storm events

8. Includes all major storm events

9. Major storms are defined by respective US states

2.4.3 Scope

US ET availability includes major storm days, and US ED availability excludes major storm days.⁹

Metrics are based on performance data recorded by the respective systems' operating systems.

In the UK, the metric is reported in line with the financial year, 1 April to 31 March. In the US, the ET and ED systems report with reference to the calendar year, 1 January to 31 December.

2.4.4 Calculation methodology

For the system corresponding to the respective definition, actual availability for the last 12 months is identified. The percentage availability for the year is then calculated as follows:

- UK ET percentage availability = $(\text{Actual availability} / \text{Potential availability}) \times 100$.
- UK ED percentage availability = $(\text{Total minutes in a year} - \text{Total customer minutes lost}) / \text{Total minutes in a year} \times 100$, where total minutes in a year = $60 \times 24 \times 365 = 525,600$ minutes.
- US ET percentage availability = $(\text{Time in period} \times \text{Total Circuits} - \text{Total Duration of Circuit Outages}) / (\text{Time in period} \times \text{Total Circuits}) \times 100$.
- US ED percentage availability = $1 - (\text{Total Customer Outage Duration} / \text{Total Customer hours serviced}) \times 100$.

2.5 Interconnector reliability – percentage availability

2.5.1 Metric

The percentage availability of the following systems over the 12 months to the year-end date:

- IFA Interconnector (%)
- IFA2 Interconnector (%)
- BritNed Interconnector (%)
- Nemo Interconnector (%)
- North Sea Link Interconnector (%)

2.5.2 Definitions

Potential availability: the maximum possible operational volume of our systems.

Aggregate availability: potential availability less any planned outages, short notice planned outages or trips. Aggregate availability includes all unavailability, from the point at which the capacity becomes unavailable to the point at which the link returns to full service and it can flow any nominated volume up to its Nominal Capacity.

2.5.3 Scope

Metric is based on performance data recorded by the respective systems' operating systems, and is based on the capacity of the interconnector being available 24 hours a day, 365 days a year.

The metric is reported in line with the financial year, 1 April to 31 March.

2.5.4 Calculation methodology

For the system corresponding to the respective definition, actual availability for the last 12 months is identified and is validated by the Operations Director. The calculation is verified by either this Director or an internal management accountant.

The percentage availability for the year is then calculated by: $\text{percentage availability} = (\text{Aggregate availability} / \text{Potential availability}) \times 100$.

2.6 Contribution of NG UK's transmission and distribution costs to consumer bills

2.6.1 Metric

For the UK, we report National Grid's contribution to customer bills:

- UK National Grid transmission element of the average domestic consumer bill (£)
- UK National Grid distribution element of the average domestic consumer bill (£)

2.6.2 Definitions

UK average domestic bill is the average gas/electric bill for non-business customers in the UK. The National Grid element is the portion of the average UK domestic bill associated with the transmission and distribution costs for the electricity attributable to National Grid.



2. Communities continued

2.6.3 Scope

This metric includes bill impact data for UK National Grid Electricity Transmission (UK ET), UK National Grid Electricity Distribution (UK ED) and internal Electricity System Operator (ESO) costs. It does not include the impact of external ESO costs as these costs are a pass-through cost managed on behalf of the industry, rather than being an internal ESO cost.

National Grid UK does not directly charge consumers; therefore, the metric approximates the network charges proportion of the Energy Supplier bills. It excludes the proportion of our revenues that are charged to other parties, e.g. costs levied on companies entering energy into the network. These costs are excluded because there is no clear approach identified to estimate how much of those costs contribute to household bills.

This metric is reported in line with the financial year, 1 April to 31 March.

2.6.4 Calculation methodology

The costs are identified from the charges set by National Grid to Energy Suppliers.

For UK ET, the portion of the average Transmission Use of System Charges (TNUoS) tariff for the relevant year, attributable to UK ET, is derived from the charges published by the ESO.¹⁰ This tariff is then multiplied by an estimate of the proportion of annual consumption that takes place during peak times to estimate charges per customer. The charge to customer is scaled up by the average loss adjustment factor as published by Ofgem¹¹ to account for losses and then multiplied by the average domestic demand, also published by Ofgem¹², to determine an average cost to UK households.

For UK ED, Distribution Use of System Charges (DUoS) provide the allowed revenues for distribution system owners to recover the cost of building and maintaining distribution infrastructure. The calculation for charges is set out in the Common Distribution Charging Methodology (CDCM) and EHV Distribution Charging Methodology (EDCM)¹³ based on the voltage at which users were connected. This is converted into the percentage of a customer's bill by taking the average domestic consumer's bill as defined by Ofgem.

The ESO Internal Revenue is identified from the Price Control Financial Model, as published by Ofgem. This is adjusted by 50% to reflect the costs recovered from Energy Suppliers for Balancing Services Use of System (BSUoS) charges as per the methodology prescribed by the Connection and Use of System Code¹⁴ (CUSC) and divided by the total annual demand, as published by the ESO,¹⁵ to estimate an average tariff charged by the ESO. That charge to customer is scaled up by the average loss adjustment factor as published by Ofgem¹⁶ to account for losses and then multiplied by the average domestic demand, also published by Ofgem,¹⁷ to determine an average cost to UK households.

The average costs of UK ET, UK ED and ESO are then combined to calculate the National Grid element of the average UK domestic customer bill.

2.7 Average energy bill charged to US households

2.7.1 Metric

Average cost per US household. This metric separates the costs to electricity and gas customers as well as low-income and other customers due to the distinct characteristics of these consumer groups.

2.7.2 Definitions

Average US electricity customer bill is the average total bill charged to all National Grid US residential electricity customers, excluding those who participated in low-income programme.¹⁸

Average US gas customer bill is the average total bill charged to all National Grid US residential gas customers, excluding customers who participated in low-income programme.¹⁸

Average low-income (only) electricity customer bill is the average total bill charged to National Grid US residential electricity customers who have participated in a low-income programme.¹⁸

Average low-income (only) gas customer bill is the average total bill charged to National Grid US residential gas customers who have participated in a low-income programme.¹⁸

The metrics represent the total bill charged to National Grid customers, including taxes and fees (the 'fully loaded bill total').

2.7.3 Scope

The metrics combine the tariff charges managed under all National Grid US rate plans, as listed below.

New York Public Service Commission:

- Niagara Mohawk (NMPC): upstate, electricity¹⁹
- Niagara Mohawk (NMPC): upstate, gas
- KeySpan Energy Delivery New York (KEDNY): downstate
- KeySpan Energy Delivery Long Island (KEDLI): downstate

Massachusetts Department of Public Utilities:

- Massachusetts Electric (MECO)
- Nantucket Electric (Nant)
- Massachusetts Gas (MA Gas)

The metrics only include residential customers who have received a service from National Grid for 12 consecutive months as at the reporting date.

All metrics exclude customers who received a temporary credit or charge on their bill that was in addition to tariff rates (a 'rider').

Average low-income customer bill metrics only include residential customers who have participated in a low-income programme for 12 consecutive months.

The metrics do not include adjustments made to bills after the reporting date.

This metric is reported in line with the financial year, 1 April to 31 March.

2.7.4 Calculation methodology

For customer accounts that meet the respective metric definitions, the total of the last 12 consecutive bills is identified from the billing system.

An arithmetic average is then calculated by: (Total charged to customers (\$)) / (Total number of customers). This equation is adapted to reflect each respective metric in terms of the product sold (gas or electricity) and customer group (average or low income).

10. Source: <https://www.nationalgrideso.com/document/235056/download>

11. Source: <https://www.ofgem.gov.uk/publications/default-tariff-cap-level-1-april-2023-30-june-2023>

12. Source: https://www.ofgem.gov.uk/system/files/docs/2019/10/tdcvs_2019_open_letter_0.pdf

13. Source: <https://www.nationalgrid.co.uk/downloads/643/west4754-distribution-charging-overview-c-hr.pdf>

14. Source: <https://www.nationalgrideso.com/document/91411/download>

15. Source: <https://www.nationalgrideso.com/industry-information/charging/balancing-services-use-system-bsuos-charges>

16. Source: <https://www.ofgem.gov.uk/publications/default-tariff-cap-level-1-april-2023-30-june-2023>

17. Source: https://www.ofgem.gov.uk/system/files/docs/2019/10/tdcvs_2019_open_letter_0.pdf

18. Low-income customers are defined as those who qualify for the Low Income Home Energy Assistance Program (LIHEAP), <https://www.acf.hhs.gov/ocs/low-income-home-energy-assistance-program-liheap>

19. Both transmission and distribution, excluding stranded costs



2. Communities continued

2.8 Customer Trust Survey (US)

2.8.1 Metric

Percentage of survey respondents who trust National Grid to provide the advice needed to make good energy decisions.

2.8.2 Definitions

Survey: supported by a third-party research provider, National Grid continuously surveys its US-based residential customers via an online 'Brand Image and Relationship' survey. The survey asks customers 'Considering everything you may know about National Grid, how much do you trust National Grid to provide you the advice you need to make good energy decisions?'

Respondents: Residential customers who submit a response to National Grid's online survey.

Trust: Respondents score National Grid on a 1-10 point scale, where 1 is 'Do not trust advice at all' and 10 is 'Trust advice completely'. Respondents who answer 8, 9 or 10 are considered to 'trust National Grid's advice'.

2.8.3 Scope

The metric considers US residential customers only and excludes customers for whom National Grid does not have an email address. Data is collected by a third-party research vendor and reported to National Grid on a monthly basis.

This metric is reported in line with the financial year, 1 April to 31 March.

2.8.4 Calculation methodology

For each of National Grid's US markets, the percentage of respondents who trust National Grid is calculated as: total respondents who answer 8-10 in the survey question / total survey respondents.

Overall results are then weighted by market, based on the proportion of customers in each market that make up National Grid's total US residential customer base.

2.9 Number of qualifying volunteering hours

2.9.1 Metric

Total volunteering hours completed on behalf of National Grid since 1 April 2020 (targeting 500,000 employee volunteering hours through to 2030).

Total volunteering hours completed on behalf of National Grid in the financial year, 1 April to 31 March.

2.9.2 Definitions

Volunteering hours: Any time spent volunteering on behalf of National Grid (including any preparation work required).

2.9.3 Scope

This metric includes all National Grid employees and those working on behalf of National Grid.

Data is based on hours recorded via internal reporting systems or as reported by our charity partners as relevant.

This metric is reported in line with the financial year, 1 April to 31 March.

2.9.4 Calculation methodology

Volunteering hours are initially recorded by those overseeing the activities. On an annual basis, the data is collated to sum the total annual volunteering hours, with relevant data reviews and sense checks performed as appropriate.

The total annual volunteering hours are added to the total hours reported for each financial year since 1 April 2020 to calculate the cumulative volunteering hours.

2.10 Number of young people provided with access to skills development

2.10.1 Metric

Total people provided with access to skills development since 1 October 2020 (towards our target of developing skills for the future, with a focus on lower-income communities, providing access to skills and employment opportunities for 45,000 people by 2030).

Total people provided with access to skills development in the financial year, 1 April to 31 March.

2.10.2 Definitions

Skills development: Programmes operated by National Grid intended to upskill participants. The programmes are not restricted to STEM (Science, Technology, Engineering and Mathematics) skills; however, STEM skills are expected to make up the majority of our programmes.

Participant: a participant comes from one of the lower-income communities we serve²⁰ and is under 25.

2.10.3 Scope

This metric includes all participants who have accessed our skills development programmes. Data is based on hours recorded via internal reporting systems or as reported by our charity partners as relevant.

This metric is reported in line with the financial year, 1 April to 31 March, and cumulatively by summing all data from 1 April 2020 to the relevant year-end date.

2.10.4 Calculation methodology

Participants on our skills development programmes are initially recorded within the respective systems of our skills development programmes. On an annual basis the data is collated and summed to the total annual participants on our skills development programmes.

The total annual participants on our skills development programmes are added to the total participants previously reported since 1 October 2020 to calculate the cumulative participants on our skills development programmes.

20. Lower income communities based upon UK ONS and US Census data



3. People



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National Grid UK and National Grid US are covered by all People metrics except where specified otherwise. UK ED uses its own HR management system, but the data is incorporated into National Grid UK's figures.

3.1 Diversity of the workforce, senior leadership group and hires in new talent programmes

3.1.1 Metric

Percentage of diverse employees within our total workforce, senior leadership group and new talent hires. The data we report is:

- Percentage of diverse employees in our total workforce
- Percentage of diverse employees in our senior leadership group
- Percentage of diverse employees in our new talent hires, this is comprised of:
 - UK Graduate applicants: percentage female
 - UK Graduate applicants: percentage ethnically and racially diverse
 - UK Apprenticeship applicants: percentage female
 - UK Apprenticeship applicants: percentage ethnically and racially diverse
 - US Graduate applicants: percentage female
 - US Graduate applicants: percentage ethnically and racially diverse
 - US Internship applicants: percentage female
 - US Internship applicants: percentage ethnically and racially diverse

3.1.2 Definitions

Diverse employees are defined as employees who identify themselves as female, LGBTQ+, disabled or from an ethnic minority. If an employee has identified themselves as belonging to more than one diverse group, they will only be counted once in the calculation.

Table 6 shows the groups that are defined as 'diverse' and 'non-diverse' in our UK and US businesses.



3. People continued

Table 6: National Grid diverse and non-diverse employees in the UK and US for our diversity of the workforce, senior leadership, new talent, recruitment, promotions and leavers reporting.

Gender (UK and US)			
Male	non-diverse		
Female	diverse		
Sexual Orientation (UK and US)			
Heterosexual	non-diverse		
Gay	diverse		
Bisexual	diverse		
Lesbian	diverse		
I prefer to use my own term	n/a		
Prefer not to say	n/a		
Disability (UK)	Disability (US)		
Dyslexia	diverse	Yes	diverse
Hearing	diverse	No	non-diverse
Long-term health condition	diverse	Prefer not to say	n/a
Mental health	diverse		
Mobility	diverse		
Visual	diverse		
Musculoskeletal	diverse		
Other neurodiverse	diverse		
Speech	diverse		
Other	diverse		
More than one	diverse		
No disability	non-diverse		
Prefer not to say	n/a		

Ethnicity (UK)		Ethnicity / Race (US)	
Any other	diverse	American Indian or Alaskan Native	diverse
Asian – Bangladeshi	diverse	Asian	diverse
Asian – Indian	diverse	Black	diverse
Asian – Pakistani	diverse	Hispanic or Latino	diverse
Asian – any other background	diverse	Native Hawaiian or Pacific Islander	diverse
Black – African	diverse	Prefer not to say	n/a
Black – Caribbean	diverse	Two or more Races	diverse
Black – any other background	diverse	White	non-diverse
Chinese	diverse	<null>	n/a
Gypsy or Irish Traveller	diverse		
Mixed – White and Black African	diverse		
Mixed – White and Black Caribbean	diverse		
Mixed – White and Asian	diverse		
Mixed – any other mixed background	diverse		
White – any other White	non-diverse		
White British/English/Scottish/Welsh/Northern Irish	non-diverse		
White Irish	non-diverse		
Prefer not to say	n/a		
<null>	n/a		

3.1.3 Scope

Includes the total National Grid workforce across all parts of the business:

- **Senior Leadership** represents the senior/top levels of management, Directors and Executives.
- **Total Workforce** includes the total number of active, permanent employees (including those on short/long-term leave of absence). All union schemes and graduates are included, but interns and temporary employees are excluded.
- **Employee Headcount** includes total employee numbers split by region: UK and US for full-time, part-time, and female and male gender employees.
- **New Talent** are hires in new talent programmes, which refers to all new graduates, interns, trainees, apprentices and Power Network Craft Assistants.

Diverse employees are all those who have self-declared their diversity status. Individuals who have chosen not to declare their diversity status are included in the baseline of our calculations.

To report on our total workforce and senior leadership group metrics in the Responsible Business Report, the number of employees at year end will be used (31 March). To report new talent hires, the number will be representative of the previous financial year (1 April to 31 March).

3.1.4 Calculation methodology

Data is extracted from our HR management systems and the following calculations are performed on the dataset to calculate this metric:

- Percentage of diversity in workforce = (Diverse individuals in workforce) / (Employees in workforce)
- Percentage of diversity in senior leadership = (Diverse individuals in senior leadership) / (Employees in senior leadership)
- Percentage of diversity in new talent hires = (Diverse individuals in new talent hires) / (New talent hires) in previous financial year.



3. People continued

3.2 Gender and ethnicity percentage of joiners, promotions and leavers

3.2.1 Metric

Percentage of female and ethnic minority employees within external hires, promotions and leavers. The data we report is:

- Percentage of female external hires
- Percentage of ethnic minority external hires
- Percentage of female promotions
- Percentage of ethnic minority promotions
- Percentage of female leavers
- Percentage of ethnic minority leavers

3.2.2 Definitions

Female and ethnic minority employees are as defined in 3.1.2.

External hires are employees that have been recruited to National Grid from outside of the organisation. Those included have completed National Grid's on-boarding process and have been issued with a National Grid employee ID card. Not included are those who have been recruited to a role from inside the company (e.g. internal transfers) or new hires who have not completed the on-boarding process.

Promotions represent all internal employees who have been awarded a promotion (with or without a pay change). Not included are movements not related to promotion including lateral moves, re-organisations and secondments.

Leavers refers to employees whose contract of employment at National Grid has been terminated for any reason (including resignation, retirement and non-voluntary reasons).

3.2.3 Scope

Includes the total National Grid workforce across all parts of the business. In scope are active permanent employees, including those on short/long-term leave of absence, full-time and all union schemes, graduates and interns. Out of scope are temporary employees, contingent workers, managed service providers and non-executive Board members.

Note: some employees may be counted under two or more parts of this metric (e.g. external hires and promotions if the employee joined National Grid and was awarded a promotion in the same year).

Diverse employees are all those who have self-declared their diversity status. Individuals who have chosen not to declare their diversity status are included in the baseline of our calculations.

Diversity metrics are reported in the Responsible Business Report to represent the previous financial year (1 April to 31 March).

3.2.4 Calculation methodology

Data is extracted from our HR management systems and the following calculations are performed on the dataset to calculate this metric:

- Percentage of female external hires = (Female hires in time period) / (Total hires in time period)
- Percentage of ethnic minority external hires = (Ethnic minority hires in time period) / (Total hires in time period)
- Percentage of female promotions = (Female promotions in time period) / (Total promotions in time period)
- Percentage of ethnic minority promotions = (Ethnic minority promotions in time period) / (Total promotions in time period)
- Percentage of female leavers = (female leavers in time period) / (Total leavers in time period)
- Percentage of ethnic minority leavers = (Ethnic minority leavers in time period) / (Total leavers in time period)

3.3 Age of workforce in bands for current workforce, joiners and leavers

3.3.1 Metric

Workforce, starters and leavers are split by age band. The data we report is:

- Age breakdown of workforce at reporting period end
- Age breakdown of external hires
- Age breakdown of leavers

3.3.2 Definitions

Definitions of workforce, external hires and leavers are consistent with 3.1.3 and 3.2.2.

3.3.3 Scope

In scope are active, permanent employees (including those on short/long-term leave of absence) as well as both full-time and part-time employees. All union schemes and graduates are included. Out of scope are temporary employees, interns, contingent workers, managed service providers and non-executive Board members.

Consolidated data is inclusive of National Grid UK and National Grid US employees.

3.3.4 Calculation methodology

Data is extracted from our HR systems at 31 March for the prior 12 months:

- External hires including date of birth
- Leavers including date of birth

From these, we group the number of employees in total workforce, hires and attrition into age brackets, as follows: Under 21, 21 – 25, 26 – 30, 31 – 35, 36 – 40, 41 – 45, 46 – 50, 51 – 55, 56 – 60, 61 – 65, 66 – 70, over 70.

For reporting purposes, these brackets are then consolidated into the following categories:

- Under 26
- 26 – 40
- 41 – 55
- Over 55

3.4 Employee engagement score (from Grid:Voice)

3.4.1 Metric

Engagement index score, as measured by National Grid's annual Employee Engagement Survey, Grid:Voice.

3.4.2 Definitions

Engagement index is a measure of how engaged our employees feel, based on the percentage of favourable responses to five questions repeated annually in our Employee Engagement Survey.

Likert scale is a psychometric scale commonly involved in research that employs questionnaires. The Likert scale is a five (or seven) point scale which is used to allow the individual to express how much they agree or disagree with a particular statement.



3. People continued

3.4.3 Scope

All employees who are permanently employed as at 1 December of the relevant financial year are provided the survey. Employee engagement score is reported as the outcome of the survey completed in the relevant financial year, 1 April to 31 March.

3.4.4 Calculation methodology

Respondents answer the questions on the Likert scale of Strongly agree to Strongly disagree. Favourable responses are Agree and Strongly Agree, except one question, 'intent to stay at National Grid', where the favourable response is five years plus or until retirement.

The engagement score is calculated as the percentage of favourable responses to the questions identified. The score is calculated as: $(\text{Total favourable responses} / \text{Total responses}) \times 100$.

3.5 'Safe to say' index in Grid:Voice

3.5.1 Metric

'Safe to say' index score, as measured by National Grid's annual Employee Engagement Survey, Grid:Voice.

3.5.2 Definitions

'Safe to say' index is a measure of how safe employees feel to say what they think, based on the average responses to the statement 'Where I work, it is safe to say what I think' in our Employee Engagement Survey.

Likert scale is a psychometric scale commonly involved in research that employs questionnaires. The Likert scale is a five (or seven) point scale which is used to allow the individual to express how much they agree or disagree with a particular statement.

3.5.3 Scope

All employees who are permanently employed as at 1 December of the relevant financial year are provided the survey. Employees' 'safe to say' score is reported as the outcome of the survey completed in the relevant financial year, 1 April to 31 March.

3.5.4 Calculation methodology

Respondents answer the question on the Likert scale of Strongly agree to Strongly disagree. Favourable responses are Agree and Strongly Agree.

The 'safe to say' index is calculated as the percentage of favourable responses to the survey statement. The score is calculated as: $(\text{total favourable responses} / \text{total responses}) \times 100$.

3.6 Wellbeing index (employees)

3.6.1 Metric

Wellbeing index score, as measured by National Grid's annual Employee Engagement Survey, Grid:Voice.

3.6.2 Definitions

Wellbeing index is the overall score for the questions 'NG supports me in achieving a reasonable balance between my work life and my personal life', 'I know who I can turn to at work for support or advice' and 'NG shows care and concerns for its employees'.

Likert scale is a psychometric scale commonly involved in research that employs questionnaires. The Likert scale is a five (or seven) point scale which is used to allow the individual to express how much they agree or disagree with a particular statement.

3.6.3 Scope

All employees who are permanently employed as at 1 December of the relevant financial year are provided the survey. Employees' wellbeing index score is reported as the outcome of the survey completed in the relevant financial year, 1 April to 31 March.

3.6.4 Calculation methodology

Respondents answer the question on the Likert scale of Strongly agree to Strongly disagree. Favourable responses are Agree and Strongly Agree.

The wellbeing index is calculated as the percentage of favourable responses to the survey statement. The score is calculated as: $(\text{Total favourable responses} / \text{Total responses}) \times 100$.

3.7 Real Living Wage (UK Employees)

3.7.1 Metric

Living wage paid (UK only).

3.7.2 Definitions

The Real Living Wage is a wage rate that is voluntarily paid based upon the wage rate set by the Living Wage Foundation (the Foundation). It is designed to be at a level that is required for employees and their families to meet their everyday needs. The Real Living Wage is independently calculated and is greater than the National Living Wage that is required to be paid by UK legislation.

3.7.3 Scope

This includes all UK employees. It includes pay for graduates, trainees and apprentices, union negotiated employees and metering grade employees.

3.7.4 Calculation methodology

The Real Living Wage is an hourly rate, calculated from salary information held in our HR management systems.

An updated rate is communicated by the Real Living Wage Foundation in Autumn each year. We run a payroll report effective 1 November and if any wages fall below the Real Living Wage, our People Services are notified and apply any required uplifts before year end, updating the employee records. At 31 March of each year, we review our payroll records to ensure the appropriate uplifts have been applied and report any exceptions.



3. People continued

3.8 UK gender pay gap

We prepare and report our UK gender pay gap disclosures in line with the approach defined by the Equality Act 2010 (Gender Pay Gap Information) Regulations 2017 and The Advisory, Conciliation and Arbitration Service (Acas) Managing Gender Pay Reporting Guide 2017 (Acas guidance).

We publish our UK gender pay gap as part of our Annual Report, Responsible Business Report and as a standalone Report on our website. Our Gender Pay Gap Reporting Methodology document can also be accessed on our website.²¹

3.9 UK ethnicity pay gap

Where relevant, we prepare and report our ethnicity pay gap disclosures in line with the principles defined by the UK's Equality Act 2010 (Gender Pay Gap Information) Regulations 2017 (the legislation) and Acas guidance.

National Grid is not legally required to report our ethnicity pay gap but chooses to on a voluntary basis. Although the UK statutory gender pay gap methodology has been used as a basis for ethnicity pay gap reporting, some adaptations have been made to ensure its suitability for ethnicity pay gap reporting. Any variations from the UK gender pay gap methodology are explained below.

3.9.1 Metric

Our UK ethnicity pay gap reporting covers our total UK businesses only, representing our entire UK workforce (i.e. inclusive of all UK legal entities, regardless of headcount). The metrics disclosed are listed below, each metric is reported once to represent the total UK workforce:

- Mean ethnicity pay gap (%)
- Mean ethnicity bonus gap (%)

For the ethnicity pay gap, we do not report publicly on the percentage of ethnic minority employees receiving a bonus payment or the proportion of ethnic minority employees in each pay quartile of the organisation.

3.9.2 Definitions

The ethnicity pay gap is an equality measure that shows the difference in average earnings between ethnic minority (or diverse) employees and those who are not. It is different from equal pay. The definitions for the key terms included as part of our gender pay gap calculations are:

- Ethnic minority (or diverse) employees are those who identify themselves as being part of an ethnic minority group, which is self-declared by employees within our HR system.
- Employees who have not declared their ethnicity are included in the baseline of the calculation.

The groups presented in Table 6 on page 26 are defined as 'diverse' and 'non-diverse' in terms of ethnicity, within our UK business.

3.9.3 Scope

In terms of the time period in scope, our ethnicity pay gap disclosures are prepared on an annual basis using the snapshot date 5 April each year for base / ordinary pay, and for the 12-month period including that pay period and the 11 pay periods prior to that date for bonus pay.

The scope of National Grid UK legal entities is disclosed in National Grid's 2022/23 Annual Report and Accounts. All UK incorporated subsidiaries are included in the relevant statutory and total ethnicity pay gap calculations for all metrics as stated in section 3.9.1 – Metric.

3.9.4 Calculation methodology

UK ethnicity pay gap metrics are calculated in accordance with the methodology set out in the legislation and Acas guidance, i.e. only ethnic minority employees replace female employees and non-ethnic minority employees replace male employees where considered in the guidance. Our data is extracted from our source systems (Payroll and HR management systems) before being reconciled and prepared for calculations to ensure that only the relevant employees, wage types and bonus types are included.

3.10 US gender pay gap and ethnicity pay gap

Where relevant, we prepare and report our gender and ethnicity pay gap disclosures in line with the principles defined by the UK's Equality Act 2010 (Gender Pay Gap Information) Regulations 2017 (the legislation) and Acas guidance.

National Grid is not legally required to report our US gender pay gap or ethnicity pay gap but chooses to on a voluntary basis. Although the UK statutory gender pay gap methodology has been used as a basis for US gender pay gap reporting and ethnicity pay gap reporting, some adaptations have been made to ensure its suitability for US gender pay gap and ethnicity pay gap reporting. Any variations from the UK gender pay gap methodology are explained below.

3.10.1 Metric

Our US gender pay gap and ethnicity pay gap reporting covers our total US businesses only, representing our entire US workforce (i.e. inclusive of all US legal entities, regardless of headcount). The metrics disclosed are listed below, each metric is reported once to represent the total US workforce:

- Mean gender pay gap (%)
- Mean gender bonus gap (%)
- Mean ethnicity pay gap (%)
- Mean ethnicity bonus gap (%)

We do not report publicly on the percentage of female or ethnic minority employees receiving a bonus payment, or the proportion of female or ethnic minority employees in each pay quartile of the organisation.

3.10.2 Definitions

The gender pay gap is an equality measure that shows the difference in average earnings between female employees and those who are male. It is different from equal pay. The definitions for the key terms included as part of our gender pay gap calculations are:

- Gender: All our gender pay gap data relies on our employees' classification of their own gender as male or female. This is a mandatory, binary field in our HR system and therefore National Grid has a gender disclosure rate of 100%.
- Relevant employee: Those who have a contract of employment with National Grid and were employed on the snapshot date 5 April. All bonus payments in the year from March to April will be included in the bonus pay gap calculation.
- Full pay relevant employee: Relevant employees excluding those paid less than their usual pay during the payroll period in which 5 April falls, as a result of being on leave. We consider an individual's usual pay to be 1/12th of their annual salary as at 5 April. These employees will be included in the calculation of the 'Base' pay gap.

21. <https://www.nationalgrid.com/careers/understanding-our-uk-gender-pay-gap-2022>



3. People continued

- Relevant pay period/bonus pay period: The month of April is used to calculate hourly pay, which is then used to calculate the pay gap in accordance with the legislation. The relevant pay period for the purpose of calculating bonus pay is the 12-month period ending 5 April.
- Relevant pay/bonus pay: An employee's 'normal' monthly salary, including any regular allowances and supplements, paid out in the pay period that includes 5 April is considered as relevant or 'normal' pay. Bonus payments made to employees in the form of cash, vouchers or securities in addition to normal pay, for reasons including performance and incentives, in the 12 months prior to and including 5 April of each year.

The ethnicity pay gap is an equality measure that shows the difference in average earnings between ethnic minority (or diverse) employees and those who are not. It is different from equal pay. The definitions for the key terms included as part of our gender pay gap calculations are:

- Ethnic minority (or diverse) employees are those who identify themselves as being part of an ethnic minority group, which is self-declared by employees within our HR system.
- Employees who have not declared their ethnicity are excluded from the calculation.

For more granular definitions of the above terms used in gender pay gap and ethnicity pay gap calculations, please refer to the legislation and Acas guidance.

The following groups presented in Table 7 below are defined as 'diverse' and 'non-diverse' in terms of ethnicity, within our US businesses.

Table 7: National Grid diverse and non-diverse employees in the US workforce

Ethnicity / Race (US)	
Not Hispanic/Latino	non-diverse
American Indian or Alaskan Native	diverse
Asian	diverse
Black	diverse
Hispanic or Latino	diverse
Native Hawaiian or Pacific Islander	diverse
Prefer not to say	n/a
Two or more Races	diverse
White	non-diverse
<null>	n/a

3.10.3 Scope

Our gender pay gap and ethnicity pay gap disclosures are prepared on an annual basis using the snapshot date of 5 April each year for base/ordinary pay, and for the 12-month period including that pay period and the 11 pay periods prior to that date for bonus pay.

The scope of National Grid US legal entities is disclosed in National Grid's 2022/23 Annual Report and Accounts. All US incorporated subsidiaries are included in the relevant statutory and total ethnicity pay gap calculations for all metrics as stated in section 3.10.1 – Metric.

3.10.4 Calculation methodology

US gender pay gap metrics are calculated in accordance with the methodology set out in the legislation and Acas guidance. US ethnicity pay gap metrics are calculated in accordance with the same methodology, only ethnic minority employees replace female employees and non-ethnic minority employees replace male employees where considered in the guidance. Our data is extracted from our source systems (Payroll and HR management systems), before being reconciled and prepared for calculations to ensure that only the relevant employees, wage types and bonus types are included.

3.11 Total employee headcount split

3.11.1 Metric

The employee headcount statistics we report are:

- UK: full-time (%)
- UK: part-time (%)
- UK: female (%)
- UK: male (%)
- US: full-time (%)
- US: part-time (%)
- US: female (%)
- US: male (%)

3.11.2 Definitions

Headcount refers to number of permanent National Grid employees at each respective reporting year end (31 March).

Full-time employment is when an employee works the total number of hours considered by National Grid as full-time in a week. Any employee who works fewer hours than this amount is considered part-time.

3.11.3 Scope

All permanent National Grid employees are in scope, regardless of pay grade and how long they have worked at National Grid. Included are those on parental leave or on short/long-term leave of absence, part-time workers, graduates and interns. Excluded are temporary employees, contingent workers, managed service providers and non-executive Board members.

3.11.4 Calculation methodology

Data is extracted from our HR management systems and the headcount is calculated for each metric and divided by total jobs worldwide.

3.12 Temporary employees and agency workers

3.12.1 Metric

The headcount of our workforce by employment type is reported against the following categories:

- UK: regular employees
- UK: temporary employees
- UK: agency employees
- US: regular employees
- US: temporary employees
- US: agency employees

3.12.2 Definitions

Temporary employees are defined as interns/trainees and seasonal hires hired as temporary employees or hired for a specific duration of time.

Agency employees are defined as non-employees with vendors (Pontoon or UK Pertemps). This does not include managed service providers, consultants or other non-employees.

3.12.3 Scope

Temporary employees and agency employees as defined above are in Scope.

3.12.4 Calculation methodology

We extract from our HR management systems at 31 March the headcount of permanent employees, temporary employees and agency employees. These are presented based on region by summing the headcounts across the appropriate business units.



3. People continued

3.13 Recruitment and attrition rates by region

3.13.1 Metric

- UK: Recruitment rate
- UK: Attrition rate
- US: Recruitment rate
- US: Attrition rate

3.13.2 Definitions

Recruitment by region considers external hires.

Attrition by region includes all attrition: resignation, retirements and non-voluntary.

The regions considered are UK and US.

3.13.3 Scope

All permanent National Grid employees are in scope (including those on short/long-term leave of absence) as well as both full-time and part-time employees. All union schemes and graduates are included.

Out of scope are interns, temporary employees, contingent workers, managed service providers and non-executive Board members.

3.13.4 Calculation methodology

Headcount and recruitment and attrition data is extracted from our HR management systems at 31 March each year.

- Average UK/US headcount = (UK/US headcount at financial year end + UK/US headcount at previous financial year end) / 2
- UK/US recruitment rate (%) = (Number of UK/US external hires) / (Average UK/US headcount) x 100
- UK/US attrition rate (%) = (Number of UK/US leavers) / (Average UK/US headcount) x 100

3.14 Annual employee turnover by type

3.14.1 Metric

The annual employee turnover statistics we report are split by:

- Voluntary
- Involuntary

3.14.2 Definitions

Voluntary turnover refers to employees who have left through either resignation or retirement.

Non-voluntary turnover includes any other leave reasons, including dismissal and severance.

Leavers refers to all employees who have been flagged with termination event reasons within a given timescale.

3.14.3 Scope

In scope are leavers who left the workforce by voluntary or involuntary type over the specific 12-month reporting period.

Out of scope are interns, temporary employees, contingent workers, managed service providers and non-executive Board members.

3.14.4 Calculation methodology

Headcount and leavers by type data is extracted from our HR management systems at 31 March each year. Annualised leavers in the 12-month period to 31 March is calculated for voluntary and involuntary reasons as a percentage of average headcount:

- Average headcount = (Headcount at financial year end + Headcount at previous financial year end) / 2
- Leaver rates by voluntary (%) = (Number of voluntary leavers in previous 12 months) / (Average headcount) x 100
- Leaver rates by involuntary (%) = (Number of involuntary leavers in previous 12 months) / (Average headcount) x 100

3.15 Average hours of training per employee

3.15.1 Metric

We report on the average training hours per employee by:

- Male
- Female
- UK
- US

3.15.2 Definitions

Total number of UK and US learner hours compared against total number of UK and US full-time employees, using an average workday of 7.4 hours.

3.15.3 Scope

In scope are active, permanent employees (including those on short/long-term leave of absence) as well as both full-time and part-time employees. All union schemes, graduates and interns are included.

Out of scope are temporary employees, contingent workers, managed service providers and non-executive Board members.

3.15.4 Calculation methodology

UK and US learner hours, as well as the UK and US male/female headcount are extracted from our HR management systems. Average training per employee is then calculated as (Total learning hours) / (Total number of employees).



4. Economy



In this section:

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4.1 Percentage of supplier payments paid to contractual term

4.1.1 Metric

Percentage of UK and US supplier payments made within the contractual term.

4.1.2 Definitions

Contractual term refers to the period between the date an invoice is received and when the invoice is due to be paid.

4.1.3 Scope

Our reporting considers purchase order (PO) invoices that are paid over the course of the financial year.

If an invoice is reversed, cancelled or paid outside of the purchase order process, it is excluded from the calculation.

Supplier invoice data is continuously monitored and tracked via our financial management systems.

This metric is reported in line with the financial year, 1 April to 31 March.

4.1.4 Calculation methodology

The metric is calculated based on the volume of invoices settled in the year as follows: $(\text{Total invoices paid within the contractual payment terms}) / (\text{Total invoices paid within the reporting time period}) \times 100$.

If suppliers' contractual terms are not defined, or vary between invoices, a judgement is made as to the primary over-riding payment term to utilise for this metric.

4.2 Percentage of suppliers with carbon reduction target

4.2.1 Metric

Percentage of National Grid's top 250 suppliers engaged through CDP who have an active carbon reduction target by 2030.

4.2.2 Definitions

National Grid's top 250 suppliers is determined by total spend data and carbon intensity of the category. There are a number of exclusions as described in Scope below.

Carbon reduction targets are targets to reduce carbon emissions as defined by the Carbon Disclosure Project (CDP).

4.2.3 Scope

Our reporting considers targets set by our suppliers at the time of performing the review in the CDP 2022 submission (1 January to 31 December 2021).

All Group suppliers are considered when determining the top 250. However, a number of suppliers have been excluded, largely on the basis that they are (1) not Procurement team driven suppliers such as ancillary services and (2) not non-carbon relevant such as consultancy and insurance service providers.

4.2.4 Calculation methodology

National Grid extracts a list of total supplier spend for the period 1 January to 31 December 2021 (2022 submission) from our financial management systems (Ariba, which extracts data from SAP). Spend is consolidated at the parent level of the Company.

Suppliers are asked to fill out the CDP online reporting system data submission questionnaire, with a minimum acceptable response rate of 80%.

We assess our total supplier spend in calendar year 2021 against the 2021 CDP submission (January 1 to 31 December 2020), which includes all suppliers that have responded/submitted to CDP.

The focus is placed on the top 500 suppliers, including those previously assessed. Suppliers are also assessed and filtered for 'carbon relevance' (see flow chart, page 33). Suppliers considered to be carbon relevant will have the following attributes:

- Suppliers outside of the Procurement team's influence or deemed by the relevant category managers as non-relevant; this will include but not be limited to: ancillary services, insurance, legal, technical engineering solutions, etc.; and
- Suppliers that have an insignificant impact on our total Scope 3 emissions (derived from emission intensity calculations as part of Category 1 Scope 3 emissions).

The top 250 suppliers by spend after making the above exclusions are reviewed internally by the Group Procurement team for accuracy before being submitted to CDP.

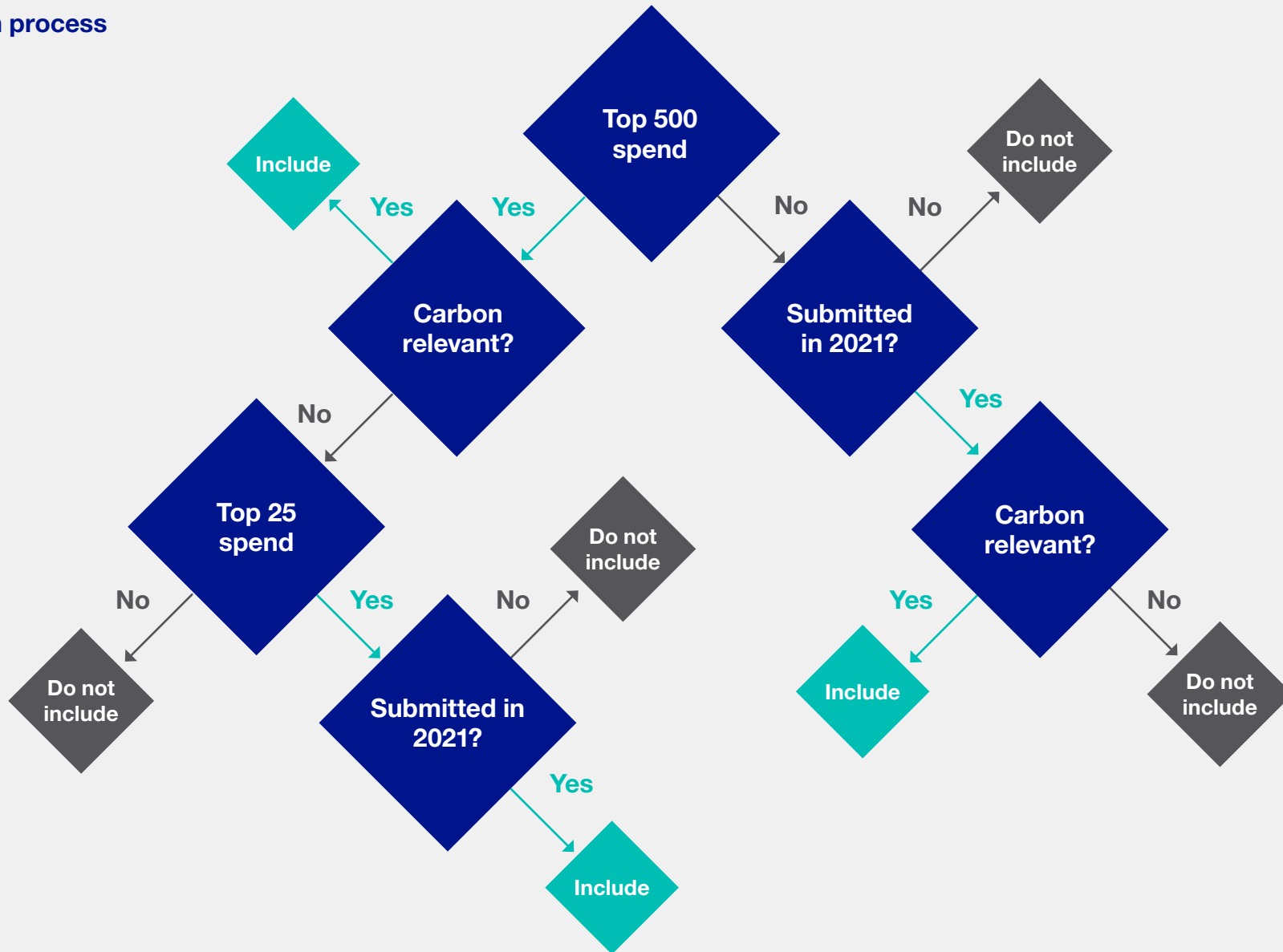
CDP provides an annual analytics and snapshot report with data taken from the supplier submissions in the CDP Online Reporting System, which calculates the metric as follows: $(\text{Number of top 250 suppliers engaged through CDP with carbon reduction targets}) / 250 \times 100$.

The exclusion process is illustrated:



4. Economy continued

The exclusion process



4. Economy continued

4.3 Investment by NG Partners (NGP)

4.3.1 Metric

Annual investments by our NGP investment fund (£).

4.3.2 Definitions

NGP refers to National Grid Partners, our dedicated corporate innovation and investment function.

4.3.3 Scope

This metric includes all investments made by NGP over the course of the year. NGP was formed to identify and invest in technologies and innovation that would ultimately benefit customers. With that founding goal, it is expected that each investment made by NGP will contribute to furthering the Group's Responsible Business priorities as outlined in the Responsible Business Charter. Specifically, the Group's commitment is to invest in developing technologies and innovations that benefit our customers and wider society.

Data on amounts invested is continuously tracked and updated as new investments are made.

Any returns on investments realised during the year are not netted against the amount invested.

This metric is reported in line with the financial year, 1 April to 31 March.

4.3.4 Calculation methodology

Investment data is continuously reported and tracked over the course of the year via our operational management and reporting systems. All NGP's amounts invested over the previous year are summed to calculate the total investments in technology and innovation.

4.4 Investment in energy infrastructure

4.4.1 Metric

Annual investment into energy infrastructure (£).

4.4.2 Definitions

Investment in energy infrastructure refers to capital expenditure on additions to property, plant and equipment, and non-current intangible assets. Investments in and loans to joint ventures and associates are also included.

4.4.3 Scope

This metric includes all capital investments made by National Grid plc and its subsidiaries.

Data is based on actual investment data (not estimated).

This metric is reported in line with the financial year, 1 April to 31 March.

4.4.4 Calculation methodology

Investment data is reported and tracked via our operational management and reporting systems. All invested amounts made over the previous year are summed to calculate the total annual capital investment figure. Our annual investments are measured in accordance with International Financial Reporting Standards (IFRS).

4.5 Jobs (worldwide)

4.5.1 Metric

Total Group workforce.

4.5.2 Definitions

Total workforce refers to all permanent National Grid employees, regardless of pay grade and how long they have worked at National Grid. Included are those on parental leave or on short/long-term leave of absence, part-time workers, graduates and interns. Excluded are temporary employees, contingent workers, managed service providers and non-executive Board members.

4.5.3 Scope

Includes the total National Grid workforce across all parts of the business. The number of employees at each respective reporting year end is presented (31 March).

4.5.4 Calculation methodology

Data is extracted from our HR management systems and the total number of employees in our workforce is calculated.

4.6 EU Taxonomy-aligned green capex as a percentage of total capex

Please refer to the [EU Taxonomy report](#) for details of how Group green capex as a percentage of total capex is calculated.



5. Governance



In this section:

5.1	Percentage of employees to have undertaken Ethics and Anti-Bribery and Corruption training	35
5.2	Diversity of the Board	35

5.1 Percentage of employees to have undertaken Ethics and Anti-Bribery and Corruption training

5.1.1 Metric

Percentage of total workforce population who have completed our Ethics training.

Percentage of total workforce population who have completed our Anti-Bribery and Corruption training.

5.1.2 Definitions

Ethics training is an online training course intended to inform and educate attendees around National Grid's Code of Ethics.

Anti-Bribery and Corruption training is an online training course intended to inform and educate attendees about fraud, bribery and corruption.

The course is mandatory for all UK employees, UK contractors with a National Grid email address and US non-unionised employees. In the US, unionised employees don't have access to online training; therefore, the US data relates to non-unionised employees only. In the US, contractors do not complete the training. These metrics exclude UK ED staff with the exception of secondees from UK ED to other business units within the Group, but we are working to integrate them into next year's figures.

5.1.3 Scope

All employees as at the reporting date are included in these metrics. The status of employees who have completed the training is continuously monitored through our HR management system.

The training courses are refreshed every three years in accordance with when the code of ethics is refreshed, in line with our policy. The metric is calculated based on completion of the most recent and current training course available. Completion of previous training courses is not included in the measurement of this metric.

The percentage of employees who have completed Ethics and Anti-Bribery and Corruption training is reported as at the relevant financial year end date, 31 March.

5.1.4 Calculation methodology

We assess the percentage of current employees who have completed the Ethics and Anti-Bribery and Corruption training within the last 3 years of the 31 March close date compared to all employees.

The percentage of colleagues to have completed the training is calculated as: $(\text{Total number of employees to have complete the training} / \text{Total number of employees}) \times 100$.

5.2 Diversity of the Board

5.2.1 Metric

Percentage of diverse representation on our Board.

5.2.2 Definitions

Diverse Board members are individuals who have identified themselves as female, LGBTQ+, disabled or from an ethnic minority. A Board member is only counted once if they are diverse based on multiple categories. All our gender data relies on our Board members' classification of their own gender as male or female. Data on both Executive Directors and Non-Executive Directors is held in National Grid's HR record management systems; however, we may or may not hold complete diversity information on these individuals in our HR systems as we would with normal employees on our payroll. In the instance that any diversity information is missing for these individuals, our designated team would write to these individuals to invite them to declare their diversity status for use in our external diversity statistics. Employees and Board members are not obliged to provide diversity information.

The following groups in Table 8 on page 36 are defined as 'diverse' and 'non-diverse' in our UK and US businesses.



5. Governance continued

5.2.3 Scope

Board members can self-declare their diversity status (optional) in accordance with Table 8, within our HR systems. In the instance that any diversity information is missing for individual Board members, our Corporate Affairs team writes to these individuals to invite them to declare their diversity status for use in our external diversity statistics. We calculate the number of Board members who fit within one of the diverse categories in the tables set out above. If a Board member fits more than one of these diverse categories, we would only count this individual once.

Diversity of the Board is reported in the Responsible Business Report as at year end (31 March).

5.2.4 Calculation methodology

Data from National Grid's Group HR system and UK ED's separate HR system is consolidated.

The following calculation is performed on the dataset to calculate this metric:

Percentage diverse representation on the Board = (Number of diverse members on the Board) / (Total number of Board members).

Table 8: National Grid diverse and non-diverse employees on the Board

Board refers to members as defined on the National Grid website²² who are active in the post at the financial year end (31 March).

Gender (UK and US)			
Male	non-diverse		
Female	diverse		
Ethnicity (UK)		Ethnicity / Race (US)	
Any other	diverse	American Indian or Alaskan Native	diverse
Asian – Bangladeshi	diverse	Asian	diverse
Asian – Indian	diverse	Black	diverse
Asian – Pakistani	diverse	Hispanic or Latino	diverse
Asian – any other background	diverse	Native Hawaiian or Pacific Islander	diverse
Black – African	diverse	Prefer not to say	n/a
Black – Caribbean	diverse	Two or more Races	diverse
Black – any other background	diverse	White	non-diverse
Chinese	diverse	<null>	n/a
Gypsy or Irish Traveller	diverse		
Mixed – White and Black African	diverse		
Mixed – White and Black Caribbean	diverse		
Mixed – White and Asian	diverse		
Mixed – any other mixed background	diverse		
White – any other White	non-diverse		
White British/English/Scottish/Welsh/Northern Irish	non-diverse		
White Irish	non-diverse	Prefer not to say	n/a
<null>	n/a		

Disability (UK)		Disability (US)	
Dyslexia	diverse	Yes	diverse
Hearing	diverse	No	non-diverse
Long-term health condition	diverse	Prefer not to say	n/a
Mental health	diverse	<null>	n/a
Mobility	diverse		
More than one	diverse		
Musculoskeletal	diverse		
No disability	non-diverse		
Other	diverse		
Other 'neurodiverse'	diverse		
Prefer not to say	n/a		
Speech	diverse		
Visual	diverse		
<null>	n/a		
Sexual orientation			
Heterosexual	non-diverse		
Gay	diverse		
Bisexual	diverse		
Lesbian	diverse		
I prefer to use my own term	diverse		
Prefer not to say	n/a		
<null>	n/a		

22. <https://www.nationalgrid.com/about-us/our-leadership-team/the-board>



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