Electricity Transmission

REPORTING CRITERIA AND BASIS OF PREPARATION

Annual Environmental Report 2022

nationalgrid

Reporting criteria and basis of preparation

Introduction

This document explains the basis of preparation for key environmental sustainability performance metrics and disclosures reported within the 2022 Annual Environmental Report ('the report').

Principles of reporting

In the preparation of the report, we have sought to ensure that:

- The reported data is meaningful and serves the needs of the report's users.
- The reported data accurately reflects our 2021/22 performance and is consistent with the definitions, scope and boundaries stipulated within this Methodology.
- The assumptions made around our calculation and measurement methods are clear.

The report is a transparent summary of our performance and enables the report's users to have confidence in the integrity of our data and the information contained within the report.

The material exclusions of a dataset are clearly stated and explained.

Assurance

All metrics reported within National Grid Electricity Transmission's (NGET) Annual Environmental Report are subject to our internal quality control review and approval processes. Further to this, we have commissioned ERM CVS to provide independent assurance over our environmental sustainability reporting metrics. Their Assurance Opinion for our 2022 Annual Environmental Report can be found on our website.

Reporting boundaries

Our report provides data and information for the period 1 April 2021 to 31 March 2022 across our NGET business.

Collaboration to ensure consistency in reporting

We are collaborating with the Scottish Transmission Owners (SPEN and SSEN) to ensure consistency in reporting methodology and reported units within the electricity transmission sector. As we develop through RIIO-T2, we expect some cross-sector consistency to be developed.

1 Reporting specifics and methodologies

1. Net zero carbon emissions

1.1 Achieve 34% reduction in scope 1 and 2 emissions by 2026

Baseline: 298,918tCO2e (2018/2019)

Metric: % of tCO2e

Scope: We will achieve net zero for our scope 1 and 2 emissions by 2050 (excluding electricity transmission losses), with interim targets of 50% reduction by 2030 and 34% reduction by 2026 from a 2018/19 baseline. Our Scope 1 emissions include our direct emissions, from leakage of insulating gases and operational travel. Scope 2 emissions include indirect emissions associated with purchased energy and electricity transmission losses. Scope 2 emissions are reported on a market basis and location basis, and line losses make up the vast majority. We exclude emissions from transmission losses in our net zero target as these are largely out of our control. Including emissions from transmission losses means our emissions would be 4.5x greater than scope 1 and 2 figure reported without them.

Calculation methodology: We have an established greenhouse-gas-emissions inventory quality management system based on the Greenhouse Gas Protocol. Annual Scope 1 and 2 emissions data (excluding transmission losses) are added together to arrive at the total tonnes of CO2e. Relevant emissions factors are derived from the Department for Business, Energy & Industrial Strategy (BEIS) emissions factors.

Assumptions: In some cases, such as energy use and operational travel, GHG emissions do not directly relate to NGET as a business unit. If this is so, we use an appropriate metric to allocate an estimated proportion of GHG emissions to individual business units. For FY22, we have used an allocation factor of 31.7%.

1.2 Reduce SF_6 emissions from our operations by 50% by 2030

Baseline: 11,935 kilograms (kg) of SF_6 leakage (2018/19)

Metric: SF_6 leakage (kg)

Scope: The scope includes NGET SF_6 leakages from NGET Transmission sites where the 'actual reason code' for the top-up is filtered by 'equipment / zone leaks to atmosphere'. We also include the SF_6 proportion of blended SF_6 gases such as SF_6/N2 into the scope of our reporting.

Calculation methodology: For NGET, SF_6 readings are taken from the gas flow meters and the top-up masses recorded on to our systems. Top-ups over the 12-month reporting period are summed to get the annual SF_6 emissions for the UK. This is then converted to tCO2e using the IPCC AR5 Global Warming Potential (GWP) factor: 1kg SF_6 = 23,500kg CO_2e.

Assumptions: Appropriate action is taken to ensure the calculated figures represent SF_6 leakage only. For example, if SF_6 is added to fill a new piece of equipment, this will appear in our SF_6 inventories but will not be included within calculations for SF_6 lost.

1.3 Purchase 100% of electricity we use from renewables

Baseline: Not available.

Metric: % of renewable energy supplied.

Scope: The scope covers NGET's electricity supply across the core and operational estate.

Calculation methodology: Not applicable.

Assumptions: Not applicable.

Additional notes: Although significant efforts have been made to meter all operational estates, there are still power draws that may be unmetered and therefore may not be covered.

1.4 Create a substation energy efficiency programme

Baseline: Not applicable.

Metric: Programme with annual milestones established.

Scope: The scope includes NGET's estate of operational high voltage electricity substations. Energy efficiency refers to all elements of the electricity substations, i.e. operational usage, site lighting, and "domestic" use in site accommodation (office space, equipment rooms such as relay and telecoms and facilities such as mess rooms and changing areas etc).

Calculation methodology: Not applicable.

Assumptions: Not applicable.

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

Baseline: 1,982.1tCO2e (based on 7,885,425 43MWh) 2019/20 baseline

Metric: % decrease in carbon emissions from office energy use.

Scope: The scope includes electricity and gas use to the following sites:

- 35% of National Grid House (based on NGET's share of occupancy)
- Eakring
- Osprey House
- Didcot

Excluded from scope are National Grid's offices at Homer Road and Wokingham, as NGET have no presence in these premises.

Calculation methodology: The scope of NGET's allocation across National Grid House (multi occupancy site) is 35% (this was based on the FY2020 allocation factor). The 2019/20 baseline was developed using electricity meter reads and invoices to determine annual consumption, with share properties apportioned based on agreed splits, along with an estimation of gas consumption as meter data was incomplete.

% reduction in carbon emission from energy use is calculated using = (Annual consumption of metre reads and invoices) *BEIS carbon conversion factors/ baseline (tCO2e) x100

Assumptions: For gas, we use estimated consumption as data is missing from profile metering. Degree day regression is used to verify estimate.

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

Baseline: 836 vehicles

Metric: % of light-duty vehicles replaced with ZEVs

Scope: The scope covers NGET's light commercial fleet vehicles only (i.e. a vehicle up to 300kg in weight). Heavy goods vehicles and company cars are excluded from the metric.

Calculation methodology: ZEVs are derived from NGET's fleet list. The fleet list must be filtered by 'Vehicle Group Code' to remove any plant vehicles, 'O Licence Vehicle' to remove heavy good vehicles, and 'Fuel Type' to view the correct number of ZEVs in NGET's fleet.

% of vehicles replaced is calculated using = (# of vehicles replaces/ baseline) X100

Assumptions: Not applicable.

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

Baseline: 3,120tCO2e

Metric: % reduction in tCO2e

Scope: NGET's business travel metric covers:

- Personal car expensed mileage
- Company car expensed mileage
- Hire car mileage
- Air travel
- Rail travel

Calculation methodology: NGET's % reduction in business travel is calculated using tCO2e = (Mileage x emission factor)/ baseline) x 100

The emissions factors used are derived from BEIS, based on vehicle size (Small, medium, large or average) and fuel type (Diesel, Petrol, Hybrid, CNG, LPG, Unknown, Plug in Hybrid Electric Vehicle or Battery Electric Vehicle). The emissions factors for air travel are derived from BEIS based on sector, cabin class and date. For rail travel, emissions are calculated using the BEIS 'National Rail' emissions factor.

In some cases, business travel does not directly align to a business unit, or a service is shared between multiple business units. In these cases, it is necessary to use an apportionment allocation factor to allocate NGET an estimated portion of GHG emissions. This apportionment factor will come from RRP Business Support table.

Where available, employee IDs are mapped against the latest SAP employee database to provide the most accurate business unit split. In some cases, business travel does not directly align to a business unit, or a service is shared between multiple business units. In these cases, it is necessary to use an apportionment allocation factor to allocate NGET an estimated portion of GHG emissions. For FY22, an allocation factor of 31.7% was used.

Assumptions: The data is based on the latest SAP Employee ID report (as provided by Group Safety, Health and Environment).

1.8 Create a transmission losses strategy

Baseline: Not applicable

Metric: Strategy established and annually reviewed.

Scope: The scope includes transmission losses from NGET's electricity network.

Calculation methodology: Not applicable.

Assumptions: Not applicable.

1.9 Deliver carbon neutral construction by 2026

Baseline: 156 TCO2e/£m (2020/21)

Metric: The balance of GHG emissions and removals (including external offsets) associated with NGET construction activities will be carbon neutral by 2025/2026.

Scope: The target time period is for any emissions associated with NGET construction activities completed in FY25/26, and where building started during the RIIO-T2[1] price control period (April 2021-March 2026). This will incorporate GHG emissions associated with lifecycle stages A1-5 (pre-construction to construction) as described in PAS 2080, B8 for emissions/sinks from operational land and D for external offsets.

Calculation methodology: To make a credible claim for carbon neutrality, evidence will be required that emissions have been minimised during our Network Development Process (NDP). At optioneering and detailed design the Carbon Asset Database (CAt) database is now integrated into our EHUBs estimating tools - the Cost Book and Work Breakdown Structure. This automatically generates a capital carbon footprint for all schemes during optioneering and detailed design at the same time as a cost estimate is generated. This bespoke dataset provides carbon factors for most key materials and equipment used within NGET construction. It has been developed over a number of years using primary data from a range of different sources including SimaPro data, ICE v3, CESMM4 and from equipment suppliers.

At delivery, for schemes where there is scope for further carbon reduction, contractors are asked to complete our Carbon Interface Tool (CIT) during tender or post contract award. The CIT is an excel-based, in-house tool that allows us to understand the carbon footprint of schemes at delivery in more detail. Contractors shall provide us with a Baseline carbon footprint and an As Built carbon footprint. We measure a scheme's carbon reduction performance between their baseline carbon footprint and as-built carbon footprint (both absolute carbon measured in tCO2e) to report carbon emissions reduction. This will be measured on each project an aggregated up to a contractor and then portfolio level.

As an interim basis, we use a carbon intensity metric (TCO2/ £m) to measure interim performance in capital carbon at a portfolio level. We measure this for new construction projects that have been completed in the reporting year. However, carbon intensity performance is heavily impacted by the type of projects in our workbook and thus may heavily fluctuate year-on-year.

In FY22, we took the following steps to obtain a carbon intensity figure:

1. Determining projects in scope: P6 financial reporting of completed projects within a the year.
2. Project spend: P6 financial reporting of completed projects within the year.
3. Project carbon emissions: project -specific data: Range of project-specific sources (availability is dependent on project type): Carbon Interface Tool (CIT) calculation built up to calculate a project specific carbon footprint, SOAT eHub estimates at project-level by project type
4. Project carbon emissions: Where project-specific data is not available then we are using:
    - Projections: of project carbon made in RIIO T1.
    - Carbon Asset Database values: used standard carbon factors from the CIT
    - Combining data to calculate an average carbon intensity: Projects were set out with their spend and capital carbon emissions. Emissions intensity was calculated for each project. To calculate the overall emissions intensity, total carbon (tCO_2e) was divided by project cost (£m).

A large proportion of the FY21/22 interim performance was calculated via proxy / estimation values

Assumptions: To achieve net-zero carbon construction by 2025/26 by implementing PAS 2080 (Carbon Management in Infrastructure) supported by an offsetting policy that uses the principles of PAS 2060 the internationally recognised specification for carbon neutrality, based on current business assumptions that 180,000tCO2e can be offset with up to £2.5m. These funds are only provided if we can demonstrate to Ofgem that the principles of PAS 2080 have been adhered to and they are allocated on a "use-it or lose-it" basis.

1.10 75% of National Grid's UK top 250 suppliers (by category/spend) will have carbon reduction targets

Baseline: 67% (2020/2021 baseline)

Metric: % of suppliers with carbon reduction targets

Scope: The top 250 supplier target listing is based on top spend and category of spend associated with carbon impact in supply chain. CDP provides an annual analytics and snapshot report with data taken from the supplier submissions in the CDP Online Reporting System.

Calculation methodology: The CDP supply chain program – the method to collect supplier data – starts in April and runs until the end of July. This is followed by engagement with the suppliers to ensure the CDP online reporting system data submission/questionnaire is completed in a timely manner. The calculation of *% of suppliers with targets* is derived from the following = *(suppliers with carbon targets in review period / 250 suppliers)*

[1] RIIO-T2 is the price control for the high voltage electricity transmission networks and high-pressure gas transmission networks which transmit energy across Britain from where it is generated. The price control runs for five years, from 2021-2026.

x 100. Supplier data used to measure NGET's FY21/22 performance will be based on suppliers' data from the previous year.

Assumptions: Not applicable.

2. Minimise waste and sustainable use of materials

2.1 Achieve zero waste to landfill across our construction projects

Baseline: 98% diversion from landfill (2019/2020).

Metric: % diverted from landfill.

Scope: The scope covers schemes running over 8 weeks in duration (schemes below 8 weeks generally produce low volumes of waste) unless a scheme under 8 weeks is known to produce high volumes of waste. Schemes delivered under NGET Asset Operations Management are excluded from the metric.

The landfill diversion target will include all waste produced on site including construction, demolition and excavation.

Excluded from scope: It is noted that certain waste streams are excluded. Due to the current UK waste industry infrastructure and technology, these waste streams cannot currently be diverted from landfill. This list will be subject for review year on year. The list for FY22 includes:

- Any hazardous classified waste that cannot be successfully/economically treated to a form that would make diversion feasible, for example contaminated soil and asbestos.
- Incinerator bottom ash (generated from construction works) classified as hazardous.
- Liquid wastes.

Additional reporting: The Report reports a total of 470,714 tonnes of construction waste produced in FY22. However, for the fulfilment of Ofgem's reporting requirements, Table 1 displays the total tonnage of waste produced by NGET, with the addition of the excluded waste streams reported in the report.

Table 1: Final destination of total waste reported (with excluded waste streams)

Waste generation	Reused	Recycled	Diverted	Total diversion	Landfill
Construction* (tonnes)	994	352,186	89,011	442,191	26,553
Construction (%)*	0.2%	79.7%	20.1%	94.4%	5.6%
Operational (tonnes)	0	3,666	6,519	10,185	343
Operational (%)	-	52.8%	36.2%	82.8%	17.2%
Office (tonnes)	-	32.1	28.47	58.75	1.81
Office (%)	-	53%	47%	97%	3%
Total (tonnes)	994	355,884	95,558	**452,435**	**26,898**
Total (%)	0.2	78.7	21.1	**94.4**	**5.6**

*Includes excluded European Waste Catalogue data which accounts for 284,487 tonnes.

Calculation methodology: The calculation is derived from the following: *Landfill diversion % = (waste sent to landfill per annum / total waste per annum) x 100.*

The calculation is based on data collected from the Principal Contractors of individual schemes on a monthly basis via the Contractor's Sustainability Portal. This is a SharePoint site used by contractors to log performance data.

Assumptions: The Principal Contractors for all projects have employed competent individuals to ensure compliance with relevant waste regulations throughout the duration of the scheme. Data reported via the Contractor's Sustainability Portal has been reviewed and inputted by a person competent to do so. A high-level assurance check is undertaken by NGET to identify and rectify any anomalies as part of reporting works. Quality of data ownership varies across the contractors and regions. We are working to understand the confidence levels of reporting from our contractors. Currently, if we find any issues, contractors are contacted for clarifications at quarterly vendor meeting.

If our landfill performance is greater than 99.5%, we will be reporting performance as 100% landfill diversion. The Carbon Trust define zero waste to landfill of that at least 99% of generated waste is diverted away from landfill. Which means that all waste produced is either reused, recycled, composted, or sent to energy recovery

2.2 Reduce the waste intensity of our construction projects year on year

Baseline: Not applicable.

Metric: % reduction in waste intensity (Total tonnes of waste/ Total spend in £M's).

Scope: The scope covers schemes running over eight weeks in duration (schemes below eight weeks generally produce low volumes of waste) unless a scheme under eight weeks is known to produce high volumes of waste. Schemes delivered under NGET Asset Operations Management are excluded from the metric.

Calculation methodology: The total tonnes of waste from construction projects / the total financial cost for the same period in £M's. The waste intensity figure is calculated on a 12 monthly rolling basis to mitigate any peaks and troughs in the data.

NGET is aware of data gaps in construction waste and is working to close these before setting a meaningful construction waste intensity baseline.

Assumptions: The Principal Contractors for all projects for each scheme have employed competent individuals to ensure compliance with relevant waste regulations throughout the duration of the scheme. Data reported via the Contractor's Sustainability Portal has been reviewed and inputted by a person competent to do so. Noting that a high-level assurance check will be undertaken by NGET to identify and rectify any anomalies as part of reporting works. Quality of data ownership varies across the contractors and regions. We are working to understand the confidence levels of reporting from our contractors. Currently, if we find any issues, contractors are contacted for clarifications at quarterly vendor meeting.

2.3 Increase our construction recycling and composting rates and set a target from a 2021/22 baseline

Baseline: Not applicable.

Metric: % increase in recycling and composting rates.

Scope: Recycling includes the recycling of waste materials into other items and the reprocessing of organic material, but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations on landfill sites (i.e. landfill restoration).

Calculation methodology: Recycling % = (waste recycled in review period / total waste in review period) x 100.

NGET is aware of data gaps in construction waste and is working to close these before setting a meaningful construction waste recycling baseline.

Assumptions: The Principal Contractors for all projects for each scheme have employed competent individuals to ensure compliance with relevant waste regulations throughout the duration of the scheme. Data reported via the Contractor's Sustainability Portal has been reviewed and inputted by a person competent to do so. Noting that a high-level assurance check will be undertaken by NGET to identify and rectify any anomalies as part of reporting works. Quality of data ownership varies across the contractors and regions. We are working to understand the confidence levels of reporting from our contractors. Currently, if we find any issues, contractors are contacted for clarifications at quarterly vendor meeting.

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

Baseline: 45% (2019/2020)

Metric: % increase in recycling rates.

Scope: Operational recycling is provided by three suppliers as follows:

- Biffa data for substations and Overhead Line depots.
- Adler and Allen data for fly tipping and emergency works completed on NGET sites.
- Oil Management Unit data for oil that is sent for disposal.

Excluded from the scope of this metric is Biffa data from central offices, Adler and Allen data for maintenance works and any other waste stream for NGET. Operational waste stream excluded due to miss in baselining (Adler and Allen) is around 6.5x the streams reported by tonnage, therefore the reported figure is not a meaningful snapshot of operational waste. We will be looking to do another rebaselining in future incorporating further waste streams.

Calculation methodology: Waste data is provided by our three suppliers and aggregated together. The calculation is derived from: (Closed loop recycling + Open loop recycling + composting)/ total waste = percentage of total waste recycled.

Assumptions: Biffa hazardous waste that is not sent to landfill is classed as closed loop recycled. Biffa has provided a level of data to show high (>95%) recycling for some elements of our hazardous waste but not all. However, due to limited confidence, we have removed 195.16 T from the recycling figure and reallocated to landfill. An improvement project is required to improve assurance and data quality. A wider project looking at other operational waste sources is ongoing, the three suppliers used here are used in the baseline.

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

Baseline: 46% (2019/2020)

Metric: % increase in recycling rates.

Scope: The scope includes the following recycling streams: general waste, dry mixed recycling, organic waste, glass, metal, wood, and confidential waste. Information technology, oil (catering) and hazardous waste are excluded from the metric.

These data sets are combined across the core office estate comprising: National Grid House (Warwick), Wokingham, Control 2 (Reading), 35 Homer Road (Solihull), Eakring, Osprey House (Castle Donnington) and Warrington. We use an allocation factor of 37% to allocate the total waste for NGET.

Same exclusions apply for streams noted as excluded in 2.5a.

Calculation methodology: Total recycling % = ((recycled waste/ total waste) X100) x allocation factor

Assumptions: Methodology and scopes will be revisited in FY23 as NGET will not hold any occupancy in Wokingham, Control 2, 35 Homer Road or Warrington.

2.5a Reduce the waste tonnage (from a 2018/19 baseline at our offices by 20%

Baseline: 134.6 tonnes (2019/2020).

Metric: % reduction in waste tonnage.

Scope: The scope includes the following recycling streams: general waste, dry mixed recycling, organic waste, glass, metal, wood, and confidential waste. Information technology, oil (catering) and hazardous waste are excluded from the metric.

These data sets are combined across the core office estate comprising which comprises of: National Grid House (Warwick), Wokingham, Control 2 (Reading), 35 Homer Road (Solihull), Eakring, Osprey House (Castle Donnington) and Warrington. We use an allocation factor of 37% to allocate the total waste for NGET.

Calculation methodology: The calculation is derived from the following: Total waste reduction % = *((total waste for the review period)/ baseline) x100) x allocation factor

Assumptions: The methodology will be revisited in FY23 as NGET does not hold any occupancy in Wokingham, Control 2, 35 Homer Road or Warrington.

2.5b Reduce water use (from a 2019/20 baseline) at our offices by 20%

Baseline: 13,120m^3 (2019/2020).

Metric: % reduction in water tonnage.

Scope: The scope includes the following potable water supplies to:

- 37% of National Grid House (based on NGET's share of occupancy)
- Eakring Training Centre
- Osprey House
- Warrington (Archives)

Excluded from scope is rainwater or grey water capture.

Calculation methodology: The scope of NGET's allocation across multi occupancy sites is 37% for National Grid House, and 100% allocation for Eakring, Osprey House and Warrington (Archives). The 2019/20 baseline was developed using estimates based on latest available supplier invoices and verifiable meter reads and multiplied by the allocation factor Invoices are received via Utilities Bill Validation Service provider (presently SMS Plc) and verified against manually collected actuals. FY22 figures are based on available meter readings (NGH meter installed 'Sept '21) and available supplier invoices.

The calculation is derived from the following: Total water reduction % = *(total water for the review period – sum of fiscal supply metres for above sites/ water baseline) *100) * allocation factor.

Assumptions: All sites named above are based on a 37% allocation of total building water usage for NGH and 100% for the rest of the sites. Baseline used an allocation of the 37% for all sites. A review of the "office" estate is required. Currently based on Core Office Estate – may need to be expanded to included Operations managed offices.

Additional notes: Water data from direct meter readings was of poor quality in 2021, hence regression analysis had to be used rather than direct reads and the baseline usage is likely a significant over estimation: NGET has requested a baseline revision.

2.6 Pilot and implement circular economy principles by aligning our business to international recognised standards

Baseline: Not applicable.

Metric: Alignment to BS 8001 standard - Circular Economy Standard.

Scope: BS8001 Circular Economy Standard provides a practical framework and guidance to organisations to implement the principles of circular economy. It intends to help organizations and individuals consider and implement more circular and sustainable practices within their businesses.

Calculation methodology: BS8001 has been used as a guidance standard to assess our approach to embedding circular economy in NGET. A gap analysis is undertaken annually through an internal self-assessment exercise. Maturity levels are evaluated using the BS8001 framework. A maturity level is assigned from level 0 to level 4. Progress against maturity levels will be tracked year on year.

Assumptions: None.

2.7 Align our Procurement Strategy to international recognised standards

Baseline: Not applicable.

Metric: Alignment to ISO 20400 standard - Sustainable Procurement Guidance Standard.

Scope: ISO 20400 Sustainable procurement provides guidance to organizations, independent of their activity or size, on integrating sustainability within Procurement. It is intended for stakeholders involved in, or impacted by, procurement decisions and processes.

Calculation methodology: ISO20400 has been used as a guidance standard to assess our approach to embedding sustainability into the Procurement function in the UK and Globally. The ISO20400 gap analysis / self-assessment is undertaken bi-annually, available through https://www.iso20400.org/.

The self- assessment results in a Spidergram outlining the company position against a number of core criteria. The output is saved on an internal SharePoint and a tracker has been created to assess progress year on year.

Assumptions: Reporting is focused on the environmental aspects of sustainable procurement only.

2.8 Maintain our high standards of oil containment and pollution management

Baseline: Not applicable.

Metric: Continuous certification to ISO14001 standard and demonstration of continuous improvement. Number of sites receiving environmental support visits.

Scope: The scope includes NGET's ISO14001 certification being maintained, and the number of site visits being conducted in FY22.

Calculation methodology: The number of site visits is tracked in an internal SharePoint tracker detailing the location of the site to be visited, the visit status / date, and relevant site team leader. The total number of site visits conducted is derived from the internal tracker. Certification against standard is provided by an external certification body following an annual ISO14001 audit.

Assumptions: There are secondary oil containment installed across our substations, including bunds and oil interceptors. Fluid filled cables are managed in line with the Environment Agency's Memorandum of Understanding.

3. Nature positive

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

Baseline: The baseline for this metric is £281.6m (2020/21).

This baseline was established using existing information from National Grid's internal site databases and was based on a sub-set of sites and extrapolated. The natural capital value of 29 NGET sustainability sites, covering 377 hectares, were assessed as part of the sustainability projects in T1 using the internal National Grid Natural Capital Tool and used by Frontier Economics to estimate the average baseline value per hectare.

The National Grid non-operational estate extent is relatively dynamic and changes over time due to land being disposed of, to non-operational land being re-designated for operational uses (for example substation extensions etc.), and for the provision of Biodiversity Net Gain (BNG) for capital delivery projects. To ensure that the baseline is comparable between the start of the RIIO-T2[1] period and the end any sites that leave the non-operational estate (sold or become operational) and new land entering the non-operational estate (for example decommissioned assets) will be excluded. This means that only land that remains within the non-operational at the beginning of Year 1 and at the end of Year 5 will be counted.

Scope: % of non-operational land enhanced in environmental value. The target applies to land owned by NGET where we own a freehold or a long leasehold (>21 years). It includes land which is subleased to others. In order to be able to fairly compare at the start and end of the period 1st April 2021 –31st March 2026, only land owned as non-operational land at both the start and end of the period is included.

It is noted that habitat creation or enhancements within non-operational land resulting from the mitigation of National Grid construction activities are covered by a separate commitment and associated incentive within the ESIt and are therefore out of scope of the Environmental Value target.

Metric: % increase in environmental value of non-operational land.

Calculation methodology: NGET developed a tool to measure the environmental and societal value of our land. This tool uses a 'natural capital' evaluation approach that monetizes the 'ecosystem services' that are provided by our land. The Natural Capital Values represented in the tool are estimated over 30 years and reflects the present value and uses a discount rate of 3.5%.

In order to meet our annual commitments, delivery will be counted towards the target at an appropriate point that signifies a change in activity. This will be:

a) the point at which work carried out by NG or our subcontractors begins at a site

b) a legal agreement is signed with a third party for them to make changes/carry out works, or

c) when land management practices are formally changed and documented.

The calculation is derived from the following: % of non-operational land enhanced = (sum of site interventions – sum of site baselines) / NGET portfolio baseline.

Assumptions: The ecosystem services and the assumptions made are provided below.

- Region and location are specified for all sites targeted for uplift as these alter the monetised value of various ecosystem services (land prices, agricultural production etc.).
- Natural capital stocks are entered as the extent of habitats present. The categorisation specified within the tool is followed without alteration; it is a broader characterisation than established in the baseline. This sees certain habitat groups combined (for example scrub falls within the grassland category).
- Food –where National Grid land is leased for grazing or arable production the extent is entered into the tool interface. The environmental gain plans (i.e. the after scenario) assume food production is ceased within the National Grid site in question.
- Timber –it is assumed that there is production of wood products (logs, coppice poles etc.) produced from 50% of each woodland area (unless specified –some woodlands are considered too small to provide a realistic basis for timber production). These wood products are the incidental results of habitat management and not a result of management (including clear felling) as commercial forestry. The 50% of arisings not eligible for sale (through woodland management practices) are to be retained for the creation of dead wood habitats.
- Carbon –the extent of the habitats considered within the NC tool with respect to carbon are entered for the baseline and after scenario.
- Air quality –this ecosystem service is specified for completeness, however it is acknowledged that the type of activities being undertaken mean the before / after scenarios will be the same (i.e. they will not alter the air quality in the specified area).
- Flood control –as with air quality this ecosystem service is specified for completeness. It is

acknowledged that in most instances the before / after scenarios will be the same (unless there is a desire to create new wetland habitat) and that this will result in a "blank" entry (i.e. none of the broad habitat types specified in the tool for flood control are present or predicted to be present).

- Pollination – where National Grid are proposing the creation of species-rich grassland or the provision of be hives this ecosystem service is specified. The measurement of farmland within 1.4km is undertaken at a high-level as no appropriate base data is available for GIS interrogation. The extent of farmland is provided in 50ha blocks (to a maximum of 600ha). The baseline scenario is always left blank, this is because the tool does not allow an enhancement to be shown effectively (for example a baseline scenario of 5ha of semi-natural grassland, provides the same value as the enhanced scenario regardless of whether the aim is to markedly increase species diversity and attractiveness to pollinators.
- Recreation – it is assumed that no additional recreational activities, other than volunteering or education will be offered. Current site usage is not entered as the information available is inconsistent and any change is what is relevant in meeting the target. For the majority of sites volunteering opportunities are expected, with an average spend per visit specified as £50 per visit (figure provided to National Grid by the Field Studies Council). On sites where there are existing environment centres additional visits of volunteers and students have been estimated through discussion with the operators (again specified as £50 per visit).
- Community – average house prices for each area has been obtained from www.zoopla.co.uk. The extent of residential development within 1km of the site is measured to the nearest hectare, with judgement being used to determine residential from other buildings. Under 10ha of residential development is considered to be "low", between 10 and 50ha "medium" and over 50ha of residential development "high" density.
- Wild species – this accounts for positive action to enhance habitats for flora and fauna. This section is completed on the basis that currently there is no positive management for biodiversity (this would be completed for the baseline at the few sites where active management agreements are in place – although these sites are not the targets for environmental gain uplifts). It is also noted that woodland is not included in the list as it is passed through as a benefit in both the before and after scenario at the same rate. This means it is not possible to demonstrate directly an enhancement to woodland. As the BNG system shows that enhancements to woodland are achievable and desirable, and National Grid have a large woodland landholding that currently is of limited biodiversity value, a proxy has been used in the National Grid NC tool to recognise any investment in woodland enhancement. This is done through assuming that the "provision of winter bird food" is analogous to woodland enhancement (this provides a similar level of monetary value as taking enhancing a grassland and is therefore considered a reasonable equivalence).

3.2 Deliver Net Gain by at least 10% or greater on all construction projects

Baseline: There is no existing baseline for this metric as BNG units are calculated on an individual project basis

Scope: NGET construction schemes (in Asset Operations, Customer Connections and New Infrastructure) (governed by the National Grid Network Development process) that have a permanent or temporary impact on the natural environment between 1 April 2021 and 31 March 2026 and have:

- Passed project sanction post-design stage
- Applied for, and been granted planning permission / consent within this period
- Committed to a net gain % of 10% or greater quantified by specified tools

Schemes that are excluded from the scope of this metric include those that:

- Have submitted a formal planning application or have already passed Gate C before 1 April 2021.
- NGET schemes forming a constituent part of a 3rd Party Development Consent Order (DCO) that has been submitted or consented prior to 1 April 2021.
- Any schemes which do not have a permanent or temporary impact on the natural environment (such as protection and control system schemes or in-situ asset refurbishment or replacements).
- Minor overhead line schemes such as fittings or steelwork replacement that do not utilise OHL exception regulations or Section 37 consent.

Metric: % of projects in scope that meet 10% BNG.

Calculation methodology: In order to quantify biodiversity losses and gains, we use the latest version of the DEFRA Biodiversity Calculator. The metric works by considering the extent of habitat within the scope of development (measured in

hectares (ha) or kilometres (km) dependent on whether the habitat is linear or not) and how distinctive it is (i.e. its complexity, rarity, diversity etc. This is predefined within the metric), its condition (i.e. its structure and management as defined by Natural England) and its strategic location. These elements are used to determine the biodiversity baseline value (measured in biodiversity units) the losses due to the development, and the gains made from its proposed habitat mitigation and enhancement measures. The biodiversity unit value of habitat creation or enhancement actions are refined based on a number of risk multipliers that account for the difficulty of habitat creation (for example it is easier to create a semi-improved grassland than an active raised bog), the time it takes for a habitat to reach target condition (for example a grassland reaches target condition quicker than a woodland), and the location of delivery (i.e. habitat creation local to the biodiversity loss is worth more than habitat creation unrelated to the impact).

The calculation is derived from the following: % BNG = (sum of onsite and offsite biodiversity units added post intervention minus sum of onsite and offsite baseline biodiversity units)/sum of total baseline units x 100) are based on Habitat Biodiversity Units only – hedgerow and river units are recorded where applicable within the DEFRA tools but are not considered within the % calculation.

Natural Capital / Ecosystem service values derived from habitat and land use change associated with our developments will be incorporated alongside the BNG calculations within RIIO-T2[1] period following agreement and approval of a consistent approach and calculation methodologies across all Transmission Owners.

How we identify schemes within scope

At the early project development stage engineers are required to identify if the scheme will have an impact on the natural environment and therefore be within scope of the BNG commitment. If confirmed within scope a BNG rating of Low / Med / High or Very High will be recorded within the project documentation and the scheme added to the relevant BNG tracker.

Schemes in scope will appoint environmental services contractors to undertake the BNG assessment and support the development of mitigation and enhancement strategies through the detailed design stage. A % BNG commitment will be determined prior to Gate C, or Sanction and be underpinned by an outline BNG plan that includes onsite and offsite interventions and associated calculations.

Assumptions: BNG commitments are underpinned by accurate assessments based on robust and reliable data, all prescribed interventions will be delivered as part of the project via formalised agreements with internal and external parties and contractors.

Where mitigation and enhancement plans are still in development, post intervention biodiversity units have been estimated using initial baseline calculations - these will be refined and updated on completion. Where baseline biodiversity units are yet to be finalised, an estimate based on a previous BNG assessment is used. These will be refined and updated on completion. In some cases, the estimate is based on a previous BNG assessment. This refers to situations where a biodiversity baseline is absent.

BNG Assessments are completed by competent specialists using the latest version of the DEFRA Biodiversity Calculator. Planned enhancements onsite and offsite are delivered and managed in accordance with the prescriptions detailed within the tools and the management plans.

It is also assumed that all schemes with an impact to the natural environment have been included within scope.

4. Leadership for change

4.1 Senior leadership accountability

Baseline: Not applicable.

Scope: All NGET directors.

Metric: % of NGET directors with environmental objectives.

Calculation methodology: The calculation is derived from the following: (sum of directors with environmental objectives)/ total # of directors * 100.

Assumptions: By environmental objectives, we also include EAP commitments where directors have been assigned as 'leads' for environmental commitments.

4.2 An engaged environmental workforce

Baseline: 71% score.

Scope: All permanent NGET employees.

Metric: Employee engagement survey satisfaction score on environmental issues.

Calculation methodology: Evaluation of our internal colleague survey – Grid:voice. Colleagues were asked if they thought we behaved in a responsible way. The responses to this survey are based on a six-point response: strongly agree, agree, neither agree / nor disagree / disagree / strongly disagree do not know / not applicable. The % of those that strongly agree or agree determine our % score.

Assumptions: None.

4.3 Take bold steps to tackle our SF_6 emissions and stimulate the market to more rapidly meet our stakeholders needs

Baseline: Not applicable.

Scope: The scope covers new assets for use on 132kV, 66kV and 13kV (tertiary) systems, gas insulated busbars (GIB) and gas insulated lines containing SF_6.

Metric: No procurement of SF_6 when there are alternatives available in the market.

Calculation methodology: No deviations from SF_6 policy.

Assumptions: None.

4.4 Work collaboratively with the other Transmission Owners to develop a consistent approach to capital carbon management

Baseline: Not applicable.

Scope: The formation of the UK Reduction of Capital Carbon in Infrastructure: Transmission (ROCCIT) group, with a principal aim of promoting an industry wide, consistent approach to reducing whole life carbon for the infrastructure projects we design and build.

The scope includes the development of an electricity transmission carbon dataset to cover carbon and cost reduction at all stages in the infrastructure delivery process. The dataset and process will be aligned to the PAS 2080 Carbon Management in Infrastructure (2016) specification.

Metric: Terms of refences agreed with the Scottish Transmission Owners.

Calculation methodology: Not applicable.

Assumptions: Operational carbon and lifecycle carbon are not included in the boundary of reporting.

4.5 Work collaboratively to develop and pilot a common and robust methodology for assessing Natural Capital impacts

Baseline: Not applicable.

Scope: The development of a robust Natural Capital impact methodology tool, produced by working collaboratively with other Transmission Owners.

Metric: To be agreed with the Scottish Transmission Owners.

Calculation methodology: Not applicable.

Assumptions: None.

4.6 Be an environmental leader for the energy industry

Baseline: Not applicable.

Scope: Number of groups and meetings that NGET is contributing to from an environment and/or sustainability perspective.

Metric: Number of groups and meetings attended externally on environmental sustainability.

Calculation methodology: Not applicable.

Assumptions: None.