

# Guidance

## Environmental Reporting Guidance - Draft

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**This document is published as a working draft. It is subject to development and amendment. It should not form the basis of any expectation or reliance.**

This guidance covers the Annual Environmental Report (AER) licence obligation for the RIIO-3 Price Control Period. This document sets out both the qualitative Environmental Reporting Guidance and quantitative Key Performance Indicator (KPI) Table.

This document is targeted at electricity transmission, gas transmission and gas distribution network operators (licensees), as well as their stakeholders. The document outlines the scope, purpose, structure, and preferred methodologies for licensees to follow when producing their AER.

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# 1. Introduction

## Context

- 1.1 We published our Final Determinations for the RIIO-3 price control in December 2025.<sup>1</sup> These set out the key elements of the price control from 1 April 2026 to 31 March 2031. This included a licence obligation for the licensees to publish an Annual Environmental Report (AER) under Special Condition 9.1 (SpC 9.1).

## Annual Environmental Report Obligations

- 1.2 The purpose of the AER is to provide a yearly update to stakeholders on the licensee's progress in delivering their Environmental Action Plan (EAP) Commitments as set out in their RIIO-3 Business Plan. The EAPs are licensees' strategies for how they propose they will mitigate the impact of their business on the environment. The AER will also allow stakeholders to monitor licensees' performance in specified environment-related aspects of its price control and enable comparability of performance between licensees where possible.
- 1.3 This Environmental Reporting Guidance ("Guidance") has been developed to help the licensee comply with its obligation in SpC 9.1 of the gas transmission (GT), electricity transmission (ET) and gas distribution (GD) licences to prepare and publish an AER. The AER will ensure each licensee is held accountable for delivering its RIIO-3 Environmental Action Plan Commitments, its approach to environmental management, and its environmental performance during the Price Control Period.
- 1.4 Where defined words and expressions are used in this Guidance, they are capitalised and have the same meaning as in SpC 1.1 of the ET, GD and GT licences.

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<sup>1</sup> 'We', 'Ofgem' and the 'Authority' are used interchangeably in this document and refer to the Gas and Electricity Markets Authority.

## **Structure**

- 1.5 The AER comprises two distinct sections, a qualitative section (AER Commentary) and a quantitative section (AER KPI Table). Further guidance on this structure can be found in Chapter 2, while the content of each section can be found in Chapters 3 and 4.

## **Compliance**

- 1.6 Licensees are required by SpC 9.1 to prepare an AER in accordance with this Guidance.
- 1.7 For the avoidance of doubt, this Guidance is subordinate to the licence. This document does not change any definition or obligations contained within the licence and in the event of any ambiguity over this Guidance the licence will take precedence.
- 1.8 This document in no way relieves affected parties, including licensees, from their responsibility to ensure ongoing compliance with legislation including competition, data protection, environment and consumer protection laws.

## **Initial publication and amendment of this guidance**

- 1.9 This Guidance is issued and amended in accordance with the procedure set out in SpC 9.1.11 and 9.1.12 of the licence.

## 2. General instructions and requirements

### Section summary

This section sets out the general instructions and requirements licensees must follow when preparing their AER.

### Purpose of the AER

2.1 The purpose of the AER is to provide a yearly update to interested stakeholders on:

- the licensee's progress in achieving the Environmental Action Plan Commitments set out in their RIIO-3 EAP;
- their performance in specified environment-related aspects of their price control; and
- the environmental impacts of the network.

### Principles for reporting

2.2 When compiling the AER, licensees must adhere to several key principles which are set out in paragraphs 2.3-2.9.<sup>2</sup>

2.3 **Relevant:** Ensure the data collected and reported reflects the relevant environmental impacts of the company for the impact categories specified within this Guidance.

2.4 **Quantitative:** Ideally performance is measured and compared over time, and to a target designed to reduce a particular impact or achieve a positive outcome. In this way the effectiveness of environmental policies and management systems can be evaluated and validated. Where appropriate, each environmental impact in Chapter 4 of this Guidance sets out the metrics to be used for that subject area. Quantitative information must be accompanied by a narrative, explaining its purpose, impacts, and giving comparators where appropriate.

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<sup>2</sup> These have been drawn from accounting principles and the internationally recognised Greenhouse Gas Protocol Corporate Accounting and Reporting Standard from the World Resources Institute and World Business Council for Sustainable Development, known as the "GHG Protocol Corporate Standard".

- 2.5 **Accuracy:** Seek to reduce uncertainties in reported figures where practical. Achieve sufficient accuracy to ensure confidence as to the integrity of the reported information.
- 2.6 **Completeness:** Quantify and report on all the sources of environmental impact within the reporting boundary that have been defined in this Guidance. Disclose and justify any specific exclusions.
- 2.7 **Consistent:** Use common methodologies to allow for meaningful comparisons of environmental impact data over time. Document any changes to the data, changes in the reporting boundary, methods, or any other relevant factors.
- 2.8 **Comparable:** Report data using accepted objective KPIs (as specified in this Guidance). The narrative part of a report provides the opportunity for a licensee to discuss any tensions that exist between providing comparable data and reporting Licensee-specific KPIs. Use of accepted KPIs will help stakeholders to compare performance across companies.
- 2.9 **Transparent:** Address relevant issues in a factual and coherent manner, keeping a record of all assumptions, calculations, and methodologies used. Internal processes, systems and procedures are important, and the quantitative data will be greatly enhanced if accompanied by a description of how and why the data are collected. Report on any relevant assumptions and make appropriate references to methodologies and data sources used.

## **Report structure**

- 2.10 The licensee's AER will consist of two distinct sections: an AER Commentary and an AER KPI table. The AER Commentary will provide the narrative around how the licensee has performed against its environmental obligations over the Regulatory Year, whereas the AER KPI Table will evidence the AER Commentary and present numerical evidence of performance.
- 2.11 Licensees must strive towards utilising the KPI table to its fullest extent. The KPI table should be the primary location of all quantitative information.

- 2.12 In some instances, it is expected that key data from the AER KPI Table may be used in the AER Commentary to support the narrative. Similarly, licensees may have data in addition to that found in KPI table they wish to include in their AER, which is also permitted.
- 2.13 Where the reporting methodology of certain environmental areas is not well developed (eg embodied carbon, Scope 3 Business Carbon Footprint (BCF) emissions, and biodiversity) this is reflected in the AER KPI Table guidance. Additional numerical reporting is encouraged, where possible, as part of the AER Commentary. This is to allow less developed areas of reporting to be presented alongside the improvements in the reporting of these fields giving stakeholders additional context. Should common reporting methodologies be developed within-period, we will consider the merits of amending the Guidance in accordance with SpC 9.1.14 to reflect such developments.
- 2.14 We have included a template for the structure and content of the AER KPI Table in Appendix 1 of this Guidance. This is to ensure that the licensee's AER KPI Table focuses on material environmental matters, is relevant, easy to understand, accurate and, where possible, comparable across licensees.
- 2.15 In cases where a corporate group covers multiple licensees, a single document is acceptable, but the corporate structure must be defined, and the performance of each licenced area must be clearly identifiable in the report for each environmental commitment.
- 2.16 There is no strict limit on the length of the AER. The licensee should include the level of detail needed for stakeholders to be able to engage with the contents, while at the same time remaining accessible. Generally, as guidance, the AER KPI Table section may not typically exceed 5 pages, while the AER Commentary section may not typically exceed 45 pages. We will keep this under review and may provide further guidance on this if we consider it necessary.



## **Reporting date and Regulatory Year**

- 2.17 The AER for the Regulatory Year commencing 1 April 2026 must be published on the licensee's website by 31 October 2027. The licensee must publish subsequent reports by 31 October in each year.
- 2.18 The licensee's AER must include information and data for the preceding Regulatory Year of RIIO-3.

## **Scope of the AER**

- 2.19 The Guidance sets out the broad scope of the AER. There may be instances where the licensee wishes to go beyond this Guidance where the licensee considers it to be appropriate to do so. Industry practice and legislative requirements may also evolve over time, with regards to environmental reporting, and we expect licensees to consider these developments and their impact on the AER.
- 2.20 The AER must provide stakeholders with a detailed picture of the licensee's environmental activities. This includes reporting on progress in implementing the licensee's EAP commitments and meeting its EAP targets, where applicable. The licensee must also use the AER to demonstrate to stakeholders what steps or activities it has undertaken to manage and, if possible, reduce its environmental impact more generally.
- 2.21 The structure, content and KPIs described in this Guidance must be the basis for the licensee's AER. A licensee may make enhancements to its AER, going beyond those specified in this Guidance. Where a licensee does so for an aspect of its AER that relates solely to its activities, the licensee must explain the change in reporting, figures and/or parameters used.
- 2.22 Where a licensee changes their reporting methodology including their KPIs, we expect the licensee to explain the change in the AER Commentary, including outlining the figures and/or parameters used.
- 2.23 Below is some further guidance on what could constitute changes to reporting methodology and KPIs:

- A licensee may include additional discretionary content where this is in response to its stakeholders' interests, or to address bespoke elements of its EAP commitments.
- A licensee may also report in its AER on additional environmental impacts that are company or regionally specific to it (ie are relevant to the licensee but are not so relevant for the sector as a whole). In doing so, the licensee must follow the principles set out in paragraphs 2.3–2.9 and explain its methodology for reporting the impact.
- If a licensee identifies a common environmental aspect/impact they consider is a material omission from the AER, the licensees may include this in their respective AERs if there is sector-wide agreement and adopt a consistent reporting methodology including KPIs.
- Similarly, if a licensee considers that a KPI specified in Chapter 4 of this Guidance needs further development, the licensees may work with other licensees to determine and propose the most appropriate metric. In such cases, the licensee groups must disclose and explain in its AER any specific exclusions, as well as its plans for reporting the KPIs in future. Ofgem will consider if a change requires updating the guidance in response to any new evidence proposed.
- Conversely, the licensee might be unable to include all of the KPIs that are specified in this Guidance in its AER, particularly in the early Regulatory Years of the Price Control Period, because the underlying data is not available or KPI development is ongoing or due to geographical differences. In such cases, the licensee must disclose and explain any specific exclusions and its plans for reporting the KPIs in future if they are material to the licensee's network.

2.24 Effects from alterations to external figures such as Global Warming Potential (GWP) equivalency ratings must be presented by licensees in such a way that it is clear where a change has been made. When affected, licensees must update all figures with the latest methodology to ensure consistency.

2.25 The licensee may also include in its AER links to other publicly available documents and include summaries of key information.

## 3. AER Commentary

### Section summary

This section provides guidance that licensees must follow when preparing the AER Commentary.

### Introduction

- 3.1 The AER Commentary enables licensees to showcase and provide contextual information and analysis of the categories in the AER KPIs as described in Chapter 4, and enables licensees to add and report on wider issues or achievements relevant to the AER not contained in the KPIs.
- 3.2 The AER Commentary is expected to have sub-headings as set out below. It is not intended to be an exhaustive list as licensees are free to add additional information or context if desirable, though the structure should be followed as closely as possible for ease of comparison.

### AER Commentary section headings (Commentary- and KPI-related)

#### Executive summary

- 3.3 This section should give the broad overview of the AER Commentary sections detailed below, including any headline figures and key findings.
- 3.4 While licensees have flexibility within the Executive Summary to provide information on what may be relevant in any given Regulatory Year, the Executive Summary must include references to a table listing all the commitments in their RIIO-3 EAPs. As this table may be lengthy in nature it may be included as part of the Executive Summary or as an Annex to the AER, which is a presentational choice for the licensee. The table must set out for each EAP commitment:
- one sentence description of the EAP commitment;
  - one sentence summary of the expected benefit or outcome key milestones for implementing the EAP commitment over the course of the Price Control Period;

- any associated milestones and targets for the relevant Regulatory Year and RIIIO-3 period;
- a Red/Amber/Green (RAG) status indicator on progress against the implementation milestones, and a quantified performance figure against any target where possible, where for the former
- red indicates progress against milestones is at significant risk and highly likely to be missed;
- amber indicates progress is delayed but likely to be achievable before the end of the Price Control Period; and
- green indicates progress against milestones is on track; and
- a brief explanation (ie one to two sentences) of the RAG rating (which may be expanded on elsewhere in the AER Commentary).

3.5 The Executive Summary should be as accessible as possible both in content and in the language used.

## Business Carbon Footprint (BCF)

3.6 The AER must cover Scope 1, 2 and 3 emissions. Scope 1 covers direct emissions from owned or controlled sources. Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the licensee. Scope 3 includes all other indirect emissions that occur in a licensee's value chain.

3.7 The licensee must report on all Scope 1 and Scope 2 emissions from its operations. Licensees must include in the AER Commentary further context regarding their activities and progress to reduce Scope 1 and 2 emissions (eg operational transport emissions reduction).

3.8 Licensees must report on all Scope 3 emissions where possible, including any updated screening tests (in line with relevant Greenhouse Gas (GHG) Protocol guidance covering all upstream and downstream categories).<sup>3</sup> We acknowledge that Scope 3 reporting is still a developing area, but we expect licensees' reporting to have developed and be aligned where possible over the previous Price Control Period.

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<sup>3</sup> [Guidance | GHG Protocol](#)

- 3.9 In cases where licensees are unable to report on elements of Scope 3 emissions, they must outline why reporting is not possible, the challenges in developing a reporting methodology, and their programme and milestones to improve their reporting (ie coverage and quality).
- 3.10 In addition to reporting methodology developments, licensees must also report on any Scope 3 emissions reduction strategy or actions currently applied or to be potentially applied in future.
- 3.11 Our RIIO-3 Business Plan Guidance set out that licensees must, where possible, adopt a science-based emissions reduction target to reduce its emissions by a date to be specified by the licensee. The targets must be based on the latest scientific consensus, reflecting the actions deemed necessary to meet the goals of the Paris Climate Agreement. Licensees must therefore report on progress against their targets. We encourage network companies to go further than the positions established in the business planning process, and to establish and report on targets for their Scope 3 emissions if not already included within their science-based target scope.
- 3.12 Licensees must take all reasonable actions to reduce controllable GHG emissions and offsetting, where applicable, must only be used for residual emissions in line with SBTi guidance where possible and using a reasonable equivalent where not. International GHG offsetting should not be relied upon and therefore should not be reported in the AER. The reporting of any domestic offsetting measures must be transparent, including an explanation as to why the emissions could only be offset as opposed to reduced or removed.

### Electricity Transmission Losses (ET only)

- 3.13 We acknowledge the complexity of this area and the strong stakeholder support for action. Each licensee indicated in its RIIO-3 business plan that despite efforts to reduce losses, total losses (TWh) on their networks are expected to increase during the Price Control Period due to network expansion (although reduced in terms of tCO<sub>2</sub>e).

3.14 We aim to target losses in an effective way to make a positive contribution to reduce levels of losses due to both the environmental and system impact.

Licensees, through their AER, must outline the following and, where relevant, any external sources of data:

- Annual transmission losses from the licensee's transmission network (in TWh, as a percentage of total electricity transmitted, and in tonnes of CO<sub>2</sub>e), with commentary on any performance changes and trends;
- Peak transmission losses from the licensee's transmission network in the Regulatory Year (MW), with commentary on the impact of peak trends across the Price Control Period on system costs;
- A short narrative on the actions or interventions in the Regulatory Year that the licensee completed from (or in addition) to its Losses Strategy and the expected benefit of those;
- How they have collaborated and shared best practice across the sector (including with NESO) to establish and develop an improved framework for reducing system losses, as well as assessing and reporting; and
- How they have considered losses when replacing assets (ie with the use of low loss equipment or considering larger cables where the incremental cost is small relative to the long-term saving in losses).

3.15 During the Price Control Period, we expect licensees to innovate and find cost effective ways to better manage losses.

### Sulphur Hexafluoride (SF<sub>6</sub>) & Other Insulation and Interruption Gases (IIGs) – (ET Only)

3.16 Licensees must use the AER Commentary to provide supplementary information on the use of SF<sub>6</sub>, an Insulation and Interruption Gas (IIG) that has an environmental impact due to its high GWP, as well as any other IIGs in use.<sup>4</sup> This must include:

- Total IIG emissions (t/CO<sub>2</sub>e) and leakage rate (%), with commentary on any yearly performance changes, and trends against reduction targets (Price Control Period and long-term);<sup>5</sup>

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<sup>4</sup> IIGs for the purpose of this report will include Sulphur Hexafluoride and all alternative IIGs deployed, provided they have a global warming potential.

<sup>5</sup> IIG emissions data in the AER are to be reported on the same basis as the licensee's IIG methodology submitted to Ofgem under Part B of Special Condition 4.3 (Insulation and Interruption Gas emissions output delivery incentive) of the Transmission Licence.

- Interventions in the previous Regulatory Year that the licensee has completed from its IIG emissions reduction strategy and their estimated impact on emissions;
- The volumes of each IIG currently installed on the licensees' Transmission System (with reference to each IIG's GWP) and the reasoning for any continued addition of SF<sub>6</sub> in the context of licensee commitments regarding the use of SF<sub>6</sub> alternatives;
- A high-level description of the likely future volumes of IIGs, including SF<sub>6</sub>, on licensees' respective networks and any actions taken to minimise their SF<sub>6</sub> inventory;
- The use of Air-Insulated Switchgear (AIS) and other non-IIG alternatives to limit the addition and/or continued use of SF<sub>6</sub> on the network;
- The quantities of SF<sub>6</sub> added during installation, maintenance or servicing due to leakage;
- For decommissioned equipment, the measures taken to recover and dispose of any SF<sub>6</sub>; and
- The use of virgin SF<sub>6</sub> and any actions taken to limit new SF<sub>6</sub> entering the Transmission System (ie leakage capture and recycling).

3.17 We expect licensees to consider how IIG emissions reporting can be evolved over time, with aims for a common reporting methodology. This must include reporting on best practices and any update on collaborative work with other licensees to develop an improved framework for assessing and reporting on IIG emissions (ie improvements to the "top-up" leakage calculation methodology).

3.18 Licensees must use the AER Commentary to include an update on the development of alternative approaches to replace SF<sub>6</sub> assets with alternative equipment that is SF<sub>6</sub>-free and comparatively environmentally sustainable.

### Shrinkage (GT only)

3.19 The gas transmission licensee must report on:

- Compressor Fuel Usage (CFU): the energy used to run compressors to manage pressures within the gas transmission system. This can either be gas or electricity, depending on the power source for the specific compressor.
- Calorific Value Shrinkage (CVS): This is caused where multiple sources of gas with different calorific values are transported and delivered through different offtakes. When the energy is billed, the calorific value of all the gas is capped at a set quantity above the lowest calorific value, hence there will be some energy that has been delivered but not billed.

- Unaccounted for Gas (UAG): This is the remaining quantity of gas which is unallocated after considering all measured inputs and outputs from the system.<sup>6</sup>
- Natural Gas Vented from all compressors, natural gas recompressed and natural gas vented during pipeline maintenance. Natural Gas Vented should be calculated in accordance with the Greenhouse Gas Emissions Calculation Methodology.<sup>7</sup>

3.20 The gas transmission licensee must also report on the projects undertaken by the licensee to investigate the accuracy of measurements at National Transmission System (NTS) entry and exit points, and any activity related to investigation and analysis of data to identify causes of gas that is unaccounted for as above.

### Shrinkage (GD only)

3.21 Licensees must use the AER Commentary to provide supplementary information on shrinkage reduction activities and projects including:<sup>8</sup>

- Pressure management;
- Gas conditioning; and
- Shrinkage activities funded through the relevant uncertainty mechanisms.

3.22 Commentary on individual projects must include:

- A summary of the shrinkage reduction activities that have taken place over the previous Regulatory Year;
- Commentary on how individual projects have been attributed to shrinkage reduction, including the percentage reduction each project achieved;
- An explanation in instances where licensees have not managed to reduce shrinkage in that Regulatory Year, including factors that effected this;
- An overview of the target shrinkage reduction licensees have set for the end of the Price Control Period including an update on their progress to achieving their targets; and
- A high-level description of the likely future modelled and observed (if available) volumes of shrinkage.

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<sup>6</sup> The amount of gas (GWh) that remains unaccounted for after the Entry Close-out Date following the assessment of NTS Shrinkage performed in accordance with the Uniform Network Code which is the legal and contractual framework to supply and transport gas. Some of this gas is leakage.

<sup>7</sup> The gas transmission licensee is required according to SpC 5.8 to maintain a GHG emission calculation methodology approved by the Authority.

<sup>8</sup> GDNs endeavour to reduce their shrinkage through activities such as pressure management, replacing old metallic pipes, and gas conditioning.



## Advanced Leakage Detection and the Digital Platform for Leakage Analytics (GD only)

3.23 The following metrics have been added for RIIO-3 to track the rollout of Advanced Leakage Detection (ALD) and the Digital Platform for Leakage Analytics (DPLA). The GDNs must provide:

- the percentage of low pressure and medium pressure networks that have been surveyed using ALD technology during the regulatory year;
- commentary on each network's progress in rolling out ALD technology (both to meet HSE requirements and beyond);
- commentary on cross-GDN engagement on DPLA rollout to ensure consistency, calibration and continued sharing of insights;
- commentary on preparation for DPLA roll out (within years one and two for NGN, SGN and WWU);
- a Cadent-specific commentary to capture learnings from its rollout of the DPLA (Cadent only); and
- commentary on how they're assimilating these learnings into their DPLA rollout programmes (NGN, SGN and WWU only).

## Biomethane and other low carbon gas connection (GD and GT only)

3.24 The gas distribution and transmission licensees must report on the following:

- A summary of licensees' green gas connections and injection processes and awareness of ongoing issues, as well as the overarching strategy to address these;
- Relevant KPIs in relation to green gas connections and injections, including enquiries received, connection studies completed, capacity connected/volumes injected; and
- Engagement events with relevant stakeholders in the Regulatory Year and any learnings of best practice. Licensees must also outline any upcoming stakeholder events in the forthcoming Regulatory Year and the objectives of these.

3.25 Gas distribution licensees must also provide an update on ongoing work to improve and standardise low carbon gas connections methodologies including collaborative efforts across networks.

## Hydrogen blending (GD and GT only)

3.26 The gas distribution and transmission licensees must report on the following:

- Supplementary information on hydrogen blending activities undertaken in the Regulatory Year including the number of blending connections; and
- An explanation on the impacts of hydrogen blending to the licensees shrinkage volumes, including the percentage reductions of shrinkage attributed to hydrogen blending in the Regulatory Year.

### Supply chain management

- 3.27 Licensees must use the AER Commentary to discuss relevant sustainability metrics/KPIs demonstrating how suppliers proactively meet their environmental supplier codes (or equivalents). This may include, but is not limited to, factors such as decarbonisation, environmental protection and carbon awareness training.
- 3.28 Licensees must provide a description of actions taken to address and embed sustainable procurement principles, such as developments to the licensee's supplier code (or equivalent), KPIs, or pre-qualification questionnaires (PQQ). This may also include collaborative work among licensees or actions taken following ISO guidelines.
- 3.29 Licensees must elaborate on specific activities they have undertaken to promote sustainable procurement (activities and goals that have a tangible impact upon sustainability, for example by aligning with the UN Sustainability Goals).
- 3.30 Licensees may provide analysis on their supply chain and the goods and services procured from suppliers where data is available. We welcome licensees to include further information in their supply chain reporting that could include, for example, the key areas of expenditure (by value) in the previous Regulatory Year and commentary on any known environmental impacts of or efforts to reduce this where this is possible.

### Sustainable Resource Use & Waste

- 3.31 Licensees must use the AER Commentary to build upon and further develop information and metrics around the production and disposal of waste as reporting matures. Companies must report on actions taken to improve resource efficiency (ie company use of materials), waste prevention and the diversion of waste from landfill.

- 3.32 Licensees may use their own metrics relevant to their organisations and reporting systems where this could be of interest to stakeholders, for example, in areas such as reuse and the circular economy. Licensees may also provide a description of actions taken to address and embed sustainable procurement principles.

### Visual Amenity (ET only)

- 3.33 Licensees must use the AER Commentary to report on activities relating to improving visual amenity. This is not strictly prescribed but can include associated themes such as stakeholder engagement and local aesthetic improvements for the local environment.
- 3.34 In relation to Landscape Enhancement Initiative Projects (LEIP) in Electricity Transmission, the licensee must provide information on any LEIP for each preceding Regulatory Year. Such information must include:
- the Designated Area for each project;
  - a short description of each project;
  - the benefits each project is seeking to achieve; and
  - the expected beneficiaries of each project.

### Fluid Filled Cables (FFCs) and Transformers (ET only)

- 3.35 Licensees must provide additional context around the number and leak rates of their FFCs and Transformers, including the impact these leaks have on the environment. Licensees must also provide details of any activities to reduce or mitigate the impact of such leaks.

### Environmental incidents

- 3.36 Licensees must also report on:
- the number and type of environmental incidents which it has reported as required to the relevant environmental regulatory authority (eg Environmental Agency, Scottish Environmental Protection Agency) in the Regulatory Year.
  - the action taken by environmental regulators in relation to warning letters, formal undertakings, enforcement notices, monetary penalties, and prosecution.

## **AER Commentary section headings (Commentary-only)**

### **Embodied Carbon**

- 3.37 Physical infrastructure assets are a significant source of the UK's carbon emissions. If the UK is to achieve its net zero ambitions, it is critical that the carbon lifecycle of infrastructure assets, including construction, maintenance, decommissioning and disposal, is significantly decarbonised.
- 3.38 Embodied carbon (EC) is defined in the UK Green Building Council as "The total greenhouse gas (GHG) emissions (often simplified to 'carbon') generated to produce a built asset. This includes emissions caused by extraction, manufacture/processing, transportation and assembly of every product and element in an asset".<sup>9</sup>
- 3.39 Licensees should work together to ensure consistency in measuring and reporting methodology (ie reported units). They must provide an update on any collaborative work and shared best practice in developing a common approach, with a long-term aspiration to reduce embodied carbon content of new projects. On this basis, methodologies and reporting for embodied carbon must be in alignment with industry standards (for example Publicly Available Specification (PAS) 2080) where this is possible.<sup>10</sup>
- 3.40 The licensee must report on embodied carbon on new construction projects (projects where building started during the RII0-3 Price Control Period) within the AER Commentary where it is possible to do so.
- 3.41 The licensee must report on both estimated embodied carbon of a new construction project at "final design" and "as built" if possible. Given the time lag between design and project completion, which can span over several years, both assessments of EC should be reported alongside each other when the project is completed in a reporting year.

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<sup>9</sup> [Embodied Carbon - Practical Guidance - UKGBC - UK Green Building Council](#)

<sup>10</sup> [PAS 2080 - carbon management in infrastructure | The Carbon Trust](#)

- 3.42 If a licensee has a target for the embodied carbon in new projects, it must clarify whether the target is for the design stage or as built, or both. Some types of construction works, such as street works, may not include a detailed design stage and so assessment of embodied carbon will only refer to “as built”.
- 3.43 Where it is possible to quantify the amount of embodied carbon associated with a new construction project, the licensee must use tCO<sub>2</sub>e/£m as the default embodied carbon reporting unit. When reporting on cables, overhead lines (OHLs), and pipes tCO<sub>2</sub>e/km must be used. Additional reporting metrics may be considered. For example, tCO<sub>2</sub>e/kV for substations/compressor stations may be used by ET/GT licensees. These figures (if available) must be presented in an accessible manner in the AER Commentary.
- 3.44 Given the reporting methodology for embodied carbon is not developed to a level that allows comparable and consistent reporting, the figures reported must be provided in the AER Commentary as opposed to the KPI Table. As the quality and standardisation of reporting improves over the course of the Price Control Period, we will consider amending this Guidance.
- 3.45 When reporting on progress against targets and/or reporting on initiatives to reduce or avoid embodied carbon, licensees must explain what actions have been taken – for example changes to design, material selection and/or optioneering.

## Biodiversity and Natural Capital

- 3.46 Licensees must report on biodiversity in the AER Commentary to detail projects which protect and/or enhance biodiversity. This should include, but is not limited to, any biodiversity baselining and implementation of measurement approaches over the course of the Price Control Period and any specific actions taken in order to enhance biodiversity.
- 3.47 Biodiversity units must be calculated by the licensee using the latest DEFRA Biodiversity Metric for projects in England, and appropriate equivalent in Scotland and Wales (the licensee should explain any modifications and provide

links to further detail on these). Similarly, any changes in the use of metrics should be shared and explained in the AER Commentary.

3.48 The AER Commentary should include reference to:

- The achievement of 10% Biodiversity Net Gain (BNG) or regional equivalent legislative target on projects where applicable;
- The implementation of biodiversity governance strategies included in the licensees' EAP;
- The biodiversity intervention delivery approach and output for the Regulatory Year (ie onsite, offsite or other forms of delivery);
- Any changes in approach to the governance of biodiversity strategies and the delivery of biodiversity interventions; and
- Other environmental activities (in addition to BNG) that aim to mitigate and/or reduce their impact on natural habitats and the local environment that may be of interest to stakeholders.

3.49 Reporting on biodiversity is not required under the AER KPI Table. This is so that any figures regarding biodiversity can be presented alongside the relevant context provided by the narrative. This context is especially important given the geographical differences between the licensees' areas and the divergence in reporting information. As such, all relevant figures and information regarding biodiversity must be reported in an accessible way in the AER Commentary.

## Climate Change Resilience and Adaptation Reporting

3.50 There is increasing stakeholder interest in how licensees are responding to climate-related risks. As such, climate change resilience and adaptation reporting will be mandatory in RIIO-3. We recognise this represents a step change from previous years, where such reporting was optional. Licensees must complete this reporting to the best of their ability, even where methodologies are still maturing.

3.51 Over the course of the Price Control Period, the level and quality of reporting on climate change resilience and adaptation reporting will likely vary between licensees due to the differences in coverage.

3.52 Reporting should focus on strategic and narrative updates, demonstrating how climate resilience is being embedded into long-term planning and operations.

Licensees must include:

- Progress on climate scenario planning, including how climate data modelling and future scenarios are being used to inform network planning;
- Adaptation pathways,<sup>11</sup> including their strategic approach to resilience, how they identify thresholds, triggers and the methodology used;
- Stress Testing for high-impact, low probability events (HILP), including descriptions of methodology and the outcomes;
- Case studies of climate related incidents, illustrating impacts, responses, lessons learned and how these inform future decisions; and
- Integration of climate resilience incidents into operations and innovation.

3.53 Licensees may also include:

- Physical asset protection interventions; and
- A high-level summary of research, monitoring, and ongoing analysis of climate risks across the network undertaken by the licensee.

3.54 Licensees will report on a high-level basis as part of their reporting and must include a clear overview of the licensee's current position on climate resilience. They should present the work they have done, any supporting studies or other relevant climate information they have gathered across the annual period, the main outcomes and findings of this, and how they will use this information to inform work in the next Regulatory Year.

3.55 Licensees must also provide any justification for omissions where requested information has not been provided, and references to related reports including but not limited to Adaptation Reporting Power, Task Force on Climate-Related Financial Disclosures.

3.56 Licensees may use an annex at their discretion to submit relevant information or data.

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<sup>11</sup> The climate guidance relating to Stress Testing, Climate Change Metrics and Indicators and Adaptation Pathway for RIIO-3 have not yet been published.

### Wider Environment & Other Activity (optional)

3.57 Licensees may also report on other projects that affect their operational areas.

Licensees can detail activities not captured above which are wider ranging but nonetheless relevant to the AER. This might include (but is not restricted to) activities such as community and stakeholder engagement.

3.58 Licensees may also use this section of the AER Commentary to relate how such activities align with their EAP commitments.

### Regional Energy Strategic Planning (GD only)

3.59 We require the GDNs to provide commentary in the AERs on work undertaken to inform the Regional Energy Strategic Plans (RESPs), including:

- stakeholder engagement;
- modelling; and
- any other coordination activities undertaken to contribute to the process of RESP development.



## 4. AER Key Performance Indicators (KPI) Table

### Section summary

This section provides guidance that licensees should follow when preparing the AER KPI Table.

### Introduction

- 4.1 Each licensee must include a section covering all the KPIs listed below. Where the licensee has no relevant data and communicates this in the AER Commentary, the KPI value may be “N/A” for certain years. The KPIs should be reported at the licensee level. The figures to be reported in this section will follow both our general instructions in this Guidance and follow the AER KPI Table, a blank version of which is published as Appendix 1 to this Guidance. These figures should form the evidence and basis for some of the content included in the AER Commentary in Chapter 3.
- 4.2 Regarding presentation, we encourage licensees to present the completed AER KPI Table as an Annex to the AER Commentary. This does not diminish the importance of the AER KPI Table as a standalone aspect of the publication, however we consider that by ensuring both the AER Commentary and KPI Table are kept together, stakeholders will find navigation of both easier.
- 4.3 Where possible, licensees must include information on all KPIs for the four Regulatory Years preceding the current Regulatory Year for the purposes of comparative analysis. Where changes to methodology or lack of historical data prevent this, any reasoning should be explained in the AER Commentary, a footnote to the KPI Table, or a supporting methodology document (at the licensees’ stylistic discretion).

### AER KPI Table section headings

#### Contextual Metrics

- 4.4 Licensees must include contextual metrics outlining the size and scope of the company.

4.5 Licensee's must include information pertaining to the Regulatory Year, including:

- Annual revenue and capex;
- Number of employees;
- Total network line length (km); and
- Number of connections.

## BCF

4.6 The licensees must report on BCF Scopes 1 and 2 year-on-year in both location-based and market-based methodology, and both including and excluding Transmission Losses (ET) or Shrinkage (GD/GT).

4.7 The total baseline reduction target will be reported in line with the licensee's SBTi target approved as part of the RIIO-3 business planning process. If the licensee also has variations and/or specific Scope targets, these targets should also be included in the space indicated. Licensees can provide further detail and commentary as appropriate in the AER Commentary.

4.8 Licensee's must report on their BCF (in tCO<sub>2</sub>e emitted) as set out in the licensee's approved EAP, including:

- Operational Transport;
- Building energy usage including substation/compressor station energy;
- Fuel combustion from temporary generation;
- Fugitive emissions (eg SF<sub>6</sub>) - please note that the GWP of SF<sub>6</sub> (and other IIGs) should be taken from the latest DESNZ publication of UK GHGs;<sup>12</sup> and
- Losses or shrinkage.

4.9 The licensee must report on all Scope 1 and 2 emissions on an "operational control" basis (ie report on all emissions from operations carried out as part of the licensee's authorised business).

4.10 The licensee should also include the following charts:

- A stacked column chart and, if the licensee desires, a pie chart to show the composition of total Scope 1 and Scope 2 emissions excluding losses over the Price Control Period in tCO<sub>2</sub>e. This chart should include the licensee's

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<sup>12</sup> <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

BCF target for the end of the Price Control Period displayed by a downward sloping trend line;

- A column chart showing the evolution over time of the CO<sub>2</sub>e intensity of an operational km travelled expressed in kgCO<sub>2</sub>e/km; and
- A stacked column chart showing the evolution over time of the energy consumption at Licensee operational and non-operational sites, in kilowatt-hours.

4.11 The licensee must report on all available Scope 3 emissions and outline less developed areas in the note's column where appropriate.

4.12 Carbon offsetting is to be reported separately to the Scope 1 and 2 emissions, as part of the KPI Table BCF tab, below the input sheet for Scope 1 and 2 emissions. This reporting must not include international offsetting.

### Shrinkage (GT only)

4.13 The gas transmission licensee must report on the following:

- Compressor fuel usage by fuel (GWh);
- Calorific value shrinkage (GWh);
- Unaccounted for gas (GWh), including metering errors and leakage;
- Venting from all compressors (tCO<sub>2</sub>e);
- Saved gas recompressed from pipeline maintenance work (tCO<sub>2</sub>e); and
- Leaked gas during maintenance work (tCO<sub>2</sub>e).

### Shrinkage (GD only)

4.14 The licensee must report on modelled shrinkage using metrics tCO<sub>2</sub>e and GWh on the following parameters, using the Shrinkage and Leakage model:

- Annual levels of gas leakage from the distribution system, reflecting the volume of methane lost into the atmosphere from fugitive emissions and venting;
- The volumes of gas lost from each source of leakage (low pressure mains, medium pressure mains, services, AGIs, interference);
- The leakage component of the licensee's overall shrinkage target;
- The tCO<sub>2</sub>e volumes for the above values, using a conversion factor to reflect the GWP of unburned gas;<sup>13</sup>

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<sup>13</sup> Conversion factor 1373tCO<sub>2</sub>e/GWh. The following assumptions are used to determine the quoted conversion factor: CV MJ/m<sup>3</sup> natural gas: 39.6; % of CH<sub>4</sub> in natural gas: 82.97%; Density of CH<sub>4</sub> in kg/m<sup>3</sup>: 0.656; Global Warming Potential of CH<sub>4</sub> in tCO<sub>2</sub>e: 28; Proportion of CO<sub>2</sub> in natural gas: 2.4%; Density of CO<sub>2</sub> kg/m<sup>3</sup>: 1.98.

- Annual volumes for the other sources of shrinkage (own use gas and theft);
- Any activities undertaken during the Regulatory Year (other than theft investigations) that are expected to materially affect shrinkage volumes, but which are not reflected in the calculations of the Shrinkage & Leakage Model;<sup>14</sup>
- Gas conditioning activities impact on shrinkage volumes;
- Pressure management impact on shrinkage volumes; and
- Repex on shrinkage volumes.

4.15 Once available, the licensee must also report using observed measures of shrinkage in the metrics tCO<sub>2</sub>e and GWh on the parameters listed above.

### Biomethane and other low gas connections (GD and GT only)

4.16 The gas distribution and gas transmission licensees must report connections data for the Regulatory Year, including a breakdown of the different gases that are classified as other green gas. This should include:

- The number of enquiries in the Regulatory Year;
- The number of connection studies;
- The capacity connected in standard cubic meter per hour (SCMH);
- The number of connections;
- The volume (energy value of biomethane injected) in GWh; and
- GD licensees should also include the average monthly flow rate (in SCMh) for all connections irrespective of connection date.

### Hydrogen blending (GD and GT only)

4.17 The gas distribution and transmission licensees must report on the following parameters:

- The volume (energy value of hydrogen blending) in GWh;
- The number of blending sites;
- The capacity blended in SCMh; and
- Blending ratio (%) of hydrogen in the gas mix.

### SF<sub>6</sub> & Other IIGs (ET only)

4.18 The licensee must report on the following parameters:

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<sup>14</sup> A definition for The Shrinkage and Leakage Model is contained in the gas distribution Licence. We consider changes of 1 GWh or more to be material, though licensees should also use their own judgement in determining this, and should explain their thinking.

- Total IIG emissions<sup>15</sup> (t/CO<sub>2</sub>e) – reported as a total against the end of the Price Control Period target, and as each IIG individually.
- The volumes of each IIG currently installed on the licensees' Transmission System (with reference to the GWP of each IIG);
- SF<sub>6</sub> leakage rate as percentage of bank (in line with the IIG Methodology Statement) against the end of the Price Control Period target;
- Leakage rate of non-SF<sub>6</sub> alternative IIGs on the licensees network;
- The total number of assets that contain IIGs;
- The number of IIG assets replaced (per annum);
- The number of SF<sub>6</sub> alternative assets;
- Percentage of assets containing SF<sub>6</sub> (as a % of bank);
- SF<sub>6</sub> leakage rate as percentage of bank at the start of the Regulatory Year against the end of the Price Control Period target;
- Amount of virgin and recycled SF<sub>6</sub> (in kg) reintroduced and/or added to the network;
- Interventions<sup>16</sup> undertaken by the licensee in the preceding Regulatory Year that have been completed; and
- Impact of interventions, meaning the emissions avoided or abated (in t/CO<sub>2</sub>e) due to the interventions defined above.

4.19 Regarding the use of alternative IIGs on the network. Reporting should be repeated and distinct for each alternative IIG on the network. The name of each of alternative IIG should be clearly set out within the AER KPI Table.

## Electricity Transmission Losses – (ET Only)

4.20 The licensee must report on the following for electricity transmission losses:

- Annual transmission losses from the licensee's Transmission System in TWh, as a percentage of total electricity transmitted, and in tCO<sub>2</sub>e;
- The target for the losses by the end of the Price Control Period;
- Annual interventions,<sup>17</sup> reported by number;
- The impact of interventions reported in megawatt hours and tonnes of CO<sub>2</sub>e (per annum); and

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<sup>15</sup> IIG emissions data in the AER are to be reported on the same basis as the licensee's IIG methodology submitted to Ofgem under Part B of Special Condition 4.3 (Insulation and Interruption Gas emissions output delivery incentive) of the Transmission Licence.

<sup>16</sup> Interventions in this context will mean targeted actions that result in reduction of SF<sub>6</sub> emissions; licensees will report on the interventions through a narrative response including the SF<sub>6</sub> alternative arising.

<sup>17</sup> Interventions in this context mean targeted activities with a discernible impact on reducing electricity losses.

- The targets and impact of interventions by the end of the Price Control Period.

## Supply Chain Management

4.21 The licensee must report on:

- The percentage of suppliers (by value) meeting the licensee's environmental supplier code showing progress towards the target to have 80% of suppliers (by value) signed up over the Price Control Period.

## Sustainable Resource Use and Waste

4.22 The licensee must report in the AER KPI table on Resource Use and Waste consistent with GRI standards (excluding Streetworks) according to waste destination (separated as Non-Hazardous/Non-Special and Hazardous/Special):<sup>18</sup>

- Total Waste Produced directly by licensee (tonnes);
- % Reused/Recycled;
- % Energy from Waste;
- Total % Sent to Landfill;
- Total % Other (where applicable); and
- Total % of Waste diverted from Landfill (excluding compliance waste, defined as waste that must legally be disposed of to landfill).

4.23 Any waste that does not fall under the three typical categorisations of waste treatment (recycle/reused, energy from waste and landfill) may be categorised as 'Other (where applicable)'. Any additional context or reasoning for the destination of some of the licensee's waste may be provided in the AER Commentary, and licensees are required to explain the treatment of any waste categorised as 'Other' in the AER Commentary.

## Visual amenity (ET only)

4.24 The licensee must report on the following:

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<sup>18</sup> According to the Environmental Protection Act 1990 and other regulations and or relevant legislation. For example, waste with hazardous properties which may render it harmful to human health or the environment is called special waste in Scotland. Elsewhere in the UK and the EC, special waste is referred to as hazardous waste and managing and regulating it is essential to minimise any effects on the environment.

- the number of LEIPs commenced in the Regulatory Year (#);
- the amount of funding it expects to be allocated to each LEIP started (£/m).

### Fluid Filled Cables and Transformers (ET only)

4.25 The licensee must report the volume of fluid (oil) used to top up cables and transformers as a percentage of volume in service against the volume recorded at the start of the Price Control Period (used as the baseline):

- ‘Oil in Service’ means fluid included in the cables, transformers and associated on-network storage tanks;
- ‘Cable Oil Top up’ means the amount of oil added during the Regulatory Year to applicable cables;
- ‘Transformer Oil Top up’ means the amount of oil added during the Regulatory Year to applicable transformers;
- ‘Removal of FFC’ means removal from network or where cables are sealed;
- ‘Leak reduction’ means reduction against the baseline leakage at the beginning of the Price Control Period;
- ‘Oil recovered’ means the oil recovered from leakage; and
- Licensees are required to provide context around their fluid filled cables KPIs in their AER Commentary.

### Environmental incidents

4.26 The licensee may report on:

- The number and type of environmental incidents which it has reported to the relevant environmental regulatory authority (eg Environmental Agency, Scottish Environmental Protection Agency) in the Regulatory Year.

## Appendix 1 – AER KPI Table

- A1.1 The AER KPI Table is published on the Ofgem website alongside this Guidance.
- A1.2 In circumstances where reporting standards have changed, such as GWP factors, the details must be given in the notes column and expanded upon in the commentary section if necessary. Both figures should be reported on in the given Regulatory Year with the previous figure being displayed in red as demonstrated below.