

Guidance

Environmental Reporting Guidance

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This guidance covers the Annual Environmental Report (AER) licence obligation for the RIO-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 RII0-3 price control in December 2025.¹ These set out the key elements of the price control from 1 April 2026 to 31 March 2031. This included a licence obligation for licensees to publish an Annual Environmental Report (AER).

Purpose of the Annual Environmental Reports

- 1.2 The purpose of the AERs is to provide a yearly update to stakeholders on licensees' progress in achieving their Environmental Action Plan Commitments as set out in their Business Plans. The Environmental Action Plans are licensees' strategies for how they propose they will mitigate the impact of their business on the environment. The AERs also allow stakeholders to monitor licensees' performance delivering their Environmental Action Plan Commitments, their approach to environmental management, and environmental performance during the Price Control Period; they enable comparability of performance between licensees where possible.

Annual Environmental Report Obligations

- 1.3 This Environmental Reporting Guidance (Guidance) has been developed for licensees to comply with their obligation in Special Condition (SpC) 9.1 of the electricity transmission (ET), gas distribution (GD) and gas transmission (GT) licences to prepare and publish an AER.
- 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.

¹ '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 must comprise of 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 respectively.

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 Part B of SpC 9.1.

2. General instructions and requirements

Section summary

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

Principles for reporting

- 2.1 When compiling the AER, licensees must adhere to the key principles which are set out in paragraphs 2.2–2.9.²
- 2.2 **Relevant:** Ensure the data collected and reported reflects the relevant environmental impacts of the company for the impact categories specified within this Guidance.
- 2.3 **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.
- 2.4 **Qualitative:** If quantitative data cannot be included for a relevant environmental impact because, for example, data is not available and/or KPI development is ongoing, licensees should include a qualitative explanation. This should cover the materiality of the environmental impact, changes in impact compared to the previous year, and whether licensees have plans to report quantitative data or a KPI in a future AER.
- 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 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”.

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- 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 licensees 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.
- 2.10 **Accessible:** Present information so that it is readily available and easy to understand for all stakeholders. This ensures the above transparency and aligns with best practice reporting.

Report structure

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

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- 2.13 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 the AER KPI table they wish to include in their AER, which is also permitted.
- 2.14 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.
- 2.15 We have included a template for the structure and content of the AER KPI Table alongside this Guidance. This is to ensure that the AER KPI Table focuses on material environmental matters; is relevant; is easy to understand; is accurate; and, where possible, is comparable across licensees.
- 2.16 In cases where a corporate group covers multiple licensees, a single document is acceptable, but the corporate structure must be defined, and, where data and narrative reporting is possible, the performance of each licensed area must be clearly identifiable in the report for each environmental commitment. Where this is not possible, licensees should provide evidence explaining why this cannot be achieved.
- 2.17 There is no strict limit on the length of the AER. Licensees 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, the AER KPI Table section will not typically exceed 5 pages, while the AER Commentary section will 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

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

Scope of the AER

- 2.20 The Guidance sets out the broad scope of the AER. There may be instances where licensees may wish to go beyond this Guidance when the licensees consider it 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.
- 2.21 The AER must provide stakeholders with a detailed picture of licensees' environmental activities. This includes reporting on progress in implementing their Environmental Action Plan Commitments and meeting Environmental Action Plan targets, where applicable. Licensees must also use the AER to demonstrate to stakeholders what steps or activities they have undertaken to manage and, if possible, reduce their environmental impact more generally.
- 2.22 The structure, content and KPIs described in this Guidance must be the basis for licensees' AER. Licensees may make enhancements to their AER, going beyond those specified in this Guidance. Where licensees do so for an aspect of its AER that relates solely to its activities, licensees must explain the change in reporting, figures and/or parameters used.
- 2.23 Where licensees change their reporting methodology including their KPIs, we expect licensees to explain the change in the AER Commentary, including outlining the figures and/or parameters used.
- 2.24 Below is some further guidance on what could constitute changes to reporting methodology and KPIs:

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- licensees may include additional discretionary content where this is in response to stakeholders' interests, or to address bespoke elements of their Environmental Action Plan Commitments;
- licensees may also report in the AER on additional environmental impacts that are company or regionally specific (ie are relevant to the specific licensee but are not so relevant for the sector as a whole). In doing so, the specific licensee must follow the principles set out in paragraphs 2.3–2.9 and explain its methodology for reporting the impact;
- if licensees identify a common environmental aspect/impact they consider is a material omission from the AER, licensees may include this in their respective AERs if there is sector-wide agreement and adopt a consistent reporting methodology including KPIs;
- similarly, if licensees consider that a KPI specified in Chapter 4 of this Guidance needs further development, licensees may work together to determine and propose the most appropriate metric. In such cases, the licensees must disclose and explain in its AER any specific exclusions, as well as plans for reporting the KPIs in future. Ofgem will consider if a change requires updating the guidance in response to any new evidence proposed; and
- conversely, licensees might be unable to include all of the KPIs that are specified in this Guidance in the 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, licensees must disclose and explain any specific exclusions and plans for reporting the KPIs in future if they are material.

2.25 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 as available at the start of the Regulatory Year to ensure consistency.

2.26 Licensees may also include in the 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 Environmental Action Plans. 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 licensees. The table must set out for each Environmental Action Plan Commitment:
- one sentence description of the Environmental Action Plan Commitment;
 - one sentence summary of the expected benefit or outcome key milestones for implementing the Environmental Action Plan Commitment over the course of the Price Control Period;

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- any associated milestones and targets for the relevant Regulatory Year and RIIO-3 period;
 - a Blue/Red/Amber/Green (BRAG) status indicator on progress against the implementation milestones, and a quantified performance figure against any target where possible, where for the former
 - (1) blue indicates that the Environmental Action Plan Commitment is completed, in full and on time;
 - (2) red indicates progress against milestones is at significant risk and highly likely to be missed;
 - (3) amber indicates progress is delayed but likely to be achievable before the end of the Price Control Period; and
 - (4) green indicates progress against milestones is on track; and
 - a brief explanation (ie one to two sentences) of the BRAG 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 (all)

- 3.6 The AER must cover Scope 1, 2 and 3 emissions for Business Carbon Footprint (BCF).³ Scope 1 covers direct emissions from sources owned or controlled by the licensee. Scope 2 covers indirect emissions from the generation of purchased electricity consumed by the licensee. Scope 3 includes all other indirect emissions, which are consequences of the activities of the licensee but which occur from sources not owned or controlled by the company.
- 3.7 Licensees 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). We acknowledge that Scope 3 reporting is still a developing area, but we expect licensees’

³ For greater detail on Scopes 1, 2, and 3, see [Guidance | GHG Protocol](#).

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reporting to have developed and be aligned where possible over the previous Price Control Period.

- 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 Chapter 4 of 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.
- 3.12 Where these targets were agreed in Final Determinations, relevant licensees must therefore report on progress against their targets from the approved baseline. 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.
- 3.13 We consider that it is best practice to take all reasonable actions to reduce controllable GHG emissions and offsetting, where applicable, should only be used for residual emissions in line with SBTi guidance where possible and using a reasonable equivalent where not. Licensees should prioritise domestic offsetting where available and financially reasonable, but they may use verified international offsets and state explicitly in the AER whether offsets are domestic or international. The reporting of any offsetting measures must be transparent, including an explanation as to why the emissions could only be offset as opposed to reduced or removed.

Environmental incidents (all)

- 3.14 Licensees must also report on:

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- 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.

Resource use and waste (all)

- 3.15 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. They must report on actions taken to improve resource efficiency (ie use of materials), waste prevention and the diversion of waste from landfill.
- 3.16 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.

Supply chain management (all)

- 3.17 Licensees should 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.
- 3.18 Licensees should 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.
- 3.19 Licensees should elaborate on specific activities they have undertaken to promote sustainable procurement (activities and goals that have a tangible

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impact upon sustainability, for example by aligning with the UN Sustainability Goals).

- 3.20 Licensees may provide analysis on their supply chain and the goods and services procured from suppliers where data is available. We welcome licensees including 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.

Biomethane and other green gas connections (GD and GT)

- 3.21 Relevant 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; 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.
- 3.22 GD licensees must also provide an update on ongoing work to improve and standardise green gas connections methodologies including collaborative efforts across networks.

Hydrogen blending (GD and GT)

- 3.23 Relevant 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 shrinkage volumes, including the percentage reductions of shrinkage attributed to hydrogen blending in the Regulatory Year.

Electricity transmission losses (ET)

- 3.24 We acknowledge the complexity of this area and the strong stakeholder support for action. Licensees indicated in their Business Plans 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 tCO₂e).

3.25 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.

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

- annual transmission losses from their transmission network (in TWh, as a percentage of total electricity transmitted, and in tonnes of CO₂e), with commentary on any performance changes and trends;
- a short narrative on the actions or interventions in the Regulatory Year that licensees completed from (or in addition) to their Losses Strategies 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;
- any work undertaken to define peak losses and better understand the impact of peak trends on the system, including any engagement with NESO and other TOs; 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).

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

Fluid filled cables and transformers (ET)

3.27 Relevant licensees must provide additional context around the number and leak rates of their fluid filled cables (FFCs) and transformers (ie top-ups), 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.

SF₆ & other IIG emissions (ET)

3.28 Relevant licensees must use the AER Commentary to provide supplementary information on the use of Sulphur Hexafluoride (SF₆), an Insulation and

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Interruption Gas (IIG) that has an environmental impact due to its high GWP, as well as any other IIGs in use.⁴ This must include:

- total IIG emissions (t/CO₂e) and leakage rate (%), with commentary on any yearly performance changes, and trends against reduction targets (Price Control Period and long-term);⁵
- activities in the previous Regulatory Year that licensees have completed from their IIG emissions reduction strategy and their estimated impact on emissions;
- the volumes of each IIG currently installed on their Transmission System (with reference to each IIG's GWP) and the reasoning for any continued addition of SF₆ in the context of licensee commitments regarding the use of SF₆ alternatives;
- a high-level description of the likely future volumes of IIGs, including SF₆, on their networks and any actions taken to minimise their SF₆ inventory;
- the use of Air-Insulated Switchgear (AIS) and other non-IIG alternatives to limit the addition and/or continued use of SF₆ on the network;
- the quantities of SF₆ added during installation, maintenance or servicing due to leakage;
- for decommissioned equipment, the measures taken to recover and dispose of any SF₆; and
- the use of virgin SF₆ and any actions taken to limit new SF₆ entering the Transmission System (ie leakage capture and recycling).

3.29 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).

3.30 Licensees must use the AER Commentary to include an update on the development of alternative approaches to replace SF₆ assets with alternative equipment that is SF₆-free and comparatively environmentally sustainable.

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

⁵ 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.

- 3.31 Licensees reporting must be in line with the ENA's Engineering Recommendation S38.⁶

Visual amenity (ET)

- 3.32 Relevant 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.
- 3.33 In relation to Landscape Enhancement Initiative Projects (LEIP) in Electricity Transmission, licensees must provide information on any LEIP for each preceding Regulatory Year. Such information must, in line with Special Condition 5.4 of the relevant licensees' licences, include:
- the Designated Area for each project;
 - the benefits each project is seeking to achieve; and
 - the expected beneficiaries of each project.

Shrinkage (GD)

- 3.34 Where practicable, relevant licensees must use the AER Commentary to provide supplementary information on shrinkage reduction activities and projects including:⁷
- Pressure management;
 - Gas conditioning; and
 - Shrinkage activities funded through the relevant uncertainty mechanisms.
- 3.35 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, where practicable;
 - An explanation of instances where licensees have not managed to reduce shrinkage in that Regulatory Year, including factors that affected this;

⁶ [ENA EREC S38 Extract 180902050419.pdf](#)

⁷ GDNs endeavour to reduce their shrinkage through activities such as pressure management, replacing old metallic pipes, and gas conditioning.

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- A summary of licensees' shrinkage reduction targets for the Price Control Period and their progress toward meeting them; and
 - A high-level description of the likely future modelled and observed (if available) volumes of shrinkage.
- 3.36 Where licensees provide commentary on how the above individual projects have been attributed to shrinkage reduction, including the percentage reduction achieved, this must be done in a manner consistent with the capabilities of the SLM. This attribution must only be provided where the effects of a project can be robustly represented through changes to SLM parameters (for example, pipe material and length, average system pressure, or monoethylene glycol saturation).
- 3.37 Quantitative attribution should only be provided where impacts can be meaningfully isolated, recognising that year-on-year changes in network characteristics (particularly due to repex), weather-driven pressure requirements, and the diminishing role of gas conditioning may limit the interpretability of disaggregated results. Where project benefits cannot be quantified using the SLM, licensees must provide a qualitative explanation instead.
- 3.38 To support consistent and comparable reporting, licensees must work collaboratively to develop a common attribution methodology, including the use of a common baseline year anchored to representative RIIO-GD2 operating conditions, and agreed assumptions for holding model components (not relevant to the activity being assessed) constant when determining project impacts.
- 3.39 The following information supports tracking the rollout of Advanced Leakage Detection (ALD) and the Digital Platform for Leakage Analytics (DPLA). Relevant licensees must provide:
- commentary on progress in rolling out ALD technology (both to meet HSE requirements and beyond);
 - commentary on inaccessible sites where appropriate;
 - commentary on cross-licensee engagement on DPLA rollout to ensure consistency, calibration and continued sharing of insights;

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- 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
- a metric on how licensees are assimilating these learnings into their DPLA rollout programmes (NGN, SGN and WWU only).

Shrinkage (GT)

3.40 The relevant licensee may add commentary on the below KPIs:

- Compressor Fuel Usage (CFU);
- Calorific Value Shrinkage (CVS);
- Unaccounted for Gas (UAG);
- Natural Gas vented from all compressors;
- Saved gas recompressed from pipeline maintenance work; and
- Vented gas during pipeline maintenance work.

3.41 The relevant licensee must also report on the projects undertaken 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.

AER Commentary section headings (Commentary-only)

Biodiversity and Natural Capital (all)

3.42 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.

3.43 Biodiversity units must be calculated by licensees using the latest DEFRA Biodiversity Metric for projects in England, and appropriate equivalent in Scotland and Wales (licensees 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.

3.44 The AER Commentary should include reference to:

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- 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 licensees' Environmental Action Plans;
- 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.

3.45 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 (all)

3.46 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.

3.47 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.

3.48 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;

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- Adaptation pathways,⁸ 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.

3.49 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.

3.50 Licensees will report on a high-level basis as part of their reporting and must include a clear overview of their 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.

3.51 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.

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

Embodied Carbon (all)

3.53 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.

⁸ The climate guidance relating to Stress Testing, Climate Change Metrics and Indicators and Adaptation Pathway for RIIO-3 have not yet been published.

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- 3.54 Embodied carbon 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”.⁹
- 3.55 Licensees must report on embodied carbon on construction projects within the AER Commentary where it is possible to do so. These include both projects that started prior to and during the RIIO-3 Price Control Period.
- 3.56 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.¹⁰
- 3.57 Licensees must report on both estimated embodied carbon 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 embodied carbon should be reported alongside each other when the project is completed in a reporting year.
- 3.58 If licensees have a target for the embodied carbon in new projects, they must clarify whether the target is for the design stage or as built, or both. Some types of construction works, such as street works applicable to GD, may not include a detailed design stage and so assessment of embodied carbon will only refer to “as built”.
- 3.59 Where it is possible to quantify the amount of embodied carbon associated with a new construction project, licensees must use tCO₂e/£m as the default embodied carbon reporting unit. When reporting on cables, overhead lines

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

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

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(OHLs), and pipes tCO₂e/km must be used. Additional reporting metrics may be considered. For example, tCO₂e/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.

- 3.60 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 AER KPI table. As the quality and standardisation of reporting improves over the course of the Price Control Period, we will consider amending this Guidance.
- 3.61 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.

Wider Environment & Other Activity (optional)

- 3.62 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.
- 3.63 Licensees may also use this section of the AER Commentary to relate how such activities align with their Environmental Action Plan Commitments.

Regional Energy Strategic Planning (GD)

- 3.64 Relevant licensees must 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.

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3.65 As a part of this requirement, licensees must demonstrate their level of engagement with the NESO-led RESP process, alongside any additional engagement undertaken supporting the process of RESP development. We do not expect licensees to provide analysis of RESP outputs as a part of this requirement.

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 Licensees must include a section covering all the KPIs listed below. Where licensees have no relevant data and communicate 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 template for the structure and content of which is published alongside 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 with the AER Commentary and AER KPI table 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 (eg in the case of a baseline year which does not allow four Regulatory Years of comparison), any reasoning should be explained in the AER Commentary, a footnote to the AER KPI table, or a supporting methodology document (at the licensees’ stylistic discretion).

AER KPI Table section headings

Business Carbon Footprint (all)

- 4.4 Licensees must report on BCF Scopes 1 and 2 year-on-year in both location-based and market-based methodology, and where relevant both including and excluding Transmission Losses (ET) or Shrinkage (GD/GT). Where licensees report on the latter in Scope 3, they should do so using the rows provided specifically for these categories (in order to avoid double-counting elsewhere).
- 4.5 The total baseline reduction target will be reported in line with the target most recently approved as part of RIIO-3. Licensees can provide further detail and commentary as appropriate in the AER Commentary.
- 4.6 Licensees must report on their BCF (in tCO₂e emitted) as set out in their approved Environmental Action Plan, including:
- Energy consumption (excluding electricity);
 - Electricity consumption;
 - Operational transport;¹¹
 - Fugitive emissions (eg SF₆) where these are not reported on as part of shrinkage;¹²
 - Venting emissions where these are not reported on as part of shrinkage;
 - Fuel combustion; and
 - Losses or shrinkage.
- 4.7 Licensees 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 licensees’ authorised business).
- 4.8 Licensees may remove rows in the Business Carbon Footprint tab of the AER KPI Table where these rows are not relevant to their sector (eg ET licensees may remove those to do with venting emissions). The first year they do this, they should remark on this removal and reasoning therefore in the AER Commentary.

¹¹ This refers to the relevant licensee’s fleet.

¹² Please note that the GWP of SF₆ (and other IIGs) should be taken from the latest DESNZ publication of UK GHGs: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

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4.9 Licensees should also include the following charts:

- A stacked column chart and, optionally, a pie chart to show the composition of total Scope 1 and Scope 2 emissions excluding losses over the Price Control Period in tCO₂e. This chart should include the BCF target for the end of the Price Control Period displayed where possible by a downward sloping trend line;
- A column chart showing the evolution over time of the CO₂e intensity of operational transport emissions, expressed in appropriate units; and
- A stacked column chart showing the evolution over time of the energy consumption at operational and non-operational sites, in kilowatt-hours.

4.10 Licensees must report on all available Scope 3 emissions and outline less developed areas where appropriate.

4.11 Carbon offsetting is to be reported separately to the Scope 1 and 2 emissions. This reporting must include a breakdown of national and international offsetting where the latter is used.

Contextual metrics (all)

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

4.13 Licensees must include information pertaining to the Regulatory Year, including the following as at the end of the Regulatory Year:

- Number of connections (total);¹³
- Number of employees (FTE);
- Network size (km), including underwater cables;
- Annual revenue (£);
- Capex (£); and
- Throughput (GWh) (GD/GT only).

Environmental incidents (all)

4.14 Licensees must report on:

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

¹³ Connections are defined as 'distinct connection or meter points where third parties are physically connected to the network'.

Resource use and waste (all)

4.15 Licensees must, where it is possible for them to do so, report in the AER KPI table on Resource Use and Waste consistent with GRI 306 according to waste destination (separated as Non-Hazardous/Non-Special and Hazardous/Special):¹⁴

- Total Waste Produced directly by licensee (tonnes);¹⁵
- % Reused
- % Recycled;
- % Energy from Waste;
- % Other Recovery;
- % Sent to Landfill;
- % Other Disposal; and
- % Other (where applicable).

4.16 Any waste that does not fall under the two typical categorisations of waste treatment (recovery and disposal) may be categorised as ‘Other’ (where applicable). Any additional context or reasoning for the destination of some of the 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.

4.17 Where a lack of information from operational waste contractors and subcontractors renders a breakdown into all individual rows of the relevant KPI table impossible, we expect the licensee to report as fully as possible and to comment on this difficulty and proposed resolutions in the AER Commentary.

Supply chain management (all)

4.18 Licensees must report on:

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

¹⁴ 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.

¹⁵ This includes construction waste generated by operational waste contractors and subcontractors.

Biomethane and other green gas connections (GD and GT)

4.19 Relevant 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)

4.20 Relevant licensees must report on the following parameters:

- The volume of hydrogen blended (energy value) in GWh;¹⁶
- The number of blending sites;
- The capacity for blending in SCMh;¹⁷
- Average blending ratio (%) of hydrogen;¹⁸
- Blending ratio (%) of hydrogen at site-level; and
- Colour of hydrogen blended (% , ie to add up to 100%).

Electricity transmission losses (ET)

4.21 Relevant licensees must report on the following for electricity transmission losses:

- Annual transmission losses from their Transmission System in TWh, as a percentage of total electricity transmitted, and in tCO₂e;
- The target for the losses by the end of the Price Control Period;
- The impact of interventions reported in megawatt hours and tonnes of CO₂e (per annum); and
- The targets and impact of interventions by the end of the Price Control Period.

¹⁶ The 'volume of hydrogen blended (energy value)' refers to the actual hydrogen that is blended into the gas network.

¹⁷ The 'capacity for blending' refers to the amount of capacity reserved or made available for hydrogen to be blended into the gas network.

¹⁸ The blending ratio should be calculated on a volume basis, defined as the total volume of hydrogen injected at the site over the Regulatory Year divided by the total volume of gas flowing downstream of the blending point over the same period, expressed as a percentage.

Fluid filled cables and transformers (ET)

4.22 Relevant licensees 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 the AER Commentary.

SF₆ & Other IIG emissions (ET)

4.23 Relevant licensees must report on the following parameters:

- Total IIG emissions¹⁹ (t/CO₂e) – reported as a total against the end of the Price Control Period target, and as each IIG individually.
- The mass (in kg) of each IIG currently installed on the licensees’ Transmission System (with reference to the GWP of each IIG);
- SF₆ leakage rate as percentage of bank (in line with the IIG Methodology Statement);
- Leakage rate of non-SF₆ 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 SF₆ alternative assets;
- Percentage of SF₆ and other IIG assets containing SF₆ (as a % of bank);
- Amount of virgin and recycled SF₆ (in kg) reintroduced and/or added to the network;

¹⁹ 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.

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- Interventions²⁰ undertaken in the preceding Regulatory Year that have been completed; and
- Impact of interventions, meaning the emissions avoided or abated (in t/CO₂e) due to the interventions defined above.

4.24 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.

Visual amenity (ET)

4.25 Relevant licensees must report on the following:

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

Shrinkage (GD)

4.26 Relevant licensees must report on modelled shrinkage against up-to-date baseline figures using metrics tCO₂e 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 overall shrinkage target;
- The tCO₂e volumes for the above values, using a conversion factor to reflect the GWP of unburned gas;²¹
- Annual volumes for the other sources of shrinkage (own use gas and theft);

²⁰ Interventions in this context means: (a) targeted actions funded through the price control that are intended to reduce IIG emissions eg, asset replacements, refurbishments, retro-filling, monitoring activities, and (b) other actions funded through the price control that have indirectly contributed to lower IIG emissions. Licensees will list the actions under (a) and report on (b) through a narrative response. Reporting will include the SF₆ alternative arising from the intervention.

²¹ Conversion factor 1373tCO₂e/GWh. The following assumptions are used to determine the quoted conversion factor: CV MJ/m³ natural gas: 39.6; % of CH₄ in natural gas: 82.97%; Density of CH₄ in kg/m³: 0.656; Global Warming Potential of CH₄ in tCO₂e: 28; Proportion of CO₂ in natural gas: 2.4%; Density of CO₂ kg/m³: 1.98.

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- 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;²² and, where practicable
 - Gas conditioning activities impact on shrinkage volumes;
 - Pressure management impact on shrinkage volumes; and
 - Repex on shrinkage volumes.
- 4.27 Once available, licensees must also report using observed measures of shrinkage in the metrics tCO₂e and GWh on some of the parameters listed above.
- 4.28 We have decided to add observed shrinkage reporting within the KPI table, but to narrow the scope of reported metrics to those that observed data can realistically and robustly support at this stage.
- 4.29 This approach recognises that, while the rollout of ALD and the DPLA will increasingly enable observed measurement of leakage, other components of shrinkage – including own use gas, theft, interference and attribution across repex, pressure management and gas conditioning – are not currently robustly measurable using observed data and would risk inconsistent or misleading reporting if mandated. Limiting observed KPIs to leakage-related metrics therefore provides a proportionate balance between ambition and deliverability, ensuring data quality and comparability across networks.
- 4.30 We consider this an interim position, and we remain clear in our expectation that, as data coverage and capability mature, the scope of observed shrinkage reporting will be reviewed and expanded in future price controls, including with a view to incorporating additional metrics where this can be done on a robust and consistent basis.
- 4.31 We have also amended the ‘low pressure mains’, ‘medium pressure mains’ and ‘services’ categories to ‘low pressure leakages’ and ‘medium pressure leakages’ to improve clarity and consistency, reflecting that the metrics capture

²² A definition for the Shrinkage and Leakage Model is contained in the GD 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.

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aggregated leakage volumes across each pressure tier, rather than individual leak events, and to better align with how leakage is represented within the Shrinkage and Leakage Model.

4.32 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). Relevant licensees must provide:

- the percentage of low pressure and medium pressure networks that have been surveyed using ALD technology during the regulatory year; and
- the percentage of accessible sites, iron mains, and inaccessible sites surveyed.

Shrinkage (GT)

4.33 The relevant licensee must report on the following against up-to-date baseline figures:

- Compressor Fuel Usage (CFU) (GWh): 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) (GWh): 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) (GWh), including identified metering errors: this is the remaining quantity of gas which is unallocated after considering all measured inputs and outputs from the system;²³
- Natural Gas vented from all compressors (tCO₂e). Natural Gas Vented should be calculated in accordance with the Greenhouse Gas Emissions Calculation Methodology;²⁴
- Saved gas recompressed from pipeline maintenance work (tCO₂e); and
- Vented gas during pipeline maintenance work (tCO₂e).

²³ 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.

²⁴ The gas transmission licensee is required according to SpC 5.8 to maintain a GHG emission calculation methodology approved by the Authority.

Appendix 1 – AER KPI Table

- A1.1 A template for the structure and content of the AER KPI Table is published on the Ofgem website. This template forms part of this Guidance.
- A1.2 In circumstances where reporting standards have changed, such as GWP factors, the details must be expanded upon in the commentary section.