ofgem
Making a positive difference
for energy consumers

Guidance

DRAFT RIIO-GD2 Business Plan Data Template (BPDT) instructions and guidance

Publication date:	29 March 2019	**Contact:**	Jonathan Farrier, Senior Manager
		Team:	GD Cost Analysis
		Tel:	020 7901 3890
		Email:	Jonathan.Farrier@ofgem.gov.uk

This document sets out the instructions and guidance for completing Business Plan data templates, required as part of the process of setting RIIO-GD2.

This document is for people who are filling out the Business Plan data templates and want to know general and specific guidance for reporting Business Plan data. It explains the scope of the Business Plan data templates, what to consider when completing them, and where to find more information.

© Crown copyright 2019
The text of this document may be reproduced (excluding logos) under and in accordance with the terms of the **Open Government Licence**.

Without prejudice to the generality of the terms of the Open Government Licence the material that is reproduced must be acknowledged as Crown copyright and the document title of this document must be specified in that acknowledgement.
Any enquiries related to the text of this publication should be sent to Ofgem at:
10 South Colonnade, Canary Wharf, London, E14 4PU. Alternatively, please call Ofgem on 0207 901 7000.

This publication is available at **www.ofgem.gov.uk**. Any enquiries regarding the use and re-use of this information resource should be sent to: psi@nationalarchives.gsi.gov.uk

Contents

Associated Documents 5

1. Introduction 6
Purpose 6
Publication 6

2. General Instructions for Completing the BPDT 7
Reporting arrangements 7
BPDT structure and data entry 7
Accounting policies 9
Use of Estimates and Allocations 9
Reporting scope 9
Definitions 10

3. General Tables 11
Contents and Version Control 11
Changes log 11
Fixed Data 11

4. Operating Expenditure Tables 13
2.00 Opex Summary 13
2.01 Opex Cost Matrix – C (Controllable) 13
2.02 Opex Cost Matrix – NC (Non-Controllable) 14
2.03 Emergency 15
2.04 Maintenance 16
2.05 Business Support Group 16
2.06 Business Support Allocation 17
2.07 IT & Telecoms Group 17
2.08 IT & Telecoms Allocation 18
2.09 Property Management Group 19
2.10 Property Management Allocation 19
2.11 Insurance Group 20
2.12 Insurance Allocation 20
2.13 CEO & Other Corporate 20
2.14 Insource/outsource 21
2.15 Real Price Effects (RPE) & Ongoing Efficiency 21
2.16 Full Time Equivalent (FTE) 23
2.17 Training & Apprentices (T&A): Costs 24
2.18 Training & Apprentices: Programmes 25
2.19 Training & Apprentices: Numbers 26
2.20 Training & Apprentices: Reconciliation 27
2.21 Shrinkage 27
2.21 Street Works 27
2.23 Low-Pressure Gasholders 30
2.24 Land Remediation 32
2.25 Statutory Independent Undertakings (SIU) 33

5. Capital Expenditure Tables 34
3.00 Capex Summary 34
3.01 LTS, Storage & Entry 34
3.02 Reinforcement (<7barg) 36
3.03 Diversions (<7barg, Excl. Repex) 37
3.04 Governors 38
3.05 Connections 38
3.06 Other Capex 40
3.07 Transport & Plant 42
3.08 Capitalised Overheads 43

6. Replacement Expenditure Tables 46
4.00 Repex Summary 46
4.01 Repex Mains Tier-1 46
4.02 Repex Mains Tier-2A 48
4.03 Repex Mains Tier-2B & 3 49
4.04 Repex Mains Other 51
4.05 Repex Mains Diversions 52
4.06 Capitalised Replacement 54
4.07 Repex Services 56
4.08 Repex Multiple Occupancy Buildings (MOB) 56
4.09 Repex Cost Breakdown 57
4.10 Mains Risk Prioritisation System (MRPS) 57

7. Asset and Other Tables 59
5.01 LTS & Entry Assets 59
5.02 Network Assets 60
5.03 Capacity & Storage Assets 61
5.04 Capacity & Demand 63
5.05 Capacity Output Data 64
5.06 Modern Equivalent Asset Value (MEAV) Assets 64
5.07 PRE, Reports & Repairs 65
5.08 Safety 65
5.09 Reliability 66
5.10 Business Carbon Footprint (BCF) 67

Associated Documents

RIIO-2 sector specific methodology consultation, 18 December 2018
https://www.ofgem.gov.uk/publications-and-updates/riio-2-sector-specific-methodology-consultation

RIIO-2 Business Plan Draft Guidance Document, 21 December 2018
https://www.ofgem.gov.uk/publications-and-updates/riio-2-business-plans-draft-guidance-document

Priorities and Work Plan of the RIIO-2 Challenge Group, 28 February 2019
https://www.ofgem.gov.uk/publications-and-updates/priorities-and-work-plan-riio-2-challenge-group

Notice proposing modifications to the RIIO-GD1 Price Control Regulatory Instructions and Guidance: Version 6.0
https://www.ofgem.gov.uk/publications-and-updates/notice-proposing-modifications-regulatory-instructions-and-guidance-rigs-riio-gd1-version-60

1. Introduction

Purpose

1.1. This document sets out the instructions and guidance for completing the Business Plan data template (BPDT) that supports the submission of the gas distribution networks' (GDNs') Business Plans.

1.2. The BPDT is an Excel workbook. It consists of a number of data entry sheets with various summaries. The BPDT should support and be consistent with the submitted Business Plan. The BPDT should be completed in accordance with these instructions and definitions provided in this document.

1.3. The BPDTs and these instructions provide a framework for the collection and provision of consistent information in order to avoid varying interpretations of definitions and reporting requirements.

1.4. These instructions are limited to ensuring consistency of reporting in the BPDTs. They do not set out the process for when draft and final Business Plans should be submitted or provide guidance on what should be included in Business Plans. These instructions should be read alongside the RIIO-2 Business Plan Draft Guidance Document and the Priorities and Work Plan of the RIIO-2 Challenge Group.

1.5. These instructions do not change any definitions or obligations contained within the gas transporter licence applicable to the GDNs and in the event of any conflict, the licence conditions will always take precedence.

Publication

1.6. A number of GDNs consider some of the information provided in the BPDT to be commercially sensitive. Ofgem is bound by the requirements of section 105 of the Utilities Act 2000 relating to the disclosure of information.

1.7. Ofgem recognises the value of improving transparency of information in regulating natural monopolies and we intend to continue to review to what extent to publish further disaggregated data and analysis alongside the Business Plans.

2. General Instructions for Completing the BPDT

This instruction and guidance document ('instructions') provide a framework for the collection and provision of consistent information to support the well-justified business plans submitted by GDNs. The output from this process will be the gas distribution networks' (GDNs) completed business plan data templates. Ofgem will use this information to assist in the assessment of the well-justified business plan submissions for RIIO-GD2.

Reporting arrangements

2.1. GDNs must provide the completed BPDT in an excel format.

2.2. GDNs must complete the BPDT in full. If information is incomplete, the GDN should provide a clear explanation for why.

2.3. For any queries on the data templates, or if any errors are discovered on completion, an email should be sent to GasNetworks@ofgem.gov.uk.

2.4. Any resubmission of the BPDT is only to be made by agreement between Ofgem and the GDN and in any such instance, the pack should be resubmitted in full. Resubmission is required to be accompanied by a letter signed by a Director.

BPDT structure and data entry

2.5. The BPDT has been separated into the following sections:

- General tables: The Contents, Changes Log and Fixed Data tables provide constant figures to be referenced whilst populating the BPDT tables.
- Finance tables: Tables 1.0.1 to 1.4.1 collect financial information.
- Activity tables: Tables 2.00 to 4.10 collect cost and workload data for activities within Opex, Capex and Repex. These tables also typically collect asset specification and population figures.
- Asset & Other tables: Tables 5.01 to 5.10 collect additional data to support deliverables, outputs and innovation.

2.6. The colour scheme used in the spreadsheets is as follows:

- Yellow cells represent input fields.
- Light and dark grey is used to denote cells containing a formula.
- White cells are used where cells do not need to be completed.

2.7. Certain fields require positive entries, whereas others require negative entries. Unless specified otherwise in the individual table instructions below, the following rules apply:

- Gross costs are to be entered as positive values.
- Contributions (customer or otherwise) are to be entered as negative values.
- Cost recoveries are to be entered as negative values.
- Commissioned workload is to be entered as positive numbers.
- Decommissioned workload is to be entered as negative values.
- Adjustments to population: enter assets added as positive values, and assets removed as negative values.

2.8. GDNs should only make entries in the indicated input fields. The excel workbook has not been locked or password protected, but GDNs must not make any changes to the formulae, format or structure contained in the template unless these instructions or instructions from Ofgem provide otherwise.

2.9. The BPDT requires the reporting of actual and forecast costs for RIIO-GD1 and the forecast costs for RIIO-GD2 (2021/22-2025/26). For specific programmes extending beyond RIIO-GD2, longer-term forecasts are required.

2.10. A financial year for the provision of information required will be a period of 12 months commencing on 1 April of each year and ending on 31 March of the following calendar year.

2.11. The base year (price base) for costs is 2018/19, therefore, all costs should be provided in 2018/19 prices unless otherwise stated. Ofgem will provide the CPIH indices to use for deflation/inflation purposes.

2.12. Note, at the time of publishing draft BPDT (March 2019), complete monthly inflation data for 2018/19 were not available and an estimate has been used in the BPDT. Final inflation data will be circulated to all GDNs once it becomes available. As a matter of governance, the GDN is to enter the final 2018/19 inflation figures for both CPIH and RPI into their version of the BPDT as described below:

2.12.1. RPI: enter the Financial Year Average RPI figure in cell J51 in tab "Universal Data". Enter the RPI inflation figure in cell K51 in the same tab.

2.12.2. CPIH: enter the Financial Year Average CPIH figure in cell M51 in tab "Universal Data". Enter the CPIH inflation figure in cell N51 in the same tab.

2.12.3. Add a new entry to the tab named "Changes Log" to indicate that the updated inflation figures provided by Ofgem have been adopted throughout the BPDT.

2.13. All tables are to be completed exclusive of real price effects (RPE) as these are captured separately in Table 2.15. Tables are to be completed inclusive of ongoing efficiency (i.e. 'frontier shift') and these assumptions are to be stated in Table 2.15.

2.14. Unless otherwise stated in this document or in the BPDT, actual financial values should be provided in £ million to a minimum of three decimal places. Financial values should reconcile with audited regulatory accounts. GDNs are required to provide all actual financial data to the highest reasonable level of accuracy available from their source systems, and commensurate with the purpose for which such data is intended, taking

into consideration the appropriate allocations that are necessary to complete the tables.

2.15. Unless otherwise stated in this document or in the BPDT, all financial values should be input as positive numbers. Where a reportable value is zero or not applicable to the GDN, then a zero should be input, rather than the cell being left blank.

2.16. Workload and outputs should be entered in the unit of measurement set out in this guidance or in the BPDT. Workload units and outputs should be reported at the highest reasonable level of accuracy from the source systems and commensurate with the purpose for which such data is intended taking into consideration the appropriate allocations that are necessary to complete the tables.

Accounting policies

2.17. The BPDT should be prepared on a cash typical basis (see Glossary[1]). Cash means exclusive of all provisions and all accruals and prepayments that are that are not incurred as part of the ordinary level of business. All expenses recognised are those expected to be incurred as part of the ordinary level of business.

2.18. The BPDT should be prepared using the same accounting policies as in the preparation of the regulatory financial statements, in accordance with UK GAAP or IFRS, unless otherwise stated. In the event that the accounting policies applied to prepare the template differ from those used in the regulatory financial statements (for some or all years), GDNs must include appropriate details including quantification of the difference.

Use of Estimates and Allocations

2.19. Apportionments should be avoided wherever possible. However, where GDNs (and any affiliate or related party undertaking of the GDNs) have to do this to complete the tables, the basis of apportionment must be provided. Changes in apportionment should also be highlighted.

Reporting scope

2.20. The data presented in the BPDT should relate to the activities of the GDN whether carried out directly by the GDN or by another party on behalf of the GDN (e.g. related parties or third parties carrying out activities for the GDN). De minimis costs are to be included where such activities are carried by the GDN (which has been consented to by the Authority in accordance with Standard Special Condition A36).

2.21. Specific sections have been included in the template to separately capture costs associated with excluded services and de minimis activities.

[1] https://www.ofgem.gov.uk/publications-and-updates/notice-proposing-modifications-regulatory-instructions-and-guidance-rigs-riio-gd1-version-60

2.22. For Cadent, all workload and costs associate with the "Outer Met" area should be reflected in the BPDT for East of England.

Definitions

2.23. The definitions set out in the Glossary of the RIIO-GD1 Gas Distribution Price Control Regulatory Instructions and Guidance[2] should be used to complete the template in a consistent way. GDNs must ensure that the definitions are clearly understood and are complied with when entering any data into the BPDT. Where there is doubt or uncertainty, please refer to Ofgem for clarification. This is to ensure consistency and comparability of data entry across GDNs.

[2] https://www.ofgem.gov.uk/publications-and-updates/notice-proposing-modifications-regulatory-instructions-and-guidance-rigs-riio-gd1-version-60

3. General Tables

Contents and Version Control

Purpose and Use by Ofgem	The purpose of this version submission control sheet is to ensure that all tables of the template have been completed and submitted by GDNs and to monitor resubmissions and track changes in those resubmissions.
Instructions for Completion	The initial submission should be completed in its entirety and submitted as soon as reasonably practicable and in any event not later than 1st July 2019. Version submission control: enter the date of the initial submission and the dates of any re-submission. For each submission enter the version number. If required, additional columns will be added by Ofgem. Business plan tables: enter a cross ("x") to indicate that the table has been completed and submitted. Where it is necessary to resubmit for any reason, the whole pack must be resubmitted because of the integrated file links. In such circumstances enter the date and the version number of the resubmission (section 2) and indicate with a cross in the appropriate box which tables and/or additional information has been amended (section 3). In addition for each resubmission, a separate free-form explanation must be provided listing each and every cell that has been amended and sufficient commentary to explain the reasons for each change.

Changes log

Purpose and Use by Ofgem	The purpose of this worksheet is to report any changes made in the Business Plan Data Tables by Ofgem.
Instructions for Completion	No data input is required.

Fixed Data

Purpose and Use by Ofgem	The purpose of this worksheet is for the licensee's name and those of related parties to be entered.
Instructions for Completion	Input from the table the number allocated to the licensee to whom the template relates. Input the full names of the GDN, other GDNs in the same group and related parties. Input the abbreviations for all other GDNs in the same group and related parties.

4. Operating Expenditure Tables

The following sections contain guidance notes on the completion of each table for the purposes of the business plan data template for Opex.

2.00 Opex Summary

Purpose and Use by Ofgem	This table is a summary of the information contained in the Opex sheets.
Instructions for Completion	Most fields in this worksheet are automatically populated, with the exception of Disallowed Related Party Margin. Enter any disallowed related party and substantial outsourcing margin as agreed on an individual GDN basis, for each year specified.

2.01 Opex Cost Matrix – C (Controllable)

Purpose and Use by Ofgem	This table collects details of the controllable operating expenses incurred within the main cost activities by the GDNs to support benchmarking, trend analysis, and monitoring performance against the allowances.

Instructions for Completion	Enter the controllable Opex expenditure by activity type. The activities are split into the following tiered levels to aid understanding and analysis:
	
	• *Price controlled activities*
	  ○ Direct Costs, split by Work Management and Work Execution
	  ○ Business Support Costs
	  ○ Training and Apprentices
	
	• *Non Price controlled activities*
	  ○ De minimis
	  ○ Excluded services
	  ○ Metering
	  ○ Consented
	
	For each activity type, enter expenditure for the following categories:
	• Net Staff Costs (including agency costs)
	• Contractor Labour
	• Materials
	• Professional and Consultancy Fees
	• Non Salary Staff Costs
	• Rent and Rates
	• Transport and Plant
	• Interruptible Contracts
	• Xoserve

	• Wayleaves/Servitudes/Easements
	• Reinstatement
	• Street Works
	• LP Gasholder Intervention (Excl. Land Remediation)
	• Land Remediation (Incl. Gasholders)
	• Smart Metering
	• Other, which includes (but not limited to):
	  ○ Pension incremental deficit funding
	  ○ Any other item not allocated above – which can be aggregated if below £0.1m, but otherwise must be specified individually
	• Customer Contributions
	• Cost Recoveries
	
	Customer Contributions and Recoveries
	Entries against Customer Contributions should relate only to income received from customers. Regarding connection projects, contributions relating to indirect costs incurred on a connection project should be included under the relevant type of connection project, rather than under the particular indirect cost category. All margins charged on connection projects should be included in the amount input as Contributions. Customer contributions and cost recoveries are to be entered as negative values.
	
	Total Net Costs
	The Total Net Cost is calculated by subtracting customer contributions and Cost recoveries from Total Gross Costs.
	
	Note: controllable costs that are normalised for benchmarking purposes are to be re-entered in this worksheet irrespective of whether they have been entered elsewhere in the workbook. The intention is to auto-populate these cells in the final version of the RIIO-GD2 BPDT.

2.02 Opex Cost Matrix – NC (Non-Controllable)

Purpose and Use by Ofgem	This table collects details of the non-controllable operating expenses incurred within the main cost activities by the GDNs to support benchmarking, trend analysis, and monitoring performance against the allowances.
Instructions for Completion	Enter non-controllable expenditure for the following categories: • Shrinkage • Ofgem Licence • Network Rates • Established Pension Deficit Recovery Plan Payment • PPF Levy Costs • Pension Scheme Administration Costs • NTS Pension Recharge • Bad Debt

	• NTS Exit Costs • Innovation (TBC) • Other - any other non-controllable items not allocated above – which can be aggregated if below £0.1m, but otherwise must be specified individually.

2.03 Emergency

Purpose and Use by Ofgem	The purpose of this worksheet is to provide an analysis of controllable emergency costs at both price controlled and total cost (including non-price controlled activities such as meter work) levels, identifying the baseline costs from the current emergency policy/model as at 2018/19 and any movement relating to changes for loss of meter work, smart meter rollout and any other activities performed by the emergency function.
Instructions for Completion	*Baseline Costs* Enter the total controllable emergency costs that are delivered as part of baseline activities – i.e. for both price controlled activities and non-price controlled activities (e.g. the component of any smart meter rollout activity that is delivered using spare emergency capacity). • Enter total controllable emergency baseline costs (based on current emergency policy/model as at 2017/18). This should not include any supplementary income (e.g. income received through meterwork contracts), which should instead be input in the Supplementary Income table. • Enter the gross costs, contributions and workload associated with smart meter rollout activity that are included in the total baseline cost figure – i.e. the component of smart meter rollout activity that is delivered using spare emergency capacity. Enter contributions as a negative number. The unit of workload is the number of repairs resulting from smart meter rollout activity and carried out by the emergency function. • Enter the gross costs, contributions and workload associated with any other activities carried out by the emergency function that are included in the total baseline cost figure – i.e. those activities, or the component of those activities, which are not delivered using spare emergency capacity. Enter contributions as a negative number. When entering workload figures, also enter the unit that these figures relate to in the Unit field. *Incremental Costs* • Enter the incremental costs, contributions and workload associated with smart meter rollout activities – i.e. the component of smart meter rollout activities that cannot be delivered using spare emergency capacity. Enter contributions as a negative number. The unit of workload is the number of repairs resulting

	from smart meter rollout activity and carried out by the emergency function. • Enter the incremental costs, contributions and workload associated with any other activities carried out by the emergency function – i.e. those activities, or the component of those activities, which cannot be delivered using spare emergency capacity. Enter contributions as a negative number. When inputting workload figures, also enter the unit that these figures relate to in the Unit field. *Supplementary Income* • Enter the income received from non-price controlled activities, including any income received through meterwork contracts. Enter supplementary income as a negative number. Total controllable emergency costs should reconcile with the controllable emergency costs in the 2.01 tab.

2.04 Maintenance

Purpose and Use by Ofgem	The purpose of this worksheet is to provide an analysis of routine and non-routine maintenance activities.
Instructions for Completion	Include all maintenance costs, including site husbandry and other general site maintenance. • NTS Offtakes • LTS Pipelines • PRS • Storage • Distribution Mains • Governors • Services & MOBs • LPG/LNG Networks • Other • Telemetry & Communications • Cathodic Protection Other maintenance costs include, but are not limited to, sub-deducts and Physical Security Upgrade Programme (PSUP) maintenance costs. Where the maintenance activity cost incurred is equal to or greater than £500k provide a description of that activity in the business plan narrative. Individual activities of less than £500k can be aggregated together. Definitions of routine and non-routine maintenance are detailed in the glossary in Appendix 1. The total maintenance cost should reconcile with that detailed in the Emergency section of 2.01 Opex Cost Matrix - C.

2.05 Business Support Group

Purpose and Use by Ofgem	The purpose of this table is to provide group net and gross cash controllable cost analysis of business support costs that are charged to the UK regulated network businesses (and to non-regulated entities where appropriate). These tables show non-operational costs only. The costs captured on this table include both those incurred directly by the networks and those incurred at group level and allocated to the individual networks.
Instructions for Completion	This table must be completed on a group basis, and included in each network BPDT submission. For multiple network licensees, the values in this table must be the same in each submission. Other gross costs are the business support costs allocated to capex, repex, direct Opex or other categories.

2.06 Business Support Allocation

Purpose and Use by Ofgem	The purpose of this table is to provide the allocation of group net and gross cash controllable costs for business support (including any cost transfers to/from direct activity functions of the company's organisation) that are charged to the UK regulated network businesses. This table shows non-operational costs only.
Instructions for Completion	This table should be completed once in each BPDT submission, showing the direct network business support costs and the costs allocated from the group for the relevant GDN. The gross and net controllable Opex costs for each activity come from table 2.01.

2.07 IT & Telecoms Group

Purpose and Use by Ofgem	The worksheet will collect gross cash controllable cost information relating to IT & Telecoms expenditure and activities supporting UK regulated network businesses.
Instructions for Completion	This table must be completed on a group basis, and included in each network BPDT submission. For multiple network licensees, the values in this table must be the same in each submission. • Input costs for each IT function by cost category • Input staff and contractor numbers in total IT & Telecoms includes: • Application Development – costs associated with the development of applications before they are put into the production

	• Application Maintenance & Support – The costs of maintaining and supporting applications that are in production. Includes minor enhancements and bug fixes • Desktop Services – the costs involved in supporting desktop hardware and software. • Application Server Support – costs involved in maintaining computer servers • Storage – costs involved in supporting the IT storage • Central Printing – all printing other than printing to local printers from a desktop pc or other device • Network (LAN & WAN) – costs involved in implementing and supporting the computer networks, Local Area Network (LAN) and Wide Area Network (WAN) • Training Centres – all the IT costs associated with training centres. This will include elements of the above that relate to training centres. • Business Telecoms – cost involved in supporting the network of business telephone, mobile and desk phones. It does not include the costs of maintaining the operational telephony linking network assets • Management Services – IT directors and other costs of running the IT function not covered by other areas Contractor costs refer to the additional IT staff recruited on a contractual basis rather than employed directly. Bought in Services are the other costs or services bought in that do not fit in other categories. Data centres refer to facilities used to house computer systems and associated components, such as telecommunications and storage systems, redundant/backup power supplies and redundant data communications connections.

2.08 IT & Telecoms Allocation

Purpose and Use by Ofgem	This table shows the allocation of costs to businesses and split between non-operational and operational costs as well as the number of end users of non-operational and operational IT systems and infrastructure.
Instructions for Completion	<u>Costs by network</u> • Costs should be input as positive values • Allocate IT & Telecoms costs charged to each GDN and other businesses (UK regulated networks) and split between non-operational and operational. <u>End users</u> Enter the annual number of end users of IT systems and infrastructure, split by non-operational and operational. Enter the total number of end users. An end user may be included in both the non-operational and operational categories. However, 'total IT end users (non-operational and/or operational)' is the number of distinct end users and therefore is not necessarily equal to the sum of non-

	operational and operational end users, e.g. 1 user using an operational and non-operational system is counted as 1 user for total end user purposes NOT 2 end users.

2.09 Property Management Group

Purpose and Use by Ofgem	The worksheet will collect gross cash controllable cost information relating to all property costs supporting UK regulated network businesses.
Instructions for Completion	This table must be completed on a group basis, and included in each network BPDT submission. For multiple network licensees, the values in this table must be the same in each submission. <u>Group Building Summary</u> Enter the number of buildings (office, depot and training centres) owned or leased by the group. For multi-use buildings then the number of buildings should be calculated on a pro-rata basis based on floor space in exclusive use, with shared floor space (e.g. staff canteens) split pro rata between office space and training centres. For example a building that is 30% office space 20% training centre, 15% depot, and 35% shared (e.g. staff canteen, toilets) would count as 51% (30% + 35%*(30/50)) of an office building (30/(30+20+15), 34% training centre and 20% depot. Where a site contains multiple buildings/facilities then the site should be counted as one building. Enter the net internal area (m^2) of owned and leased buildings (office, depot and training centres). <u>Non-allocated costs</u> Input the costs which cannot be attributed to specific buildings. <u>Costs by Building</u> • Category 3 buildings – buildings costing ≥£1m per year. Input the name and specifications of each category 3 building, and enter the building costs. • Category 2 buildings – buildings costing <£1m and ≥£0.5m per year. Input the total costs of all category 2 buildings as stated on the table. • Category 1 buildings – buildings costing <£0.5m per year. Input the total costs of all category 1 buildings as stated on the table. • Training Centres – identify the total building(s) costs of all Training Centre(s) as stated on the table. Training Centre(s) are therefore not included in Categories 1, 2 and 3 above.

2.10 Property Management Allocation

Purpose and Use by Ofgem	This table shows the allocation of costs to businesses split between non-operational and operational costs.
Instructions for Completion	• Costs should be input as positive values • Allocate Property Management costs charged to each GDN and other businesses (UK regulated networks) and split between non-operational and operational. It is expected that all of the costs will be allocated to non-operational.

2.11 Insurance Group

Purpose and Use by Ofgem	The worksheet will collect cash controllable cost information relating to insurance department costs, premiums, policies and cover etc, including the actual costs and cover relating to the GDN businesses.
Instructions for Completion	This table must be completed on a group basis, and included in each network BPDT submission. For multiple network licensees, the values in this table must be the same in each submission. <u>Group insurance department costs</u> Enter the appropriate details of insurance premiums and other insurance costs for the group. See latest RIIO-GD1 RIGs glossary for definitions of the insurance premium costs. <u>Captive insurance costs</u> Enter the details of all captive insurance costs for the group. See latest RIIO-GD1 RIGs glossary for definitions of the captive insurance costs. Non-insurance liabilities, gross loss reserves and annual retained risk should be entered as negative values.

2.12 Insurance Allocation

Purpose and Use by Ofgem	This table shows the allocation of insurance costs to businesses.
Instructions for Completion	1. Costs should be input as positive values 2. Allocate the Group Insurance Department Costs charged to each GDN, split between insurance premium costs and other insurance costs. 3. The total costs should equal the total Group Insurance Department Costs in table 2.11.

2.13 CEO & Other Corporate

Purpose and Use by Ofgem	This worksheet shows the gross cash controllable cost of CEO and other corporate function costs and the amounts allocated to GDNs directly or via a related party.

	It is not expected that the GDNs will forecast the total CEO costs, just the total of the costs allocated to GDNs
Instructions for Completion	• Costs should be input as positive values • The total costs for each corporate activity should be input for each GDN • The amount of costs allocated directly to the GDNs with allocations of such functions, if any, from related parties. CEO & Other Corporate Costs include: • Communications – communication within the UK businesses, internal communications, external communications, media relations, issues management, regional communications, community relations, events management. • Group Strategy - function has the responsibility of evaluating the strategic options of the Group. • Legal / Risk and Compliance/ Comp Secretary – legal department, the management corporate governance for all companies to ensure they comply with legislation, regulations and best practice. • Corporate Responsibility and investor relations – corporate responsibility and interaction with institutional equity investors and market analysts also advertising, charity and sponsorship arrangements. • Board Members and Other – staff and other costs of Board members and other corporate costs not fitting into other categories.

2.14 Insource/outsource

Purpose and Use by Ofgem	The purpose of this worksheet is to provide an analysis of the business models adopted by each network by capturing the proportion of costs insourced and outsourced.
Instructions for Completion	For each activity, enter labour, materials and other costs relating to insourced activities and outsourced activities. For outsourced costs, enter labour, material and other costs relating to both open book and closed book contracts.

2.15 Real Price Effects (RPE) & Ongoing Efficiency

Purpose and Use by Ofgem	The purpose of this worksheet is to provide an analysis of Real Price Effects (RPE) and Ongoing Efficiency (OE) forecasts and assumptions.
Instructions for Completion	This table enables licensees to provide their forecast of real price effects (additional to other building block forecasts). All cost forecasts provided elsewhere within the tables should be exclusive of RPEs. Any increase to ongoing

	pension contribution rates should be included in main tables and not treated as an RPE. *RPE Indices* For each expenditure category, enter the index that represents your view of inflation relative to CPIH. CPIH data is contained in the Universal Data tab. Indices have a base year of 2018/19 – i.e. if you expect Direct Opex to increase by 1% above CPIH from 2018/19 to 2019/20, enter 1.01 for the year 2019/20. *RPE Weightings* For each expenditure category, enter the weight of each RPE input category. Some input categories allow for a different index weighting to be entered for Opex, Capex and Repex, e.g. if materials used in Opex are subject to different input price pressures that those used in Capex or Repex, then a different index can be entered for each. Otherwise, all indices can be equal. The indices for specialist labour should be exclusive of any materials used by contractors. Instead, the indices for materials should reflect the cost changes associated with both direct materials and those used by contractors. Input weights should sum to 100% for each expenditure category. The *Other* field should capture any remaining weight not attributable to the defined input categories listed. Different weights can be entered for different years. You should provide evidence within the business plan commentary of how the final indices were deduced and why you expect the weight of each input category to vary over time (if applicable). *Disaggregated Opex RPE Costs* Enter the forecasted RPE figures for each Opex activity in £m for the remaining years of RIIO-GD1 (2019/20-2020/21) and for the five years of RIIO-GD2 (2021/22-2025/26). *Disaggregated Capex RPE Costs* Enter the forecasted RPE figures for each Capex activity in £m for the remaining years of RIIO-GD1 (2019/20-2020/21) and for the five years of RIIO-GD2 (2021/22-2025/26). *Disaggregated Repex RPE Costs* Enter the forecasted RPE figures for each Repex activity in £m for the remaining years of RIIO-GD1 (2019/20-

	2020/21) and for the five years of RIIO-GD2 (2021/22-2025/26). *Ongoing Efficiency* This table requests GDNs to evidence the ongoing efficiencies embedded in their forecast costs. Ongoing efficiencies are productivity improvements expected by even the most efficient GDN. This should represent a GDN's forecast of reductions in input volumes that can be achieved whilst delivering the same outputs. Ongoing efficiency assumptions have a base year of 2018/19, i.e. if you expect ongoing efficiencies for Direct Opex to decrease costs by 1% per annum from 2018/19 to 2019/20, then enter 0.99 for year 2019/20, and so on. You should provide evidence within the commentary/business plan of how the final ongoing efficiency indices were deduced.

2.16 Full Time Equivalent (FTE)

Purpose and Use by Ofgem	This table collects information on the number of Full Time Equivalents (FTE) involved in each activity listed. This information will allow us to monitor labour trends in gas distribution.
Instructions for Completion	FTEs should be reported to the nearest whole FTE. *FTE Tables* Enter the average net FTE staff numbers for each Opex, Capex and Repex activity (including related parties' staff numbers), broken down into the following categories: (i) GDN's Own Employees (ii) GDN's Own Trainees & Apprentices (iii) Contract Labour (iv) Related Party GDN's Own Employees should include any agency costs. The sum of these add up to the total net FTEs in that Opex, Capex or Repex activity. Any FTEs charged directly to Capex or Repex, or charged from Opex to Capex or Repex, should be entered directly into either the Capex or Repex FTE sections. Note that FTEs exclude allocations for overtime, for example:

	• Employee doing full time hours = 1 FTE • Employee doing 80% hours = 0.8 FTE • Employee doing full time hours and 20% overtime = 1 FTE If FTEs are not recorded automatically into these activities, then they should be allocated on a best endeavours basis in line with salaries and wages. *Occupation Breakdown* For each occupational category listed, enter the average net FTE staff numbers for each year, aggregated across all business functions. If FTEs are not recorded automatically into these categories, then they should be allocated on a best endeavours basis.

2.17 Training & Apprentices (T&A): Costs

Purpose and Use by Ofgem	This table captures the numbers and costs of apprentices and other trainees and the training costs associated with them.
Instructions for Completion	With the exception of external funding, all costs should be entered as positive values. **Trainee & Apprentice Categories** The following trainee and apprentice categories are defined. <u>Craftsperson Apprentice</u> Apprentices who are being trained to attain or retain skills commensurate with level 1, 2 or 3 jointers, overhead linesman, fitters, and multi-skilled trades set out by Energy & Utility Skills. <u>Engineer Apprentice</u> Apprentices being trained on an apprenticeship programme leading to qualification as an engineer. <u>Graduate & Other Staff/Management Trainee</u> Other employees employed under a formal training programme. *Salary Costs* Enter the basic salary & wages costs associated with each of the defined T&A categories. Enter the normal pension charges associated with each of the defined T&A categories. *Training Costs* Enter the specific costs of training course materials and other costs specifically relating to training courses. This will only be the costs incurred in training apprentices and trainees whilst they are on that programme. Therefore the

	costs will not include the training of the existing workforce. Operational training covers training for craftspeople and engineers. Non-operational training covers all other training. Where the GDN has identified other initiatives undertaken to address a skills shortage, enter costs against the Training to Address Skills Shortage heading. A series of *Other* fields are available for the GDN to capture costs that aren't represented by the pre-defined headings. If entering costs against an *Other* field, the GDN shall enter a description for that activity in the specification field provided. *Administration Costs* Input the total cost of recruitment of apprentices and trainees. *External funding* Where there is a reasonable likelihood that a GDN will be eligible for funding from any party (for example from the National Employment Service) – either paid directly to the training provider or to the GDN or its parent company - towards any training and apprentices costs, then a realistic assessment should be made of the amount of funding it is likely to receive.

2.18 Training & Apprentices: Programmes

Purpose and Use by Ofgem	This table captures the net staff cost per trainee/apprentice for specific training and apprentice programmes run by or on behalf of the GDN.
Instructions for Completion	*Craftsperson Apprentice Programmes;* *Engineering Apprentice Programmes;* *Graduate & Other Staff/Management Trainee Programmes* For each programme year (i.e. years one to four), enter the title of the specific programme run by, or on behalf of, the GDN. The training & apprentice categories are the same as those listed in the T&A Costs tab, and individual programmes should be allocated to the same categories as they were for calculating the costs in that tab. In the case of a programme falling under more than one category then it should be entered under all applicable categories and a supporting narrative explanation should be provided. <u>Craftsperson Apprentice Programmes/Engineer Apprentice Programme/Graduate & Other Apprentice Programme</u> The title of the specific programme run by or on behalf of the GDN should be entered under the relevant category. The categories are the same as those for table 2.17 and programmes should be allocated to the same categories as they were for calculating the costs given in table 2.17. In the case of a programme falling under more than one category then it should be entered under all applicable

	categories and a supporting narrative explanation should be provided. *Trainee Type* One of the following trainee types, at which the training programme is aimed, should be entered: ▪ Competent ▪ Semi-competent ▪ Graduate trainee ▪ Trainee ▪ Upskiller These types are consistent with those used by Energy and Utility Skills. Please note that the cells use conditional validation to ensure that only the above categories may be entered. Where a programme is aimed at more than one trainee type then each programme/trainee type combination should be considered as distinct programmes and entered into the table as such. Where this is the case then a supporting narrative explanation should be provided. *Average Programme Headcount* Enter the average annual headcount for each programme for each year specified. Headcount figures should be rounded to the nearest integer value. *Programme Length* The length of time in years between the start and end of a programme should be entered (rounded up to the nearest year). *Accreditation/Award* The accreditation body (if any) plus the qualifications gained on successful completion of any stage of the programme should be entered. *Average Annual Training Cost per Apprentice/Trainee* The average annual specific costs of training courses, materials and other costs specifically relating to training courses, as described in the instructions for the T&A Costs tab, should be entered under the applicable operational or non-operational category heading.

2.19 Training & Apprentices: Numbers

Purpose and Use by Ofgem	This table captures the number of positions becoming vacant each year in each T&A category, along with the number of trainees and apprentices qualifying in that same category. It should be noted that it is not expected that there will always be a direct correlation year-by-year between the

	number of positions to be filled and the number of trainees and apprentices qualifying from a programme. However, over the entirety of RIIO-GD1 and RIIO-GD2, some degree of correlation between the two sets of figures should be evident. This should be accompanied by clear narrative in the accompanying business plan.
Instructions for Completion	All headcount figures should be entered as positive values, regardless of whether they represent positions being vacated, created or filled. *Craftsperson Apprentice Programmes;* *Engineering Apprentice Programmes;* *Graduate & Other Staff/Management Trainee Programmes* For each training & apprentice programme, enter the number of equivalent positions expected to be created in the organisation each year as a result of retirement, staff leaving for other reasons, or additional positions created (due to, for example, growth or expansion of a function). An equivalent position for these purposes is one planned to be filled by a person qualifying from the apprentice/training programme. The individual T&A programmes should match those specified in the T&A Programmes tab. The number of trainees and apprentices qualifying from each programme each year should be entered to the nearest integer value.

2.20 Training & Apprentices: Reconciliation

Purpose and Use by Ofgem	Placeholder tab.
Instructions for Completion	Placeholder tab.

2.21 Shrinkage

Purpose and Use by Ofgem	This sheet collects the forecasted amounts to be spent annually on shrinkage gas split by component and by LDZ. Allows us to monitor the shrinkage purchases.
Instructions for Completion	Costs reported on this schedule should be the anticipated costs to incur in procuring the gas for shrinkage as determined under the UNC. The figures reported here should agree with the shrinkage figures reported in table 2.02.

2.21 Street Works

Purpose and Use by Ofgem	This table captures the annual costs and volumes associated with street works, traffic management and reinstatement activities.

Instructions for Completion	All costs, contributions and volumes should be inclusive of contractor costs, contributions and volumes. Where any assumptions have been included for ongoing efficiency, these should be captured separately in the RPE & OE tab and explained in the narrative. All street works subsections are subdivided further into Opex, Capex and Repex. The GDN shall provide evidence within the narrative of how expected costs, contributions and volumes have been derived. *Permit & Notice Applications* For each permit/notice type, enter the gross costs, contributions and volumes related to granted notices/permits for each year specified. The lane rental subsection captures costs associated with lane rental application fees only, not daily rental charges themselves, which are captured separately in the Lane Rental section. Only enter direct costs/contributions relating directly to permit and notice applications. Associated administration costs are to be entered in the Administration section. Permit types are as per NRSWA definitions. *Lane Rental* For each cost category of Opex, Capex and Repex, enter the total annual lane rental charge in the Gross Costs block. Enter the corresponding contributions in the Contributions block, and enter the total annual number of days occupying a lane rental street in the Volumes block. Only enter direct costs/contributions relating directly to lane rental charges. Associated administration costs are to be entered in the Administration section. *Inspection Fees* For each inspection type, including D-type reinstatement defect inspections, enter the total annual gross costs, contributions and volumes for each cost category. Only enter direct costs/contributions relating directly to the inspection fee. Associated administration costs are to be entered in the Administration section. *Suspensions & Switch-Outs* For each type of suspension/switch-out, enter the corresponding total annual gross costs, contributions and volumes. For any suspension or switch-out cost not represented by the pre-defined categories provided, GDNs may specify a unique activity along with corresponding gross costs, contributions and volumes. This should be accompanied by written narrative in the accompanying business plan. Only enter direct costs/contributions relating directly to the suspension or switch-out. Associated administration costs are to be entered in the Administration section.

	Charges/Penalties For each charge/penalty type, enter the total annual gross costs, contributions and volumes for each cost category. Only enter direct costs/contributions relating directly to the charge or penalty. Associated administration costs are to be entered in the Administration section. *Administration* For each administration type, enter the total annual gross costs, contributions and volumes for each cost category. Volume entries are only required for traffic management plans, which captures the total number of individual plans. Enter office-based street works administration gross costs and contributions, including but not limited to: • Back-office administration, • Management costs, • Training costs, • IT running costs. Enter field-based street works administration gross costs and contributions, including but not limited to: • Site meetings to ensure the requirements of the Traffic Managers (inspections) are met, • Pre-site surveys to meet the planning requirements, Under Admin Setup, enter any one off administration set up gross costs and contributions. A series of Other fields are available for the GDN to enter any street works administration costs not accurately captured by the predefined administration fields provided. *Productivity Costs* Enter the incremental gross costs and contributions received relating to restricted hours imposed by the Highway Authority, both for reduced and extended working hours. These costs and contributions should only capture the incremental costs/contributions resulting directly from restricted working conditions. Enter the incremental gross costs and contributions associated with any additional site supervision mandated by the Highway Authority. A series of Other fields are available for the GDN to enter any street works productivity costs not accurately captured by the predefined productivity fields provided. *Workload Breakdown* Enter the volumes and workload against the predefined subheadings. Total Projects/Jobs: enter the total number of projects/jobs, including those that are not impacted by a street works permit, notice or lane rental scheme. Note that the total number of projects/jobs should equal the sum of projects/jobs both subject to a street works scheme, and not subject to a scheme.

	Projects/Jobs Subject to a Permit Scheme (or Notice/Lane Rental Scheme): Enter the number of projects/jobs impacted by the respective scheme. If a project/job is impacted by multiple scheme types (e.g. notice and lane rental), then capture that project/job against only one scheme type. Projects/Jobs Not Subject to a Street Works Scheme: Enter the number of projects/jobs that are not impacted by any street works scheme. If any part of that project/job is impacted by a street works scheme, then enter it instead under the relevant scheme subheading. *Street Works Breakdown* Enter the net street works costs against each activity within Opex, Capex and Repex. Street works costs should not include traffic management or reinstatement costs, which are entered elsewhere. *Traffic Management Breakdown* Enter the net traffic management costs against each activity within Opex, Capex and Repex. Traffic management should include all activities required to manage traffic as part of a project/job, including but not limited to: signing, lighting and guarding, temporary traffic signals, and personnel required to manually operate equipment or manually direct traffic. *Reinstatement Breakdown* Enter the net reinstatement costs against each activity with Opex, Capex and Repex. Reinstatement costs should include costs associated with both temporary and permanent reinstatement, in addition to any reinstatement remedial works. *Local/Highway Authority Breakdown* Enter the total number of LA/HA operating the specified scheme, along with those operating without any street works scheme. *Uncertainty Costs: Permit Schemes,* *Uncertainty Costs: Lane Rental Schemes,* *Uncertainty Costs: Other* Enter the net value of any uncertain costs related to permit schemes, lane rental schemes or other. The aim here is to understand the magnitude of uncertainty as it relates to street works costs in RIIO-GD2.

2.23 Low-Pressure Gasholders

Purpose and Use by Ofgem	This table collects information on costs and workload associated with the decommissioning and demolition of low pressure gasholders.

	The information will enable Ofgem to understand the workload and costs associated with the LP gasholders removal programme.

Instructions for Completion	*Gasholder Intervention*
	For each intervention type listed, enter the gross costs for each year identified, and the corresponding workload in mcm subject to intervention. If specifying *Other* fields, enter a unit of workload if applicable.
	
	Network Intervention
	This section aims to capture any Capex costs directly resulting from gasholder intervention, e.g. network reinforcement.
	
	LP Gasholders
	A full list of the GDN's gasholders is to be recorded here. The information will provide Ofgem with a clear indication of the progress of GDN's gas holder removal programme. The information required on this table is:
	
	• Gasholder name - list all names of LP gas holders
	• Gross costs - enter the annual Opex cost of intervention for the related gas holder (£m) for each year identified. Intervention costs should not include any associated land remediation costs.
	• Gasholder location - list all corresponding LP gasholder addresses
	• 2018/19 status - list all gasholder statuses as they stand in 2018/19. Select from drop down menu:
	  ○ Operational gasholders
	  ○ Decommissioned gasholders
	  ○ Mothballed gasholders.
	  ○ Partially demolished
	  ○ Fully demolished
	  ○ Other
	• Gasholder type - list all gasholder types. Select from drop down menu:
	  ○ Spiral guided above-ground
	  ○ Spiral guided below-ground
	  ○ Column guided above-ground
	  ○ Column guided below-ground
	  ○ Wiggins
	  ○ MAN
	  ○ Other
	• Capacity - provide the original capacity of the holder in million cubic metres (mcm).
	• Footprint - provide the gasholder's site footprint (m2), eg the area to be decommissioned / demolished. If multiple holders sit within a single site, record total m2 footprint for whole holder site and reference the other holders sitting within the single site under gas holder location.
	
	Note: The costs reported in this table should be reflected in the cost-benefit analysis of the gasholder removal programme. The table does not require information on benefits associated with the removal of gasholders (eg,

	reduced maintenance costs). These benefits should be explicit in the cost-benefit analysis. Descriptions • **Operational gasholders:** holders that are being regularly filled and emptied to provide diurnal storage to the LDZ or local strategic support for specific MP or IP networks. • **Decommissioned gasholders:** holders that have been parked at low level and are not being regularly filled and emptied. Decommissioned holders still retain gas and the potential to be recommissioned in the future. For the purpose of BPDT we term holders that continue to be required for winter operation as operational even if they are "decommissioned" during summer, and only those holders that are no longer required as part of our storage plans are termed "decommissioned". • **Mothballed gasholders:** holders that have been physically isolated (cup and cap, removal of spool) and purged to air. The potential for recommissioning at some point in the future is significantly reduced.

2.24 Land Remediation

Purpose and Use by Ofgem	This table collects information on costs and workload of statutory and non-statutory land remediation on gasholder and non-gasholder sites. The information will enable Ofgem to understand the workload and costs associated with land remediation activities.
Instructions for Completion	All costs should be input as positive values. Forecasts should exclude RPEs. **Statutory activities** Gross costs: Enter the costs relating to routine site monitoring and maintenance, statutory remediation costs relating to non-gasholder sites and costs associated with gasholder sites. Workload: Enter in whole numbers, the number of sites, and total area of land (m^2) for the following activities: • Routine site monitoring and maintenance • Statutory remediation of non-gasholder sites • Statutory remediation of gasholder sites **Non-statutory activities** Gross costs: Enter the costs relating to non-statutory remediation of non-gasholder sites, and non-statutory remediation of gasholder sites. Workload:

	Enter in whole numbers, the number of sites, and total area of land (m^2) for the following activities: • Non-statutory remediation of non-gasholder sites • Non-statutory remediation of gasholder sites

2.25 Statutory Independent Undertakings (SIU)

Purpose and Use by Ofgem	This table collects information on costs and workload for Statutory Independent Undertakings (SIU). The information will enable Ofgem to understand the workload and costs associated with SIUs across Opex, Capex and Repex.
Instructions for Completion	*Gross Costs* For each category/activity, enter the gross costs incurred/forecasted. For any additional activities not captured by the predefined activities, use the Other fields to specify an activity description. *Contributions (Excluding Cross-Subsidy)* For each category/activity, enter any contributions received, not including income from the cross-subsidy, which is to be captured in the cross-subsidy table below. For any additional activities not captured by the predefined activities, use the Other fields to specify an activity description. *Total Demand (1-in-20 Peak: Severe LDC)* Enter the demand in mcm/d under 1-in-20 conditions for each SIU.

5. Capital Expenditure Tables

5.1. The following sections contain guidance notes on the completion of each table for the purposes of the business plan data template for Capex.

3.00 Capex Summary

Purpose and Use by Ofgem	This sheet summarises the information contained in the capex sheets 3.01 to 3.08.
Instructions for Completion	No entries required.

3.01 LTS, Storage & Entry

Purpose and Use by Ofgem	This table collects expenditure and incurred workload data to date for LTS pipelines, LTS diversions, NTS offtakes & distribution network embedded gas entry points, pressure reduction stations (PRSs), and storage. This table is used to understand the costs and scale of individual projects and their associated incurred workload to date to enable comparative analysis of expenditure between networks. The data will be used to support benchmarking, trend analysis, and monitoring performance against allowances. Forecast expenditure and workload for LTS capital works associated with the removal of gas holders should be captured in this table, however costs and workload for the removal of low pressure holders (abandonment, demolition and remediation) should be captured under work management (table 2.01) and LP gasholder removal (table 2.23). Network reinforcement <7barg should be captured under Reinforcement (table 3.02).
Instructions for Completion	Details for projects with a gross value of ≥£0.5m are individually identified with specific costs and asset details relating to them, and costs for work <£0.5m is aggregated. Regardless of project value, enter historic costs in the subtotal row under each defined year of RIIO-GD1, up to and including 2018/19. For all years beyond this, costs must be entered as per the instructions below. All expenditure should be inclusive of capitalised overheads. There are five distinct LTS, Storage & Entry categories as follows: • LTS pipelines (incl. LTS Diversions) • NTS Offtakes

	• Distribution network embedded gas entry points (incl <7barg) • PRS • Storage (non-LTS) Where the work is remedial in nature and does not upgrade or extend the life of the asset it will be recorded as Opex on table 2.04 Maintenance. OLI Run remedial activities are also captured on table 2.04. <u>Storage</u> Do not enter any associated Capex expenditure for low pressure (LP) gasholder intervention works in this table. This expenditure should be entered in the Opex table 2.23 LP gas holder demolitions. <u>Named projects ≥0.5m</u> Record individual projects where the total gross expenditure over the life of the project equals or exceeds £0.5m. List each project individually and complete all areas in each table, i.e. project specifications, actual expenditure, project expenditure and workload details. Where a single project consists of individual cost elements less than £0.5m, but the project total equals or exceeds £0.5m, this should be identified as one integrated project (for example, offtake+ pipeline+ two PRSs). The elements of the projects should be listed separately against the appropriate activity table and the same project name should be used to identify the associated costs and incurred workload to date. <u>Projects with a gross value <£0.5m</u> Aggregate the costs of the projects where total spend per project is <£0.5m and input the total on the relevant row of each table. <u>Project Specifications</u> For all individually-identified projects, enter the following supporting data as applicable: • LDZ • Load / non load related • Diameter in mm • Piggable / non-piggable Length • Maximum Design Operating Pressure • Maximum Design Capacity • Maximum Design Outlet Pressure • Minimum Design Outlet Pressure • Actual Contracted Annual Volume • Actual Contracted Daily Volume • Pressure tier <u>Gross Expenditure</u> Input the gross expenditure for each project and the aggregate total for projects where total spend per project is below £0.5m. <u>Contributions</u>

	Input the contributions received for each project, if any, and the aggregate total contributions for projects where total gross spend per project is <£0.5m. <u>Workload</u> For each project (or aggregate if <£0.5m), enter the corresponding workload either incurred or forecasted for all asset categories. <u>Expenditure Justification (CBA)</u> If a CBA has been developed or investment can be justified entirely on a CBA, no input is required under CBA. Where CBA is not available or investment cannot be justified entirely on a CBA, an approach of incremental expenditure above the CBA level shall be considered in the following categories: Customer, Growth, Mandatory and Renewal. These categories should only be used where no CBA has been developed. Enter the forecast amount of expenditure for each project under the justification categories of Customer, Growth, Mandatory and Renewal. Expenditure can be allocated to more than one category as necessary. The balancing amount of gross expenditure will be automatically calculated and shown under the CBA category.

3.02 Reinforcement (<7barg)

Purpose and Use by Ofgem	This table collects expenditure and workload data for general and specific reinforcement on the below 7 bar network, including governors. Reinforcement above 7 bar network is captured on table 3.01 LTS and storage. The table collects sufficient data to support a meaningful comparison of unit costs between activities and networks. The data will be used to support benchmarking, trend analysis, and monitoring performance against allowances.
Instructions for Completion	All expenditure should be inclusive of capitalised overheads. Regardless of project value, enter historic costs in the subtotal row under each defined year of RIIO-GD1, up to and including 2018/19. For all years beyond this, costs must be entered as per the instructions below. *General Reinforcement* *Specific Reinforcement* <u>Gross Costs</u> Mains - enter the aggregate gross costs, contributions and workload by pressure tier for both diameter bands listed.

	District Governors – enter the aggregate gross costs, contributions and workload by inlet/outlet pressure and by governor type. *Reinforcement ≥ £0.5m (General and Specific)* This table records individual projects where total gross expenditure is equal to or above £0.5m over the life of the project. Project Name/Description: enter the name of the project. Gross Costs/Contributions: enter the gross costs and contributions relating to the project. Category: select a category from the drop down menu. District Governors Installed – enter the total number of district governors installed as part of the individual project for each pressure tier shown. Workload (All Diameters & Pressures): enter the total workload in kilometres of mains installed for each project. The workload figure should include all diameters and pressure bands installed as part of that project. Note: capitalised replacement activities are captured in the Repex tables.

3.03 Diversions (<7barg, Excl. Repex)

Purpose and Use by Ofgem	This table provides an analysis of the diversion works delivered on the below 7bar network, which are not captured as part of Repex. This should include both rechargeable and non-rechargeable diversions, and include mains and associated MOB and governor diversions.
Instructions for Completion	*Diversions: Low-Pressure* *Diversions: Medium-Pressure* *Diversions: Intermediate-Pressure* For each diameter band defined, enter the gross costs, contributions and workload associated with diversion projects not attributable to Repex. Enter the associated service diversions, which should include all intervention types, for both domestic and non-domestic customers. *MOBs* Enter the aggregated gross costs, contributions and workload against each defined MOB riser length. This should capture any riser diversion works not attributable to Repex. Any costs for laterals should be reported under risers. *Governors*

	Enter the aggregated gross costs, contributions and workload against each defined governor type requiring diversion, including service governors.

3.04 Governors

Purpose and Use by Ofgem	This table collects data relating to district and service governor replacement and decommissioning activities. This table is used to understand the costs and associated workload so as to enable comparative analysis of expenditure between networks. The data will be used to support benchmarking, trend analysis, and monitoring performance against allowances. Governor data relating to reinforcement, connection and diversion activities is captured on tables 3.02, 3.05 and 3.03 respectively.
Instructions for Completion	District governors are broken down by intervention type, and also by governor inlet/outlet pressure specification. Service governors are broken down by customer type. For district governors, data is collected for four categories: • Full Replacement • Partial Replacement • Refurbishment • Decommission <u>Gross Costs</u> Enter the gross expenditure by intervention and governor type. <u>Contributions</u> Enter the contributions received, if any, by intervention and governor type. <u>Workload</u> Enter the number of governors replaced or decommissioned by intervention and governor type.

3.05 Connections

Purpose and Use by Ofgem	This table collects expenditure and workload data for the provision of new mains and services to supply new and existing domestic and non-domestic premises. Governors forming part of any new connections and not associated with network reinforcement are captured here.

	Any associated network reinforcement is captured in tables 3.01 LTS & Storage and 3.02 Reinforcement. This table is used to understand the costs and scale of individual projects and their associated workload to enable comparative analysis of expenditure between networks. The data will be used to support benchmarking, trend analysis, and monitoring performance against the allowances. Forecast expenditure relating to the provision of a design and quotation service is identified separately from work execution activities to support increased accuracy in assessing total costs. This activity is identified as back office and expenditure is relatively "fixed" in nature compared to direct provision of new mains and services connections. Disaggregation of forecast expenditure by mains diameter, services, governor type, MOB and design & quotations activities is required in order to separately identify unit costs for existing housing, new housing and non-domestic infrastructure.
Instructions for Completion	*New Housing* *Existing Housing* *Non-Domestic* These three tables collect data for projects below, equal to and above £50k in gross value. Enter the gross costs, contributions and workload for all predefined asset categories, e.g. mains ≤180mm, MOB Risers, etc. Any costs for laterals and branches should be reported under risers. MOB laterals should not be counted as services for the purposes of this table. Where a single riser consists of two or more diameters it will still count as a single riser. When a building has multiple individual risers that are only connected via underground pipe but supply the same building they should be counted as multiple risers. Design and quotation includes all activities supporting the provision of designs and quotations for new connections. Enter the total new diversified demand in standard m3/h of the newly connected infrastructure within each category for each year of the forecast. *FPNES* This table collects fuel poor connections expenditure and workload data at an aggregated level. FPNES costs, contributions and workload should not be included in the preceding sections for New Housing, Existing Housing and Non-Domestic connections. In the RIIO-GD2 Specifications block, enter the number of connections at an aggregated level for each of the categories below:

	(1) One-off connections (2) Community scheme connections (3) Other scheme types (eg Utility Infrastructure Providers [UIP] and Independent Gas Transporters [iGT]) *SIU* This table collects connections expenditure and workload data at an aggregated level for Statutory Independent Undertakings. SIU costs, contributions and workload should not be included in the preceding sections for New Housing, Existing Housing and Non-Domestic connections. *IGT* This table collects connections workload data at an aggregated level for IGT connections. IGT workload should not be included in the preceding sections for New Housing, Existing Housing and Non-Domestic connections. Note: historic connection figures should reconcile with Xoserve figures. It is acknowledged that forecast figures will be based on assumptions. *Projects ≥£50k* This table collects data for connections projects with a total value of equal to or greater than £50k. Note: costs, contributions and workload figures related to these projects should be included in the preceding sections for New Housing, Existing Housing and Non-Domestic. The figures in this table should therefore represent a subset of those tables. Project Name: enter the name of the project. Gross Costs/Contributions: enter the total annual gross costs and corresponding contributions for each project year. Historic costs (prior to 2019/20) for projects equal to or greater than £50k in value should be aggregated and entered in the Total row. Workload: for each project, enter the workload specifications outlined. Specifications: for each project, enter the specifications by selecting from the available dropdown categories, or in the case of Additional Governor Capacity, enter it manually. Net Costs Summary: assign the net costs to each of the categories provided.

3.06 Other Capex

Purpose and Use by Ofgem	These tables collect data for Other Capital Expenditure for the following categories:

	• System operations • IT (infrastructure and systems) and telecoms • Xoserve • Other Capex These tables also capture named projects over £0.5m. The data will be used to support benchmarking, trend analysis, and monitoring performance against the allowances. These tables also collect data for land and buildings, telecoms, security, furniture and fittings, tools and equipment, plant and equipment (excluding wheeled plant) and other capex. The worksheet makes provision to capture both named projects over £0.5m; aggregated smaller projects and non-project related spend.
Instructions for Completion	For projects with a total gross cost of less than £0.5m, projects can be aggregated and entered into the first group of tables designated for aggregated projects <£0.5m. Otherwise, projects should be captured at an individual level in the second group of tables designated for projects ≥£0.5m. *System Operations* System Operation Capex includes those IT systems and infrastructure costs which are driven by System Operation. *IT & Related Telecom* IT & Related Telecom Capex includes those IT systems and infrastructure costs which are driven by IT and telecommunications. *Xoserve* Xoserve expenditure should be the portion of Xoserve's charge relating to capital expenditure (as identified by Xoserve) to allow inclusion in the RAV. *Other Capex* Where the following activities are carried out on the distribution network assets to upgrade or extend the useful life of the assets, include with the project they relate to costs for the following: • Cathodic protection activities • Valve activities • Special / over crossings • Bank erosion • Sleeves • Pipeline protection measures (Pipelines) • Climate change / resilience measures (LTS) Where the above activities are carried out on LTS assets they will be captured in table 3.01 LTS and Storage.

	Where the work is remedial in nature and does not upgrade or extend the life of the asset it will be recorded as Opex in table 2.04 Maintenance. *RIIO-GD2 Cost Summary* Input the gross costs for design. Implementation costs are auto-populated and calculated by subtracting design costs from total gross expenditure. • Design: these costs are associated with planning, designing and testing systems, incurred irrespective of the size of the network. • Implementation: these costs are associated with IT workstations and training. These costs are expected to vary depending on the size of network and number of staff involved with the process. <u>Expenditure Justification (CBA)</u> If a CBA has been developed or investment can be justified entirely on a CBA, no input is required under expenditure justification. Where CBA is not available or investment cannot be justified entirely on a CBA, an approach of incremental expenditure above the CBA level shall be considered in the following categories: Customer, Growth, Mandatory and Renewal. These categories should only be used where no CBA has been developed. Enter the forecast amount of expenditure for each project under the justification categories of Customer, Growth, Mandatory and Renewal. Expenditure can be allocated to more than one category as necessary. The balancing amount of gross expenditure will be automatically calculated and shown under the CBA category.

3.07 Transport & Plant

Purpose and Use by Ofgem	These tables collect data for vehicles and wheeled plant. The worksheet makes provision to capture data on both Capex and Opex expenditure in these areas in order to make comparable assessment for companies operating different procurement models for these assets.
Instructions for Completion	All data should be entered for the following types of asset; • Cars • Car Derived Vans • LGVs includes vehicles up to 3.5 tonnes GVW excluding car derived vans • HGVs includes vehicles >3.5 tonnes GVW

	• Wheeled Plant includes mobile compressors, cranes, excavators and dumpers It is expected that costs for transport and plant will cover both price control and non-price control activities. The table makes provision to capture the total transport and plant costs and separately those costs directly associated with the price control. For each year specified, the following data should be entered for the following sections; Capital Expenditure • Gross Costs: Total • Gross Costs: Price Control Activities Operating Expenditure (running costs) • Gross Costs: Total • Gross Costs: Price Control Activities This should include all costs for servicing, tax, insurance, fuel and lease costs where appropriate. Population • Total Population: enter the total number of vehicles or wheeled plant in the fleet at the end of the financial year. • New & Replacement Vehicles: enter the total number of vehicles which is planned to be purchased during the year. Include both additional to the fleet or replacement of existing vehicles or wheeled plant. Ownership • Owned: enter the percentage of the fleet which is owned. • Leased: no entry required, the figure is automatically calculated as a balance of the leased percentage. Life & Mileage • Planned Life of New Vehicles: enter the planned life of the vehicles to be purchased (or actually purchased) during the year in number of years. • Mileage: enter the expected annual miles for the whole fleet. The entry should be made in the number of '000 miles.

3.08 Capitalised Overheads

Purpose and Use by Ofgem	These tables capture the forecast breakdown of capitalised overheads between various cost and capex/repex

	categories initially captured in Opex and then recharged via the accounting systems to capex or repex. This is required to understand the breakdown of Opex transfers.
Instructions for Completion	Categories of Opex Transfer For each year of the forecast, provide a breakdown of the total transfer from the opex account to Capex or Repex into the categories of: • Capitalised labour costs • Capitalised pension costs • Transport operating costs • Last mile logistics • Tools and equipment • Other non-staff related costs, or • Other costs Capitalised labour should not include any direct capex and repex wages. Capitalised labour should recognise: (a) ERO costs (NI, superannuation, training, holidays, sickness etc) (b) All other staff costs in supporting Repex and Capex activities (for example supervisory, managerial, planning and support) A description must be entered for any sums entered into the 'Other' lines. The Total should also balance with the total transfer from the Opex account <u>Recharge from Opex; Direct / Indirect</u> For each year, provide a breakdown of the total transfer from: (a) Direct Opex; and (b) Indirect Opex (support services) to Repex and Capex. *Capitalised Overheads by Activity* For each year of the forecast, provide a breakdown of the total transfer from Opex in respect to overheads to Capex / Repex into the categories of: • LTS, Storage & Entry • Reinforcement • Diversions (<7barg, Excl. Repex) • Governors • Connections • Other Capex • Repex Tier-1 Mains • Repex Tier-2A & 2B Mains

	• Repex Tier-3 Mains • Other Mains • Repex Services • Repex Diversions • Other Repex

6. Replacement Expenditure Tables

6.1. The following sections contain guidance notes on the completion of each table for the purposes of the business plan data template for Repex.

4.00 Repex Summary

Purpose and Use by Ofgem	This sheet summarises the information contained in the Repex sheets 4.01 to 4.10.
Instructions for Completion	No entries required.

4.01 Repex Mains Tier-1

Purpose and Use by Ofgem	These tables capture the costs, contributions, workload and specifications related to tier-1 Repex as enforced by the HSE under their policy for the Iron Mains Risk Reduction Programme.
Instructions for Completion	The tab is divided into two main sections: • Mains Commissioned: this section captures the costs, contributions and workload related to the installation and commissioning of new mains. Additionally, a number of specifications are captured relating to the commissioned mains. • Mains Decommissioned: this section captures the workload related to the decommissioning of existing metallic mains. Additionally, a number of specifications are captured relating to the decommissioned mains. For both Mains Commissioned and Mains Decommissioned, mains are first categorised based on the metallic assets they are replacing. Each asset is then categorised by diameter band. Metallic asset categories are defined as follows: • Cast Iron & Spun Iron: Low-Pressure • Cast Iron & Spun Iron: Medium-Pressure • Ductile Iron: Low-Pressure *Mains Commissioned* Gross Costs: enter the total annual gross costs related to each asset category, entered separately for each predefined diameter band. Contributions: if applicable, enter the total annual contributions related to each asset category, entered separately for each predefined diameter band.

	Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains commissioned. Workload forecasts are required beyond RIIO-GD2, reflecting the fact that the HSE's IMRP is due to end in 2032. Specifications (both RIIO-GD1 and RIIO-GD2): Reinstatement (% of Gross Costs): for each price control, enter the average proportion of reinstatement costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include both temporary and permanent reinstatement costs. Street Works (% of Gross Costs): for each price control, enter the average proportion of street works costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include all traffic management costs, but exclude all reinstatement costs. Length of Mains Inserted (Dead): for each price control, enter the total projected length of mains inserted using the dead insertion technique. Length of Mains Inserted (Live/Other): for each price control, enter the total projected length of mains inserted using the live insertion technique, or an alternative insertion technique other than dead or live. Length of Mains Open Cut in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains installed via open cut (open trench) excavation in each of the defined surface categories. *Mains Decommissioned* Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains decommissioned (abandoned). Workload forecasts are required beyond RIIO-GD2, reflecting the fact that the HSE's IMRP is due to end in 2032. Dynamic Growth: for each year specified, enter the value of dynamic growth for each diameter band. Note: dynamic growth figures should also be included in the Decommissioned Workload table. Specifications (both RIIO-GD1 and RIIO-GD2): Length of Mains in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains decommissioned that are situated in each of the defined surface categories.

4.02 Repex Mains Tier-2A

Purpose and Use by Ofgem	These tables capture the costs, contributions, workload and specifications related to tier-2A Repex as enforced by the HSE under their policy for the Iron Mains Risk Reduction Programme.
Instructions for Completion	The tab is divided into two main sections: • Mains Commissioned: this section captures the costs, contributions and workload related to the installation and commissioning of new mains. Additionally, a number of specifications are captured relating to the commissioned mains. • Mains Decommissioned: this section captures the workload related to the decommissioning of existing metallic mains. Additionally, a number of specifications are captured relating to the decommissioned mains. For both Mains Commissioned and Mains Decommissioned, mains are first categorised based on the metallic assets they are replacing. Each asset is then categorised by diameter band. Metallic asset categories are defined as follows: • Cast Iron & Spun Iron: Low-Pressure • Cast Iron & Spun Iron: Medium-Pressure • Ductile Iron: Low-Pressure *Mains Commissioned* Gross Costs: enter the total annual gross costs related to each asset category, entered separately for each predefined diameter band. Contributions: if applicable, enter the total annual contributions related to each asset category, entered separately for each predefined diameter band. Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains commissioned. Specifications (both RIIO-GD1 and RIIO-GD2): Reinstatement (% of Gross Costs): for each price control, enter the average proportion of reinstatement costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include both temporary and permanent reinstatement costs. Street Works (% of Gross Costs): for each price control, enter the average proportion of street works costs relative

	to total gross costs for each asset category, entered separately for each diameter band. This should include all traffic management costs, but exclude all reinstatement costs. Length of Mains Inserted (Dead): for each price control, enter the total projected length of mains inserted using the dead insertion technique. Length of Mains Inserted (Live/Other): for each price control, enter the total projected length of mains inserted using the live insertion technique, or an alternative insertion technique other than dead or live. Length of Mains Open Cut in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains installed via open cut (open trench) excavation in each of the defined surface categories. *Mains Decommissioned* Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains decommissioned (abandoned). Specifications (both RIIO-GD1 and RIIO-GD2): Length of Mains in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains decommissioned that are situated in each of the defined surface categories.

4.03 Repex Mains Tier-2B & 3

Purpose and Use by Ofgem	These tables capture the costs, contributions, workload and specifications related to tier-2B and tier-3 Repex as enforced by the HSE under their policy for the Iron Mains Risk Reduction Programme.
Instructions for Completion	The tab is divided into two main sections: • Mains Commissioned: this section captures the costs, contributions and workload related to the installation and commissioning of new mains. Additionally, a number of specifications are captured relating to the commissioned mains. • Mains Decommissioned: this section captures the workload related to the decommissioning of existing metallic mains. Additionally, a number of specifications are captured relating to the decommissioned mains. For both Mains Commissioned and Mains Decommissioned, mains are first categorised based on the metallic assets

	they are replacing. Each asset is then categorised by diameter band. Metallic asset categories are defined as follows: • Cast Iron & Spun Iron: Low-Pressure • Cast Iron & Spun Iron: Medium-Pressure • Ductile Iron: Low-Pressure *Mains Commissioned* Gross Costs: enter the total annual gross costs related to each asset category, entered separately for each predefined diameter band. Contributions: if applicable, enter the total annual contributions related to each asset category, entered separately for each predefined diameter band. Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains commissioned. Specifications (both RIIO-GD1 and RIIO-GD2): Reinstatement (% of Gross Costs): for each price control, enter the average proportion of reinstatement costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include both temporary and permanent reinstatement costs. Street Works (% of Gross Costs): for each price control, enter the average proportion of street works costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include all traffic management costs, but exclude all reinstatement costs. Length of Mains Inserted (Dead): for each price control, enter the total projected length of mains inserted using the dead insertion technique. Length of Mains Inserted (Live/Other): for each price control, enter the total projected length of mains inserted using the live insertion technique, or an alternative insertion technique other than dead or live. Length of Mains Open Cut in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains installed via open cut (open trench) excavation in each of the defined surface categories. *Mains Decommissioned* Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains decommissioned (abandoned).

	Specifications (both RIIO-GD1 and RIIO-GD2): Length of Mains in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains decommissioned that are situated in each of the defined surface categories.

4.04 Repex Mains Other

Purpose and Use by Ofgem	These tables capture the costs, contributions, workload and specifications related to Repex mains activities not captured within the HSE's three-tier system.

Instructions for Completion	The tab captures the following Repex asset categories:
	
	• Iron Mains >30m
	  ○ Cast Iron & Spun Iron: Low-Pressure
	  ○ Cast Iron & Spun Iron: Medium-Pressure
	  ○ Ductile Iron: Low-Pressure
	• Steel Mains
	  ○ ≤2"
	  ○ >2"
	• Other Policy & Condition
	  ○ Medium Pressure Ductile Iron (MPDI) captured separately
	
	The tab is divided into two main sections:
	
	• Mains Commissioned: this section captures the costs, contributions and workload related to the installation and commissioning of new mains. Additionally, a number of specifications are captured relating to the commissioned mains.
	• Mains Decommissioned: this section captures the workload related to the decommissioning of existing metallic mains. Additionally, a number of specifications are captured relating to the decommissioned mains.
	
	For both Mains Commissioned and Mains Decommissioned, mains are first categorised based on the metallic assets they are replacing. Each asset is then categorised by diameter band.
	
	Mains Commissioned
	Gross Costs: enter the total annual gross costs related to each asset category, entered separately for each predefined diameter band.
	
	Contributions: if applicable, enter the total annual contributions related to each asset category, entered separately for each predefined diameter band.

	Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains commissioned. Specifications (both RIIO-GD1 and RIIO-GD2): Reinstatement (% of Gross Costs): for each price control, enter the average proportion of reinstatement costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include both temporary and permanent reinstatement costs. Street Works (% of Gross Costs): for each price control, enter the average proportion of street works costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include all traffic management costs, but exclude all reinstatement costs. Length of Mains Inserted (Dead): for each price control, enter the total projected length of mains inserted using the dead insertion technique. Length of Mains Inserted (Live/Other): for each price control, enter the total projected length of mains inserted using the live insertion technique, or an alternative insertion technique other than dead or live. Length of Mains Open Cut in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains installed via open cut (open trench) excavation in each of the defined surface categories. *Mains Decommissioned* Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains decommissioned (abandoned). Specifications (both RIIO-GD1 and RIIO-GD2): Length of Mains in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains decommissioned that are situated in each of the defined surface categories.

4.05 Repex Mains Diversions

Purpose and Use by Ofgem	This table collects details of costs incurred and the workload associated with carrying out rechargeable mains diversions and non-rechargeable mains diversions associated with Repex.

	Data reported on this table is to include those diversions that involve the decommissioning of iron mains that fall within the scope of the HSE enforced Policy for Iron Mains Risk Reduction Programme.
Instructions for Completion	The tab is divided into two main sections: • Mains Commissioned: this section captures the costs, contributions and workload related to the installation and commissioning of new mains. Additionally, a number of specifications are captured relating to the commissioned mains. • Mains Decommissioned: this section captures the workload related to the decommissioning of existing metallic mains. Additionally, a number of specifications are captured relating to the decommissioned mains. For both Mains Commissioned and Mains Decommissioned, mains are first categorised based on the asset group they are replacing (e.g. tier-1). Each asset is then categorised by diameter band. Within each of the two main sections, diversions are further classified as either • Rechargeable Diversions, or • Non-Rechargeable Diversions The difference between the above classifications is that rechargeable diversions includes a Contributions block. *Mains Commissioned* Gross Costs: enter the total annual gross costs related to each asset category, entered separately for each predefined diameter band. Contributions: if applicable, enter the total annual contributions related to each asset category, entered separately for each predefined diameter band. Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains commissioned. Specifications (both RIIO-GD1 and RIIO-GD2): Reinstatement (% of Gross Costs): for each price control, enter the average proportion of reinstatement costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include both temporary and permanent reinstatement costs. Street Works (% of Gross Costs): for each price control, enter the average proportion of street works costs relative to total gross costs for each asset category, entered

	separately for each diameter band. This should include all traffic management costs, but exclude all reinstatement costs. Length of Mains Inserted (Dead): for each price control, enter the total projected length of mains inserted using the dead insertion technique. Length of Mains Inserted (Live/Other): for each price control, enter the total projected length of mains inserted using the live insertion technique, or an alternative insertion technique other than dead or live. Length of Mains Open Cut in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains installed via open cut (open trench) excavation in each of the defined surface categories. *Mains Decommissioned* Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains decommissioned (abandoned). Specifications (both RIIO-GD1 and RIIO-GD2): Length of Mains in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains decommissioned that are situated in each of the defined surface categories.

4.06 Capitalised Replacement

Purpose and Use by Ofgem	This table collects details of costs incurred and the workload associated with carrying out mains replacement works that are allocated as reinforcement works. Data for all capitalised replacement mains are reported in this table, including those that involve the decommissioning of iron mains that fall within the scope of the HSE enforced Policy for Iron Mains Risk Reduction Programme. Services relating to capitalised replacement should be reported in the Repex Services tab.
Instructions for Completion	The tab is divided into two main sections: • Mains Commissioned: this section captures the costs, contributions and workload related to the installation and commissioning of new mains. Additionally, a number of specifications are captured relating to the commissioned mains. • Mains Decommissioned: this section captures the workload related to the decommissioning of existing metallic mains. Additionally, a number of

	specifications are captured relating to the decommissioned mains. For both Mains Commissioned and Mains Decommissioned, mains are first categorised based on the asset group they are replacing (e.g. tier-1). Each asset is then categorised by diameter band. *Mains Commissioned* Gross Costs: enter the total annual gross costs related to each asset category, entered separately for each predefined diameter band. Contributions: if applicable, enter the total annual contributions related to each asset category, entered separately for each predefined diameter band. Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains commissioned. Specifications (both RIIO-GD1 and RIIO-GD2): Reinstatement (% of Gross Costs): for each price control, enter the average proportion of reinstatement costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include both temporary and permanent reinstatement costs. Street Works (% of Gross Costs): for each price control, enter the average proportion of street works costs relative to total gross costs for each asset category, entered separately for each diameter band. This should include all traffic management costs, but exclude all reinstatement costs. Length of Mains Inserted (Dead): for each price control, enter the total projected length of mains inserted using the dead insertion technique. Length of Mains Inserted (Live/Other): for each price control, enter the total projected length of mains inserted using the live insertion technique, or an alternative insertion technique other than dead or live. Length of Mains Open Cut in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains installed via open cut (open trench) excavation in each of the defined surface categories. *Mains Decommissioned* Workload: enter the total annual workload related to each asset category, entered separately for each predefined diameter band. This represents the length of mains decommissioned (abandoned).

	Specifications (both RIIO-GD1 and RIIO-GD2): Length of Mains in Carriageway (or Footway/Footpath, or Verge/Other): for each price control, enter the total projected length of mains decommissioned that are situated in each of the defined surface categories.

4.07 Repex Services

Purpose and Use by Ofgem	This table collects details of costs incurred and the workload associated with all Repex service interventions, excluding MOBs.
Instructions for Completion	The tab is categorised based on the Repex category that the service relates to. For instance, if a service intervention is undertaken as part of a tier-1 Repex project, then the costs, contributions, workload and specifications should be captured within the tier-1 table on this tab. Typically, services tables are further categorised as either domestic and non-domestic. Finally, the intervention type is captured as being either a relay or a transfer. For tier-1 services only, additional predefined intervention types are listed. Specifications (both RIIO-GD1 and RIIO-GD2): Average Service Length: for each price control, enter the average length of service for each Repex category Reinstatement (% of Gross Costs): for each price control, enter the average proportion of reinstatement costs (directly attributable to the service intervention type) relative to total gross costs. This should include both temporary and permanent reinstatement costs.

4.08 Repex Multiple Occupancy Buildings (MOB)

Purpose and Use by Ofgem	This table collects information to provide Ofgem with visibility of GDNs position with regards to its level of understanding of the risk associated with risers and the costs and workload associated with the replacement and refurbishment of GDNs gas supply infrastructure.
Instructions for Completion	This tab captures expenditure and workload data for the following intervention drivers: • Planned Replacement • Replacement on Failure • Planned Refurbishment

	• Refurbishment on Failure • Planned Permanent Isolation • Permanent Isolation on Failure Each intervention type is then further broken down by riser length. Gross Costs: enter the total annual gross costs related to each asset category. Costs for laterals and branches should be included with risers. Contributions: if applicable, enter the total annual contributions related to each asset category. Workload: Total Riser Length: enter the total annual workload in terms of riser length. Include the length of laterals and branches. Workload: Number of MOBs: enter the total annual workload in terms of the number of multiple occupancy buildings for which riser replacement works have been completed. Workload: Number of meter points: enter the total annual workload in terms of the number of meter points included in completed riser replacement works.

4.09 Repex Cost Breakdown

Purpose and Use by Ofgem	This table analyses total gross repex expenditure into four types of expenditure. This is to understand the impact of different real price effects for different inputs used in production.
Instructions for Completion	For each Repex category, enter the total gross expenditure for direct labour, contract labour, materials and other.

4.10 Mains Risk Prioritisation System (MRPS)

Purpose and Use by Ofgem	Mains risk data is required to verify the measurement of safety risk and risk management strategy associated with distribution mains. Completion of mains risk data in this table is not required, instead mains risk data must be provided separately by way of an MRPS extract of 1st April 2019.
Instructions for Completion	Completion of this table is not required – see above.

7. Asset and Other Tables

7.1. The following sections contain guidance notes on the completion of each table for the purposes of the business plan data template for asset tables.

5.01 LTS & Entry Assets

Purpose and Use by Ofgem	This table collects non-financial data movements in total length of pipelines (by diameter and operating pressure) during the period. Also includes sundry other LTS population data. We collect this data to understand changes in the pipeline assets and the changes that investment will make over the period.
Instructions for Completion	These tables are to be prepared for each LDZ within the GDNs ownership. The sheet collects asset data by size and pressure tier and tracks commissioned (installed or added) and decommissioned (abandoned or removed). For decommissioned assets enter a negative figure. Adjustments to Population Brought Forward: for each historic year of RIIO-GD1, enter the reported adjustments made to the asset population. Adjustments downwards should be entered as a negative number. Population Brought Forward (into 2013/14): enter the population brought forward into the RIIO-GD1 price control (i.e. 2013/14). Population Carried Forward (into 2019/20): no entry required. This is an automatic field which calculates the asset population carried forward into 2019/20. *LTS Pipelines by Diameter Band* Enter the actual/forecast commissioned and decommissioned length of LTS pipelines by diameter band in each year. Note: if an LTS pipeline is down-rated to operate below 7 barg (or up-rated), this should be shown as a new asset in the mains data table. *LTS Pipelines by Operating Pressure* Enter the actual/forecast commissioned or decommissioned length of LTS pipelines by pressure band in each year

	Note; if a pipeline is down-rated (or up-rated) from one LTS tier to another, this should be clearly shown as a + and – entry in the same year in the relevant rows. *Installations* Enter the forecast number of NTS offtakes, Embedded Gas Entry Points ≥7barg and <7barg, PRSs and AGIs commissioned or abandoned in each year.

5.02 Network Assets

Purpose and Use by Ofgem	The table collects pipeline, governor, MOB, services and CSEP asset population data and detailed movements in the distribution asset population throughout both RIIO-GD1 and RIIO-GD2. This enables Ofgem to monitor changes in assets over time and between GDNs.
Instructions for Completion	Commissioned/Decommissioned: enter the volume of commissioned (installed or added) and decommissioned (abandoned or removed) assets for each year specified. For decommissioned assets enter a negative figure. Adjustments to Population Brought Forward: for each historic year of RIIO-GD1, enter the reported adjustments made to the asset population. Adjustments downwards should be entered as a negative number. Population Brought Forward (into 2013/14): enter the population brought forward into the RIIO-GD1 price control (i.e. 2013/14). Population Carried Forward (into 2019/20): no entry required. This is an automatic field which calculates the asset population carried forward into 2019/20. *Distribution Mains (Low, Medium and Intermediate Pressure)* This includes all mains commissioned and decommissioned, including mains commissioned and decommissioned as part of the Repex programme. *Governors* For each governor installation type enter the actual/forecasted number to be commissioned (installed as new and replacement) and also enter any to be decommissioned (removed). *Services* Enter the total actual/forecasted number of services (excluding multi-occupancy buildings) by material type for each year specified. This should not include Connected System Entry Points (CSEPs), which are to be entered separately in the CSEP table. This should not include IGT or

	SIU customers, which are captured in separate tables within this tab. *Multi-Occupancy Buildings (MOBs)* Enter the total actual/forecasted number of MOB assets (MOBs, risers and meter points) categorised by riser length for each year specified. • For MOBs commissioned and decommissioned, enter total annual number of multiple occupancy buildings brought onto the network, or taken off of it. MOBs removed from the network should be entered as a negative number. • For MOBs risers commissioned and decommissioned, enter the total annual number of risers commissioned and the total number of risers decommissioned. Risers decommissioned should be entered as a negative number. • For MOBs meter points commissioned and decommissioned, enter the total annual number of meter points added or removed from the network. Meter points decommissioned (removed) should be entered as a negative number. Exclude meter points within buildings with ground floor, basement and first floor premises only. *Connected System Entry Points* Enter the total actual/forecasted number of CSEPs commissioned and decommissioned in each year specified. Also enter the number of adjustments to the CSEP population recorded in each year of RIIO-GD1. Adjustments downwards should be entered as a negative number. *IGT Services* Enter the total actual/forecasted number of IGT customers downstream of the GDN's network for each year specified. Also enter the number of adjustments to the IGT population recorded in each year of RIIO-GD1. Adjustments downwards should be entered as a negative number. *SIU* Enter the total actual/forecasted quantity of Statutory Independent Undertaking mains and services for each year specified. Also enter the number of adjustments to the SIU mains and services population recorded in each year of RIIO-GD1. Adjustments downwards should be entered as a negative number.

5.03 Capacity & Storage Assets

Purpose and Use by Ofgem	The table collects non-financial data movements in the amount of storage capacity (by storage type). We collect this data to understand the changes in the volume of any contracted seasonal storage and the (contracted or planned) capacity of supplies into the LTS over the period.
Instructions for Completion	*Storage* For each asset (High-Pressure Vessels, Salt Cavities & Mined Cavities, LNG Storage and Low-Pressure Gasholders) enter the following: • Commissioned: enter the useable capacity commissioned in the specified year. • Decommissioned: enter the useable capacity decommissioned. This should include mothballed capacity. Enter decommissioned capacity as a negative number. • Asset Population: enter the total annual asset population in terms of the number of assets. In the case of low-pressure gasholders, this should be the number of operational gasholders. • Useable Capacity Brought Forward (into 2013/14): enter the total aggregated useable capacity brought forward into RIIO-GD1 in mcm. *Linepack* For each type of linepack capacity (LTS, NTS Contracted) enter the following: • Commissioned/Contracted: for LTS Linepack, enter the useable capacity commissioned in the specified year. For NTS Linepack, enter the maximum total daily volumes of storage contracted in the specified year. • Decommissioned/Lost: enter the useable capacity decommissioned in the specified year (for LTS Linepack only) in mcm/d. Enter decommissioned capacity as a negative number. • Useable Capacity Brought Forward (into 2013/14): enter the total aggregated useable capacity brought forward into RIIO-GD1 in mcm/d (for LTS Linepack only). *Capacity (NTS Offtakes)* For NTS Offtake capacity, enter the following: • Commissioned: enter the total amount of new commissioned flat capacity (daily capacity) as an aggregate for all NTS offtakes for the year. • Decommissioned: enter the useable capacity decommissioned in the specified year. Enter decommissioned capacity as a negative number. • Asset Population: enter the total number of NTS offtakes in each LDZ for each year specified. • Useable Capacity Brought Forward (into 2013/14): enter the total aggregated useable capacity brought

	forward into RIIO-GD1 in mcm/d (for LTS Linepack only).

5.04 Capacity & Demand

Purpose and Use by Ofgem	The table collects data by exit zone based on the 1 in 20 planning scenario and annual throughput. We collect this data to understand the basis on which capacity-based investment is judged to be required by the GDN.
Instructions for Completion	Note: GDNs should list their offtakes in discrete groups by exit zone, and alphabetically within each zone. *Capacity & Demand* NTS Offtake Name: enter the name of each NTS offtake on the network. Enter the name of proposed offtakes that are expected to be commissioned. Total Demand (1-in-20 Peak: Severe LDC): enter the demand in mcm/d under 1-in-20 conditions for each offtake. NTS Flat Capacity Required (1-in-20 Peak: Severe LDC): enter the flat capacity daily volume in mcm/d under 1-in-20 conditions for each offtake. NTS Flexible Capacity Required (1-in-20 Peak: Severe LDC): enter the flexible capacity daily volume in mcm/d under 1-in-20 conditions for each offtake. Peak Flowrate (1-in-20 Peak: Severe LDC): enter the maximum peak flowrate in mcm/h taken from each offtake in each year specified. Minimum Inlet Pressure at Start of Day (1-in-20 Peak: Severe LDC): enter the minimum inlet pressure at Start of Day (barg). This is the inlet pressure required to pack the linepack system to the full stock position. Minimum Inlet Pressure at End of Day (1-in-20 Peak: Severe LDC): enter the minimum inlet pressure at End of Day (barg). This is the end of the storage day, i.e. when linepack systems are expected to be at minimum stock values. NTS Exit Zone: enter the exit zone number. *Storage* Total Volume of Storage Required (1-in-20 Peak: Severe LDC): enter the total volume of storage needed for each zone.

	Total Volume of Storage Available (1-in-20 Peak: Severe LDC): enter the total volume of storage available for each zone (excluding use of NTS flex). This should include available LP holder volume, available linepack, HP bullets, and other storage volumes. *Interruptible* Number of Site with an Interruptible Contract: enter the number of sites with a current interruptible contract purchased though the auction process. Total Capacity of Interruptible Sites: enter the total capacity in mcm/d which that have to be constructed on the network to provide a firm supply should interruptible contracts not be available. Total Interrupted Capacity: enter the capacity interrupted, or forecasted to be interrupted, on the peak day of the specified year in mcm/d to ensure network capacity remained/remains available to firm consumers. *Assumed Planning CV* Enter the assumed planning calorific value for each LDZ for each year specified.

5.05 Capacity Output Data

Purpose and Use by Ofgem	The table collects capacity outputs data for NTS offtakes and PRSs.
Instructions for Completion	Instructions below are a guide. Companies will use common assumptions as developed through the capacity working group. Capacity Utilisation: enter the number of sites (offtakes and PRSs) at the appropriate capacity utilisation.

5.06 Modern Equivalent Asset Value (MEAV) Assets

Purpose and Use by Ofgem	The table mostly uses information entered in other sheets necessary for calculating the MEAV.
Instructions for Completion	Whilst most information in this table auto-populates, GDNs are required to enter the following data: • The number of mothballed gasholder assets and the useable capacity available in each year specified.

	• The number of any other storage assets and the useable capacity available in each year specified.

5.07 PRE, Reports & Repairs

Purpose and Use by Ofgem	This table collects data to help us understand the trend in PREs over time and the overall system condition.
Instructions for Completion	**Public Reported Escapes (PREs)** This table captures the requirements for Standard Special Condition (SSC) D10 2 (g): Quality of Service Standards. Enter the historical and forecast annual total number of controlled, uncontrolled and other (non-gas) PREs, and the number of these responded-to within timescale. A controlled gas escape/emergency is a gas escape or other gas emergency where the person reporting the escape or other emergency, after carrying out (or causing to be carried out) the actions advised by the telephone service, advises the operator that the escape of gas or other emergency appears to have ceased. All other gas escapes are considered uncontrolled. **Reports** <u>Network related</u> Enter the historical and forecast number of annual controllable and non-controllable jobs to be closed off with a status: • Escape - Distribution mains condition report (condition) • Escape - Service condition report (condition) • Escape - Distribution mains interference (damage) • Escape - Service interference (damage) • Other – Distribution mains • Other – Services **Actioned Repairs** Enter the historical and forecast annual number of annual actioned repairs by category and diameter band as per the table. **Deferred Repairs** Enter the historical and forecast annual number of escape-related repairs deferred beyond 28 days by the time categories listed. Enter the historical and forecast annual median repair time (days) for all repairs deferred beyond 28-days.

5.08 Safety

Purpose and Use by Ofgem	This table collects information to inform us on GDN performance against a number of safety metrics.
Instructions for Completion	**<u>Reportable Gas in Buildings (GIB) Events</u>** Enter the annual historical and forecasted number of GIB events reportable under RIDDOR (ie GIB ≥20% LEL or >10kg of gas has been released in to a building) by the asset types shown, against the respective material, diameter band and pressure tier. Enter the annual historical and forecasted number of other RIDDOR reportable GIB events from: • Non-iron mains (steel, PE, etc.) • Service pipes • Non-pipe specific components (eg joints, clamps, encapsulations) • Third party interference Where the cause of the escape is third party interference, do not also report the event against a specific asset type. This will ensure a single event is not double counted. **Non-Reportable GIB Events** The data in this table applies to GIBs of any level of gas concentration but not up to reportable limits, i.e. it excludes those GIB events which are reported in the table above. Enter the historical and forecast number of network GIB events by the asset types / causation type shown, against the respective material, diameter band and pressure tier. Where the cause of the escape is third party interference, do not also report the event against a specific asset type. This will ensure a single event is not double counted. **Fractures & Failures** This relates to cast or spun iron fractures and ductile iron corrosion failures. Enter the historical and forecast number of fractures and failures of mains by material, diameter band and pressure. **Repair Risk** Enter the historical and forecast total accumulative repair risk ($x10^6$).

5.09 Reliability

Purpose and Use by Ofgem	This table collects information to inform us on GDN performance against a number of reliability metrics.
	Customer numbers Enter the number of customers in the following categories: Domestic (including MOB), MOB, Non-Domestic (including I&C). The number of customers entered should exclude Connected System Exit Points (CSEPs) and Independent Gas Transporter (IGT) customers. **Number and duration of non-contractual interruptions** The data completed under this section should exclude major incidents. Enter the following annual historical and forecast interruptions data by cause and activity category as per the table. • Number of planned non-contractual interruptions • Duration (minutes) of planned non-contractual interruptions • Number of unplanned non-contractual interruptions • Duration (minutes) of unplanned non-contractual interruptions

5.10 Business Carbon Footprint (BCF)

Purpose and Use by Ofgem	The purpose of this table is to collect information on the licensee's Business Carbon Footprint (BCF) (in tonnes of CO_2 equivalent) in order for us to review the carbon footprint across all the energy networks.
Instructions for Completion	The CO_2 equivalent of shrinkage is auto-populated in this tab to show the total BCF for the GDN with and without shrinkage. GDNs must forecast all Scope 1 and Scope 2 emissions (and a subset of Scope 3 emissions, as detailed below) on an "operational control" basis, ie forecast all emissions from operations on which the GDN has full authority to introduce and implement its operating policy. GDNs must also forecast a subset of Scope 3 emissions (business travel and external contractors), to ensure that the reporting captures all of the emissions arising from the development and operation of the licensee's distribution system, regardless of the legal entity carrying out each activity. According to this, we consider it valuable to focus on contractor emissions relating to the operational transport fleet and mobile power plants.

GDNs are given flexibility to set their own standards for the reporting year - we expect this generally to align with the statutory or regulatory accounts.

Apportionment of forecast emissions across a corporate group to the GDN business units must be transparent. We expect that the basis for calculating the apportionment factor will vary according to the area of emissions. The table below gives the preferred basis for determining the apportionment factor. Other financial allocation methodologies can be used to calculate the apportionment factor.

Table 1.0: Apportionment factor determination

Area of emissions	Basis for apportionment factor
Building usage	Head count
Operational Transport	Network length or km^2 of the transmission licence area.
Business transport	Head count, or like operational transport
Substations usage	Number of substations

For RIIO-GD1, enter the historical and forecast GDN emissions in CO^2 equivalent for GD1 – scope 1, 2 and partial scope 3 all together, as reported in RRPs.

For GD2, split out GDN emissions and contractor emissions. Enter forecast volumes of the following emissions categories both for the GDN and contractors. Enter the conversion factors for each of the emissions categories (more guidance below). The CO^2 equivalent emissions will be auto-populated.

Buildings Energy Usage
Emissions for electricity usage in buildings must be converted using carbon equivalent factor. GDNs must state in their methodology (included in the commentary) the conversion factor it has used and why they consider this to be appropriate.

Natural Gas, Diesel and other fuels are all categorised as fuel combustion and must be converted to tCO2e on either a Gross Calorific Value (Gross CV) or Net Calorific Value (Net CV) basis. We expect that this element of the chosen approach is clearly stated in the commentary and that this is consistently applied over time.

Transport

- **Operational Transport -** the transportation (often a fleet of vehicles) used in the day to day operation of the business – ie in the inspection and maintenance of the network.
- **Business Transport –** the transport undertaken by staff travelling to locations that are other than their normal place of work or moving between sites for purposes such as meetings.

	Defra guidelines provide for a range of emission conversion factors for transport means, with the aim to provide the best possible estimate of emissions from the vehicle portfolio owned and/or operated by the company. Defra allows for transport to be entered in terms of both mileage and fuel consumption. Use mileage data for transport where possible, using conversion factors at the greatest level of disaggregation that is reasonably practicable. Business travel by road can be entered in terms of company car and private car. The GHG Protocol defines company cars as scope 1 and private car use for business purposes as scope 3. In cases where emission factors for specific transport means are not available (we are aware of this issue for helicopters, but there may be some other instances) the equivalent tonnes of carbon dioxide (tCO_2e) must be estimated and summed to the closest means of transport (eg "air" for helicopters). **Fugitive Emissions** This category caters for GHG emissions from a range of gases that may be relevant to the GDNs (eg HFC from air conditioning). **Fuel Combustion (non-building)** This is to cover non-building fuel usage, such as mobile plants and the stand-by diesel mobile generators that are deployed from time to time in response to planned outages or faults. Defra emissions factors must be used. All mobile plant and generation used by GDNs, related and affiliate undertakings, contactors and sub-contractors must be included in so far as it is reasonably practicable.