

# RIIO-T1 Electricity Transmission Price Control – Regulatory Instructions and Guidance: Version 5.13

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## Overview:

This document provides instructions and guidance to the three electricity transmission owners - National Grid Electricity Transmission plc, SP Transmission Ltd and Scottish Hydro Electric Transmission plc - to enable them to complete the reporting requirements associated with the transmission price control from 1 April 2013 to 31 March 2021.

This is the first transmission price control to reflect the new RIIO (Revenue = Incentives + Innovation + Outputs) model.

# Context

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This document contains the electricity transmission price control cost, outputs, financial and revenue Regulatory Instructions and Guidance (RIGs).

The purpose of this document is to provide a framework to allow Ofgem to collect accurate and consistent information from the three electricity transmission owners (TOs) - National Grid Electricity Transmission plc (NGET), SP Transmission Ltd (SPTL) and Scottish Hydro Electric Transmission plc (SHE Transmission) and electricity system operator (NGET SO).

A number of licence conditions require the three electricity TOs to provide us with this information. The main licence condition for the purposes of this document is Standard Condition B15: Regulatory Instructions and Guidance  
This guidance applies to reporting from the period 1 April 2013 until 31 March 2021.

## Associated documents

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RIIO-T1: [Final Proposals for NGGT and NGET - Overview](#)

RIIO-T1: [Final Proposals for NGGT and NGET – Outputs, incentives and innovation](#)

RIIO-T1: [Final Proposals for NGET and NGGT – Cost assessment and uncertainty](#)

RIIO-T1: [Final Proposals for NGGT and NGET – Finance](#)

[RIIO-T1 and RIIO-GD1: Licence conditions – Statutory consultation](#)

[RIIO-T1 and RIIO-GD1: Draft Regulatory Instructions and Guidance - Consultation](#)

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# 1. Introduction

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## Chapter Summary

This chapter sets out the purpose and structure of the Regulatory Instructions and Guidance (RIGs) which will apply to the electricity transmission owners for RIIO-T1. It also sets out guidance on the process for reporting under the RIGs and our audit requirements.

## Background

1.1. This is the first price control to be conducted under our new RIIO (Revenue = Incentives + Innovation + Outputs) model. RIIO-T1 is the regulatory framework to apply to electricity and gas transmission companies from 1 April 2013 to 31 March 2021.

1.2. The Regulatory Instructions and Guidance (RIGs) provide a framework which enables Ofgem to collect data from the transmission owners (TOs) during the RIIO-T1 period. We collect data to enable us to administer the Special Conditions of the TOs' licences (the conditions which relate to the price control) and our price control Final Proposals. For example, the RIGs allow us to monitor TOs' performance against the outputs that they are required to deliver, to calculate any rewards or penalties associated with incentive mechanisms, and to determine adjustments to allowances determined within period, i.e. costs determined through uncertainty mechanisms.

1.3. The RIGs also provide a database of TO performance which we draw on to set cost proposals at subsequent review periods. The RIGs inform TOs about the information we plan to collect, guide them on how to provide this information and enable licensees to put systems in place to collect the data to the detail we require.

1.2.1.4. The framework also allows us to collect data on provisional Totex expenditure<sup>1</sup> for use in the annual iteration process and the calculation of the MOD term (see glossary for definition).

## Legal framework

1.3.1.5. For RIIO-T1 the reporting requirements have been consolidated in a single new licence condition:

- Standard Condition B15: Regulatory Instructions and Guidance ('the RIGs Licence Condition').

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<sup>1</sup> Totex is provisional as it may be adjusted as a result of subsequent efficiency reviews or for the correction of any errors either after the 31 July or in subsequent years.

[1.4.1.6.](#) The RIGs Licence Condition sets out the scope and governance arrangements for the RIGs.

[1.5.1.7.](#) The RIGs Licence Condition consolidates the reporting related provisions, which were previously included within a number of licence conditions, into a single condition. Having a single licence condition has not altered the nature of the information that the TOs need to provide.

[1.6.1.8.](#) In the event of any inconsistency between the licence conditions and this guidance, the licence conditions will take precedence.

## Components of the RIGs

### Overall structure

[1.7.1.9.](#) The RIGs comprise five main elements:

- templates for reporting data (in MS Excel v.2007 or newer)
- templates containing the calculation of the revenue elements – revenue reporting (including performance against incentives) (in MS Excel v.2007 or newer)
- templates for providing commentaries against the data (in MS Word)
- instructions and guidance on how to report the data (in MS Word).
- a RIIO T1 Scheme-Output Referencing Workbook (MS Excel)

### RIGs templates

[1.8.1.10.](#) The data templates have been designed to be consistent with RIIO-T1 price control Final Proposals. Where possible we have consolidated previous reporting requirements as part of the RIGs.

[1.9.1.11.](#) The key points to note in completing the RIGs templates are:

- The Licensee must take all reasonable steps to ensure the quality of its RIGs data. Quality data will in all material respects be accurate, complete and fairly presented.
- Where a table contains multiple years of data (historical and/or forecast) that was reported in a previous RIGs template, the licensees should report, unless otherwise stated in the specific table guidance, data for all years that is to the best of its knowledge up to date and accurate. Licensees are required to explain any material data revisions in their accompanying narrative.
- The Licensee must notify Ofgem of the possibility of any significant revisions to improve data quality. This notification must be issued to Ofgem as soon as it becomes evident to the Licensee that a reasonable likelihood exists of significant inaccuracies in any of its previously submitted data.
- Some of the workbooks in these RIGs have been designed to link to other workbooks. These links must be retained by the TOs in the version

submitted to Ofgem. Failure to do so will be considered non-compliant with the RIGs.

- The RIGs tables are colour coded to reflect the action required (excludes Revenue RRP). Yellow cells represent input fields. Light grey is used to denote cells containing a formula. White cells are used where cells do not need to be completed.
- Unless otherwise stated, all financial values should be input in the real price of the year to which the RIGs relate, i.e. actuals are in the costs of the year, and forecasts include impacts of real price effects, but not inflation.
- Unless otherwise indicated in the guidance document or templates, actual financial values should be provided in £ million to a minimum of three decimal places, and displayed at one decimal place, with financial values reconciling with the audited regulatory accounts. However, TOs 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.
- Workload units and outputs should be reported at the highest 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. Unless stated in the licence or elsewhere in this document. Workload and outputs should be entered in the unit of measurement set out in this guidance or in the template
- Unless otherwise indicated in the guidance or templates financial values should be input as positive values.
- Where a reportable value is zero or not applicable to the TO then a zero must be input rather than the cell being left blank.
- Where a table clearly states that data is to be filled in by another TO other than the licensee, the licensee does not need to populate the data.

## **Instructions and guidance**

1.10.1.12. The purpose of this document is to provide instructions and guidance to enable the TOs to complete the associated workbooks. This document provides information on:

- the systems, processes, procedures, recording and provision of the required data
- reporting units
- levels of accuracy (including rounding)
- the methodology for calculating or deriving required numbers
- the provision of the data to the Ofgem (format, frequency etc)
- any audit or examiner requirements
- reasons for the data requirement
- explanations of how Ofgem will monitor, assess, and enforce compliance

- a glossary of terms used in the workbooks.

~~1.11.1.13.~~ For the avoidance of doubt, this document should be read in conjunction with the RIGs Licence Conditions. Where definitions are provided within the licence conditions, they are not duplicated in this document.

#### *Provision of forecast data*

~~1.12.1.14.~~ There will be a requirement to forecast costs, workload and outputs for any remaining years of RIIO-T1 price control period. During RIIO-T1 Ofgem will require forecasts into RIIO-T2. This requirement has been discussed with TOs.

~~1.13.1.15.~~ Where TOs are required to provide forecasts then the forecasts shall represent the TOs best view following its best endeavours to take account of all relevant internal and external factors.

#### *Provision of Indirect Allocation Methodology*

~~1.14.1.16.~~ TOs must provide their methodology for allocating indirect costs as part of their reporting for the relevant reporting year and subsequently inform Ofgem of any changes to this methodology annually.

### **Commentary**

~~1.15.1.17.~~ Alongside the submission of its templates, each TO must complete a commentary. The guidance for this is set out in Chapter 110. A [strategic](#) commentary is required in order to:

- [Provide a useful executive summary, focusing attention on distilling key messages of the drivers of performance and presenting clear strategic insights at this point in the price control period.](#)
- Give Ofgem an understanding [of the key drivers](#) of ~~annual~~ business performance in terms of expenditure, workload and outputs [and the materiality of each driver](#).
- [Provide a summary of the key outputs the network company has delivered during the year and set them in the context of the delivery of the overall RIIO-ET1 price control outputs.](#)
- Provide a summary explanation of the forecast, including outputs, secondary deliverables, costs and workload.
- Provide an understanding of material variances against previous year's actuals, forecasts and Final Proposals ([SPTL and SHE Transmission](#)) and [the opening allowances \(NGET\)](#) for outputs, secondary deliverables, costs and workload.



- To inform Ofgem of any organisational changes / performance improvements, including modification/enhancements to allocation methodology and/or data capture e.g. systems.

## Reporting under the RIGs

### Timescales for reporting

~~1.16.~~1.18. The reporting year for the provision of information under the RIGs is from 1 April to 31 March in the following calendar year. The excel templates for reporting on summary costs, workload and outputs should include forecasts for each of the remaining years of the RIIO-T1 price control period.

~~1.17.~~1.19. Except where otherwise stated, the TOs must provide the information required under the RIGs as soon as reasonably practicable and in any event not later than 31 July following the end of the reporting year to which such information relates. This is the latest date that TOs can submit information unless Ofgem has previously consented to an extension in writing.

~~1.18.~~1.20. Most of the RIGs (with the exception of the Pension Pack which is required on a triennial basis) will be submitted on an annual basis.

~~1.19.~~1.21. For guidance on completion of the Pension Pack please see the Regulatory Instructions and Guidance: Triennial Pension Reporting Pack supplement.

### Form of submission

~~1.20.~~1.22. Instructions for the electronic submission of the workbooks will be circulated to each TO's regulation manager in advance of each submission deadline. However, if there is any doubt about the method of submission, the licensee must contact Ofgem.

~~1.21.~~1.23. The submission must be accompanied by a letter signed by a director on behalf of the TO confirming that the data is accurate and has been provided in accordance with the RIGs.

### Resubmissions

~~1.22.~~1.24. TOs are required to seek the agreement of Ofgem or person nominated by Ofgem before resubmitting any information provided in accordance with these RIGs.

~~1.23.~~1.25. In any such instance the report concerned must be resubmitted in full (unless agreed otherwise). The resubmission must only be accompanied by a letter signed by a director where significant changes have been made and where Ofgem and/or the TO decide such a letter is required. The volume of supporting information the licensee will be required to submit to support any resubmission will be dependent on the nature of any required resubmission.

~~1.24.~~1.26. For each resubmission a detailed explanation must be provided in the changes log in the RIGs listing every cell that has been amended. The explanation must include sufficient commentary to explain the reasons for the resubmission.

~~1.25.~~1.27. In relation to the detailed return required as part of revenue reporting, this must only be resubmitted where a restatement is necessary in the opinion of the appropriate auditor.

## **Review**

~~1.26.~~1.28. Once the TOs have submitted the information to Ofgem, Ofgem or a person nominated by it ('a reviewer') will undertake a detailed review of the information. A review may include a visit to each TO for discussion of the information submitted. Such visits will be agreed with the TOs in advance.

~~1.27.~~1.29. Where a reviewer has been nominated, the reviewer will enter into an agreement with the licensee to maintain confidentiality on reasonable terms.

## **Appointing an examiner**

~~1.28.~~1.30. In accordance with the RIGs Licence Condition the TO must permit a person nominated by Ofgem to examine:

- the systems, processes and procedures for measuring the specified information
- the specified information collected by the licensee
- the extent to which the systems, process and procedures and the specified information complies with the RIGs; and
- any further information relevant to the RRP submissions

## **Audit requirements in relation to revenue reporting**

~~1.29.~~1.31. In accordance with the RIGs Licence Condition, Ofgem will identify the specified information which is to be subject to audit, the terms on which an auditor is to be appointed by the licensee for that purpose and the nature of the audit to be carried out by that person. We will issue an Agreed Upon Audit Procedures (AUP) for use by an appropriate auditor by 31 March of the year of submission.

## **Publication and sharing of templates**

~~1.30.~~1.32. It is a requirement for TOs to publish an annual report, on their company website. The report should be published by the 30 September. The information published must align with the information provided to Ofgem. The report should cover the following as a minimum:

- Executive Summary
- Revenue Impact - actual revenue v allowances for reporting year
- Incentive – performance in the year against targets with potential future highlights

- Innovation – summary of innovation projects, funding under NIA etc. to cover some of previous IFI reporting
- Outputs - performance in the year against targets
- Costs - performance in the year against targets for costs and workload where relevant, highlights of future performance, and expected outturn at the end of RIIO.
- Uncertainties (including Load Related) - a high-level commentary in relation to anticipated impact(s) of any uncertainty mechanism and how this has evolved from the expectations at the time of drafting the Business Plans. Comment on how these have affected forecast capex and output delivery.

~~1.31-1.33.~~ Tables that should be published with / in the report are:

- Totex, actuals against allowances and forecasts
- Consolidated Outputs, ENS, SF6, customer and stakeholder satisfaction and timely connections (Scottish TOs only)
- Wider Works, including Base Wider Works (BWW) and Strategic Wider Works (SWW) and any preconstruction work to facilitate these.

~~1.32-1.34.~~ Ofgem may publish any further information contained in the templates, but will notify TOs in advance of any intention to do so and will make any necessary redactions.

## Structure of this document

~~1.33-1.35.~~ This document is divided into sections reflecting the different component parts of the RIGs workbooks. These are as follows:

- Chapter 2 provides general instructions and guidance for completing the data template worksheets.
- Chapter 3 provides instructions for the completion of the financial issues worksheets.
- Chapter 4 provides instructions for the completion of the total expenditure worksheets.
- Chapter 5 provides instructions for the completion of the operating expenditure worksheets.
- Chapter 6 provides instructions for the completion of the capital expenditure worksheets.
- Chapter 7 provides instructions for the completion of the electricity network data worksheets.
- Chapter 8 provides instructions for the completion of the outputs worksheets.
- Chapter 9 provides instructions for the completion of the revenue reporting worksheets.
- Chapter 10 provides instructions for completion of the RIIO-T1 Scheme-Output Referencing Workbook
- Chapter 11 provides guidance for the submission of a supporting commentary.

## 2. General Instructions for completing data template worksheet

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### Chapter Summary

The purpose of this chapter is to provide general instructions for completing the data template(s) worksheets by TOs. This is to enable Ofgem to effectively monitor the performance of the companies in relation to the allowances set as part of RIIO-T1 Final Proposals and against previous year's submitted actuals and forecast.

### Overview

2.1. The data templates are a series of tables in MS Excel workbooks. The purpose of the workbooks is to facilitate the submission of uniform and comparable financial, and outputs information from TOs. This enables comparison of TOs, with Final Proposals and prior year's performance, and comparative regulation on a consistent basis throughout the RIIO-T1 period. The workbooks should support and be consistent with the RIIO-T1 Final Proposals.

2.2. The TOs should submit accurate and where instructed audited figures of their costs and revenues for the relevant period. Further guidance is provided in this chapter.

2.3. The workbook has been designed to have single data entry where possible in order to avoid duplication and to facilitate reconciliations and balance checks.

### Accounting policies

2.4. All costs are to be entered on a cash basis. Cash means exclusive of provisions and accruals and prepayments that are not incurred as part of the ordinary level of business. TOs should use the same accounting policies as in the preparation of the regulatory financial statements, in accordance with UK GAAP or IFRS unless otherwise stated.

2.5. 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) you must include appropriate details including quantification of the difference.

### Structure of the template

2.6. The template has been separated into the following sections:

1. Finance.
2. Totex summaries.
3. Opex.
4. Capex.
5. Network asset data.
6. Network output data.

The reporting pack also contains revenue tables.

### **Data entry (Important)**

2.7. As the templates are a series of tables in MS Excel workbooks, links and formulae have been included to limit, where possible, the amount of manual data entry required. The workbooks have not been "locked", **but TOs are not to change any formulae or formats (including insertion or deletion of rows or columns, moving any cells, or altering any text, figures, or formulae in any cells not shaded yellow) without instruction from Ofgem first.** If a change is necessary (to correct an error, for example), Ofgem will notify TOs of the correction to be made.

### **Definitions**

2.8. Detailed definitions are included in the specific instructions for the tables unless they affect more than one table. TOs must ensure that the definitions are clearly understood and are complied with when entering any data into the template. Where there is doubt or uncertainty, please refer to Ofgem for clarification. This is to ensure consistency and comparability of data entry across TOs.

2.9. The Regulatory Asset Value (RAV) is a key building block of the price control review. RAV represents the value upon which the companies earn a return in accordance with the regulatory cost of capital and receive a depreciation allowance. Additions to the RAV are calculated as a set percentage of Totex. The definition of Totex is detailed in Appendix 2.

### **Use of Estimates and Allocations**

2.10. Apportionments should be avoided wherever possible. However where a TO (and any affiliate or related undertaking of the licensee) has to do this to complete the tables, the basis of apportionment must be provided. Changes in apportionments should also be highlighted.

### **Additional information**

2.11. If TOs consider additional information beyond that requested is necessary to develop a complete understanding of the information presented in the tables then such information should be included in an appendix to the submission.

### **Template errors**

2.12. Where errors in a worksheet are identified then Ofgem should be notified as soon as possible. Ofgem will make the necessary corrections, log them in the change log and notify the TOs.

### **Re-Openers**

2.13. In relation to re-openers, where licensees expect their application to be successful and report forecast expenditure, licensees should also ensure they report the corresponding forecast allowance.

# 3. Instructions for completing the financial issues worksheets

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## Chapter Summary

The purpose of this chapter is to inform the completion of the financial issues worksheets, ~~which covers each TO (and SO where applicable) by each TO~~. This is to enable Ofgem to effectively monitor outturn against the appropriate allowances, assess future allowances and quantify any adjustments as required in the Final Proposals.

## Introduction

3.1. The purpose of these worksheets is to facilitate the submission of uniform and comparable financial information from licensees. This enables comparison with business plans, comparison with prior years and comparative regulation on a consistent basis throughout the RIIO-T1 period.

3.2. Licensees should submit accurate (and where instructed) audited figures of their costs and revenues for the relevant period. Further guidance is provided below.

3.3. All costs are to be entered on a cash controllable basis. This means exclusive of all provisions and all accruals and prepayments that are not incurred as part of the ordinary level of business.

3.4. The following worksheets are no longer included in the pack and are not required to be submitted to Ofgem: 1.1 Income statement, 1.2 – Financial Position, 1.3 Cash flow, 1.7 Tax Computation, 1.8 Tax Pools, 1.9 Tax allocations of spend, 1.10 Tax allocations CT 600, 1.12 Financing requirements, 1.13 Pensions defined benefit.

3.5. Worksheet 1.11 – Tax Clawback has been incorporated into 1.5 – Net Debt and [interestTax Clawback](#).

3.6. Submit numbers in £m correct to two decimal places.

## ~~Additional information required~~

~~3.7. The following additional information is also required:~~

- ~~• Corporation Tax return (CT600) and supporting tax computations for the licensee's last statutory accounting financial year;~~
- ~~• Final agreed corporation tax return for all years closed by HMRC in the regulatory year and up to the date of submission of the relevant RIIO-T1 reporting template;~~
- ~~• Audited Annual Pension Scheme accounts; and~~

- ~~Copy of the Certification by senior accounting officer that is prescribed in FA2009, which certifies annually that the accounting systems for the company and its subsidiaries are adequate for the purpose of accurate reporting of 'taxes and duties'. This may be for the group in which the licensee is a subsidiary.~~

## Overview of worksheets

~~3.8.3.7.~~ The worksheets included within this chapter are:

- 1.4 Reconciliation to Regulatory Accounts
- 1.5 Net debt, ~~interest~~ and tax clawback
- 1.6 ~~Fixed-asset d~~Disposals

### 1.4 Reconciliation to Regulatory Accounts

Purpose and use by Ofgem	<p>The purpose of this worksheet is to reconcile total expenditure balances as per Regulatory Accounts to total expenditure reported in the Costs and Outputs Reporting Pack.</p> <p>Detail all reconciling items between the Regulatory Accounts and Costs and Outputs Reporting Pack in the yellow input cells.</p>
Guidance on completing this worksheet	<p>This table should be completed in £m nominal.</p> <ul style="list-style-type: none"> <li>• Detail all reconciling items between the Regulatory Accounts and Costs and Outputs Reporting Pack in the yellow input</li> </ul>

### 1.5 Net ~~D~~ebt and Tax Clawback

Purpose and use by Ofgem	<p>This table and the Tax clawback table have now been integrated into the same worksheet.</p> <p>The purpose of this worksheet is to provide a framework for the provision of detailed information on the company net debt position and an analysis of interest income and expenses. This information is adjusted to the Regulatory Accounts Net Debt and Net Interest figures to bring them in line with the regulatory definitions contained in the July 2009 open letter to network operators on the tax clawback, which sets out ex post adjustments following DPCR4.<sup>2</sup></p>
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<sup>2</sup> [Clawback of tax benefit due to excess gearing \(July 2009\)](#)



	<p>The adjusted Net Debt and Net Interest figures will be required to calculate the value of the tax benefit due to excess gearing as part of the Annual Iteration Process.</p> <p>Where short term loans to related parties display the characteristics of long term loans, eg repeated renewal, they should be included within net debt as long term loans.</p> <p><u>Where a company has restricted cash balances, these should be excluded from cash and short-term deposits. This should be presented within the other adjustment rows of the net debt conversion table.</u></p>
Guidance on completing this worksheet	<p>Where debt is of a short term/current nature (and can therefore be replaced several times in a year) the balance outstanding at the yearend must be entered. The interest rate stated must be the rate that is applicable to the tranche which is outstanding at the regulatory year end.</p> <p>Further specific guidance:</p> <ul style="list-style-type: none"> <li>• The net debt summary is a reconciliation between the debt items A to <u>HG</u> and total net debt (<u>IH</u> to <u>QN</u>).</li> <li>• There are additional manual input lines to reconcile any differences that may arise between the net debt analysis and net debt per the balance sheet due to inclusion of derivatives and classification differences.</li> <li>• For A to <u>HG</u>, balance sheet debits and cash must be entered as negative values and balance sheet credits must be entered as positive values. Input year end values as per the Regulatory Accounts.</li> <li>• For A to <u>QM</u> space for associated commentary has been provided.</li> </ul>

## 1.6 Disposals

Purpose and use by Ofgem	The purpose of this table is to collect information relating to fixed asset disposals.
Guidance on completing this worksheet	<ul style="list-style-type: none"> <li>• Rows 16 to 21: Enter details of disposals in the regulatory year by asset type for the company and individual licensees. For the avoidance of doubt, disposals should include assets transferred from the licensee to a company within the same group (i.e. a property company).</li> <li>• Rows 25 to 31: insert details of any adjustments or reclassifications relating to disposals.</li> <li>• Row 20: Property and land disposal income - various sites – these cells are linked to the sub-table below the main</li> </ul>

	table. All areas of the sub-table must be completed. The property and associated land include: in-whole or part of any operational site and in-whole or part of any non-operational site (eg office buildings).
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## 4. Instructions for completing the total expenditure worksheets

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### Chapter Summary

The purpose of this chapter is to provide information on the total expenditure worksheets by each TO. This is to enable Ofgem to effectively monitor the performance of the companies in relation to their business plans and the total expenditure baselines set in the Final Proposals.

### Introduction

4.1. The purpose of the worksheets in this area is to report total expenditure. In the main these worksheets pull data from other areas of the RIGs.

### Overview of worksheets

4.2. The worksheets included within this chapter are:

- 2.1 Provisional Price Control Financial Model (PCFM) inputs
- 2.2 Totex forecasts
- 2.3a Forecast Allowances
- 2.3b Forecast Volumes
- 2.4 Published Totex
- 2.5 Published Outputs
- 2.6 Published Wider Works
- 2.7 Input Prices

#### 2.1 Provisional Price Control Financial Model (PCFM) inputs

Purpose and use by Ofgem	The purpose of this table is to provide the Totex expenditure inputs to inform the Annual Iteration Process of the Price Control Financial Model (PCFM). The data from this table will be used to inform the direction of actual Totex (in the sub categories as identified) to populate the PCFM for the reporting year. The information also enables Ofgem to monitor performance against allowances and outputs.
Guidance on completing this worksheet	The table draws information from Table 2.2.

	The table does not distinguish between base expenditure and expenditure incurred under uncertainty mechanisms as the capitalisation rate is the same.
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#### Specific definitions for this worksheet

None	
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## 2.2 Totex forecasts

Purpose and use by Ofgem	<p>The purpose of this table is to collect a summary of total opex and capex data for the actual reporting year and high level forecasts for the whole of the price control period. This enables a comparison with previous years and the price control allowances.</p> <p>A TO can provide if it, so desires, a range of forecasts within their annual report published at the end of September. If they do they should fill this table in using the central or most likely one.</p> <p>This table is <del>now</del> fully auto populated.</p>
Guidance on completing this worksheet	<p>The actual data for the reporting year table is self populated with information from the table 3.1 Summary of Cash Controllable Costs and Table 4.1 Capex Summary. The capex forecast also comes from Table 4.1.</p> <p>Values are to be reported in £m in the reporting year's prices, with the exception of 'Previous Year Submission' data, which is to be reported in 2009/10 prices.</p> <p>Previous year's forecasts are populated from previous year tab. Forecast allowances are auto-populated from the table 2.3a.</p> <p>The table automatically compares the current year actuals and forecasts with previous years and the forecast price control allowances in 2009/10 prices and current year prices.</p> <p>Load and non load capex will include capital contributions <a href="#">and real price effects (RPEs)</a>.</p> <p><a href="#">Please refer to the supporting commentary chapter (11) for guidance on explaining the differences between allowances and actual/forecast spend, and the drivers of material differences (this year and in comparison with last year's information).</a></p>

Specific definitions for this worksheet

None	
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### 2.3a Forecast Allowances

Purpose and use by Ofgem	<p>The purpose of this table is to enable TOs to vary the base allowances for uncertain expenditure or changes in volume drivers. Thus the adjusted allowances more closely match as the actual spending in the year and the forecasts for future years will include amounts for uncertainties. This will enable a better reflection of performance against allowances.</p> <p><b>NB. These adjusted allowances may not reflect the final allowances allowed for uncertainty and volume driver changes which may be finalised some years later</b></p>
Guidance on completing this worksheet	<p>The base allowances are auto-populated from other RIGs tables.</p> <p>Uncertainty mechanism allowances data should be input in the yellow shaded cells to reflect the latest view of what outputs have been and are expected to be delivered, as per table 2.3b. For the avoidance of doubt, the input allowances for each year will be the latest view of what the final allowances will be for that year. As prior years are potentially impacted by future outputs prior year inputs can be made for prior years as well as the current year and future years. All allowances should be calculated in line with licence condition formulae and revenue drivers. SWW allowances should exclude pre-construction allowances which are non-variant allowances already allocated to the SWW projects within the licence.</p> <p>These tables are for Ofgem use only and will not be published, although the total adjusted allowance figures for Totex may be published.</p> <p>The totex forecast on this table should agree to the forecast shown on table 2.2</p> <p>The forecast allowances should be in line with TOs central or most likely forecasted outturn.</p> <p><u><a href="#">This worksheet comprises the following tables for completion:</a></u></p> <ul style="list-style-type: none"> <li>• <u><a href="#">Table 1a: variations to base allowance (including the effect of RPEs) – 2009-10 prices</a></u></li> <li>• <u><a href="#">Table 1b: variations to base allowance (including the effect of RPEs) – current reporting year prices</a></u></li> </ul>

- [Table 1c: variations to base allowance \(excluding the effect of RPEs\) – 2009-10 prices.](#)

Specific definitions for this worksheet

None

## 2.3b Forecast Volumes

Purpose and use by Ofgem	The purpose of this table is to enable <a href="#">SPTL and SHE Transmission TOs</a> to vary the base volume driver allowances to match actual volume or expected future volumes. The adjustments made on this table explain the financial changes made in Table 2.3a. This will enable Ofgem to understand some of the reasons for changes in the allowances in the current and future years.
Guidance on completing this worksheet	<p>Data should be input as required in the yellow shaded cells.</p> <p>These tables are for Ofgem use only and will not be published, although the total adjusted allowance figures for Totex may be published.</p> <p>The volumes included in this table will match the volumes used to calculate uncertainty mechanism allowances in table 2.2.</p>

Specific definitions for this worksheet

None

## 2.4 Published Totex

Purpose and use by Ofgem	The purpose of this table is to replicate what the TO has published on its website.
Guidance on completing this worksheet	<p>Where possible the cells on these tables are auto-populated from other RIGs tables.</p> <p>Licensees are required to publish these tables on their website by 30<sup>th</sup> of September in each year of RIIO-T1. The data contained in these tables <b>MUST</b> agree with that published on the TO's website. However, they may choose to use different formatting in their published tables.</p> <p>TOs can provide if it, so desires, a range of forecasts within their annual report published at the end of September. If they</p>

	<p>do they should fill this table in using the central or most likely one</p> <p>TOs can change the row headings on this table provided it still shows totals for capex, opex and totex.</p> <p>If the network company chooses to submit a revised table 2.4 to realign allowance categorisation (to be consistent with the <a href="#">current company view of the</a> treatment of spend), the Licensee is required to publish this table on their website by 30th of September in each year of RIIO-T1. The data contained in these tables <b>MUST</b> agree with that published on the TO's website. However, they may choose to use different formatting in their published tables.</p>
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Specific definitions for this worksheet

None	
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## 2.5 Published Outputs

Purpose and use by Ofgem	The purpose of this table is to replicate what the TO has published on its website.
Guidance on completing this worksheet	<p>The cells on these tables are <a href="#">fully</a> auto-populated from other RIGs tables.</p> <p>Licensees are required to publish these tables on their website by 30<sup>th</sup> of September in each year of RIIO-T1. The data contained in these tables <b>MUST</b> agree with that published on the TO's website. However, they may choose to use different formatting in their published tables.</p>

Specific definitions for this worksheet

None	
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## 2.6 Published Wider Works

Purpose and use by Ofgem	The purpose of this table is to replicate what the TO has published on its website.
Guidance on completing this worksheet	<p><del>Where possible the cells on these tables are auto-populated from other RIGs tables.</del></p> <p>Data should be input as required in the yellow shaded cells.</p>

	Licensees are required to publish these tables on their website by 30 <sup>th</sup> of September in each year of RIIO-T1. The data contained in these tables <b>MUST</b> agree with that published on the TO's website. However, they may choose to use different formatting in their published tables.
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#### Specific definitions for this worksheet

Delivery date	The date at which the transmission infrastructure developments to reinforce the licensee's transmission system have undergone second stage electrical commissioning or final stage commissioning and becomes part of the TO's network.
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## 2.7 Input Prices

Purpose and use by Ofgem	<p>TO's allowances are adjusted annually to take account of actual inflation as measured by the retail price index (RPI). However, TO cost inflation is not fully reflective of RPI and therefore allowances also include ex ante assessments of real price effects (RPEs). The RPE allowances reflect our expectation (at the time that the allowances were set) of how much the TO's costs would increase above RPI due to macro-economic factors outside of the companies' direct control.</p> <p>The purpose of this table is for TOs to provide their views on actual and current forecast levels of input prices over the price control period.</p> <p>This table will be used by Ofgem to monitor and evaluate the impact of changes in input prices on the actual and forecast expenditure. This will allow additional transparency of the TO's actual performance and may help inform our view of how factors outside of a TO's control might impact expenditure if other factors are kept constant. We acknowledge that there may be valid reasons why a TO's actual and forecast expenditure will not be perfectly reflective of changes in input prices and quantifying the notional changes will help TOs to provide us with fuller explanation of any variations from allowances.</p>
Guidance on completing this worksheet	<p>The table is divided into five sections. Please see below specific definitions for this worksheet.</p> <p><b>1. Real Price Effects:</b> this table is auto populated</p> <p><b>2. Indices</b></p> <p><b>2.1. Relevant Input Price Indices (per business plan):</b> the licensees are required to populate this section with their original forecast of RPIs used to calculate the RPE forecasts in their in their business</p>



	<p>plan as well as the individual BP RPE forecasts. The RPIs should be reported as a Year-on-Year (YoY) change, with 2011 as the base year (1.00). Year 2012 will therefore be 1.048 (or similar) etc. see calculations below.</p> <p><b>2.2. Relevant Input Price Indices (actual &amp; revised forecast):</b> the licensees should populate this section with their current estimates of historical and forecast RPIs and RPE components of input prices. The assumptions, rationale, and data sources for figures reported on this table should be explained in the relevant section of the accompanying commentary document.</p> <p>Each licensee is required to provide its views on actual and forecast impact of changes in the macro-economic environment on the following input price categories:</p> <ul style="list-style-type: none"> <li>• Direct labour (opex)</li> <li>• Direct labour (capex)</li> <li>• Contractor labour (opex)</li> <li>• Contract labour (capex)</li> <li>• Materials (opex)</li> <li>• Materials (capex)</li> <li>• Equipment/plant</li> <li>• Transport</li> <li>• Other expenditure not covered by the above categories</li> </ul> <p>The data entered in this table should not be dependent on:</p> <ul style="list-style-type: none"> <li>• contracting strategy</li> <li>• technological innovations</li> <li>• corporate structure</li> <li>• capital structure</li> <li>• other factors within the company's control</li> </ul> <p>While we acknowledge that the mix of work, type of labour, and materials is variable and that the assumptions around these will affect calculated indices, licensees should be able to explain and provide rationale for their input values</p> <p>Licensees are required to provide an explanation in their narrative of the methodology, data sources, and assumptions used to complete this table. If a third party consultant is employed to carry out the analysis for completion of this table then a consultant's report should be provided.</p> <p><b>3. Weightings:</b> Licensees are required to add their Business Plan / Final Proposals view of percent weighting of each category for each area.</p>
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	<p><b>4. RIIO-T1 Business Plan baseline excl. RPEs:</b> the licensees are required to populate this table with their forecast baseline costs that equate to those in their RIIO-T1 business plan after stripping out the original RPEs. The required reporting categories are the same as those in the 'Allowances' tab and on table '2.2 Totex Forecast'. The costs should be in 2009-10 price base.</p> <p>While LR expenditure is a single line on the 'Allowances' tab and on table '2.2 Totex Forecast', table 2.7 differentiates between 'Connections &amp; Local Enabling Works' and 'Wider Infrastructure &amp; TSS'. Licensees are therefore required to report the percentage split between these LR cost categories.</p> <p><b>5. RIIO-T1 Business Plan baseline incl. RPEs:</b> Equivalent to 4 above but with RPEs included.</p> <p><i>Price base: all historical and forecast costs should be entered in 2009-10 prices.</i></p>
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Specific definitions for this worksheet

Specific definitions for the worksheet

<b>Input price elements (C)</b>	<p>For these purposes the input price elements are:</p> <ul style="list-style-type: none"><li>(1) Direct labour (opex)</li><li>(2) Direct labour (capex)</li><li>(3) Contract labour (opex)</li><li>(4) Contract labour (capex)</li><li>(5) Materials (opex)</li><li>(6) Materials (capex)</li><li>(7) Equipment/plant</li><li>(8) Transport</li><li>(9) Other</li></ul> <p>The total cost in any cost category (e.g. opex, capex) can be divided into nine elements.</p>																
<b>Indexed Inflation (RPI)</b>	<p>Year-on-year (financial year average) percentage change in the retail price index (RPI_index).</p> $RPI_t(\%) = \frac{RPI\_index_t}{RPI\_index_{t-1}} - 1$ $RPI_t = RPI_{t-1} + RPI_t(\%)$ <p>Example (for outturn RPIs):</p> <table><tr><th>Financial year</th><th>Financial Year Average RPI</th><th>YoY change (%)</th><th>YoY change (total) (base: 2011)</th></tr><tr><td>2010/11</td><td>226.48</td><td></td><td>1.000</td></tr><tr><td>2011/12</td><td>237.34</td><td>4.80%</td><td>1.048</td></tr><tr><td>2012/13</td><td>244.68</td><td>3.09%</td><td>1.079</td></tr></table>	Financial year	Financial Year Average RPI	YoY change (%)	YoY change (total) (base: 2011)	2010/11	226.48		1.000	2011/12	237.34	4.80%	1.048	2012/13	244.68	3.09%	1.079
Financial year	Financial Year Average RPI	YoY change (%)	YoY change (total) (base: 2011)														
2010/11	226.48		1.000														
2011/12	237.34	4.80%	1.048														
2012/13	244.68	3.09%	1.079														

	2013/14	251.73	2.88%	1.108
	2014/15	256.67	1.96%	1.127
	2015/16	259.43	1.08%	1.138
<b>Input Price Inflation (IPI)</b>	<p>The rate at which the absolute level of the relevant cost category (e.g. direct labour (opex), equipment/plant) has increased in year <b>t</b> relative to the previous regulatory year</p> $IPI_{C,t}(\%) = \frac{Input\_Price_{C,t}}{Input\_Price_{C,t-1}} - 1$			
<b>Weight:</b>	<p>Each cost category (LR, NLR, Opex etc) consists, in varying proportions, of the individual input price elements (e.g. direct labour (opex), equipment/plant). TOs are required to provide their view of the percent of cost category that can be attributed to the individual input price elements.</p>			
<b>Real Price Effects (RPE):</b>	<p>RPEs represent the above RPI inflationary effects faced by transmission companies. An individual RPE element, such as direct labour opex, for a given one year period (t-1 to t) is calculated as follows:</p> $RPE_{C,t}(\%) = \frac{1 + IPI_{C,t}(\%)}{1 + RPI_t(\%)} - 1$			

# 5. Instructions for completing the operating expenditure worksheets

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## Chapter Summary

The purpose of this chapter is to inform the completion of the operating expenditure worksheets by each TO. This is to enable Ofgem to effectively monitor the performance of the companies in relation to their business plans and operating expenditure baselines set in the Final Proposals.

## Introduction

5.1. The purpose of the worksheets in this area is to report operating costs (opex) information at various different levels to enable Ofgem to fully understand opex trends and performance. Certain large and significant areas of cost are broken down into greater detail so that we can understand the movements more easily.

5.2. Licensees should submit accurate (and where instructed) audited figures of their costs and revenues for the relevant period. Further guidance is provided below.

5.3. All costs are to be entered on a cash controllable basis (see Glossary). Cash controllable means exclusive of all provisions and all accruals and prepayments that are not incurred as part of the ordinary level of business.

## Materiality

5.4. Where TOs are completing tables with costs <£0.1m it is not expected that all cells will be completed. TOs should either show the total in the cell labelled "Other" or enter the total in the cell that represents most of the costs.

## Overview of worksheets

5.5. The worksheets included within this chapter are:

- [3.1 Opex summary – cash controllable costs NGET ONLY](#)
- [3.1 Opex summary – cash controllable costs SPTL and SHE Transmission ONLY](#)
- [3.2 Indirect Costs Summary SPTL and SHE Transmission ONLY](#)~~Year-on-year movement in controllable costs~~
- 3.3 Asset management opex
- 3.4 Business support – group costs

- 3.5 Business support – allocation [\(No requirement to populate\)](#)
- 3.6 Business support – supplementary detail
- 3.7 Operational training
- 3.8 Total transmission salary and FTE numbers
- 3.9 Analysis of excluded, consented, and de minimis services
- 3.10 Provisions
- 3.11 Related party transactions
- 3.12 Innovation Rollout Mechanism (IRM) expenditure
- 3.13 Network Innovation Allowance (NIA) expenditure
- 3.14 Network Innovation Competition (NIC) expenditure
- 3.15 Physical security opex
- 3.16 SO EMR Data Volumes

### **3.1 Opex summary – cash controllable costs NGET ONLY**

Purpose and use by Ofgem	<p>The purpose of this table is to provide a breakdown of cash controllable costs into activities within business support, closely associated indirect and direct costs. Table 3.1a shows the net amounts, Table 3.1b shows the gross amounts and Table 3.1c shows the capitalised amount.</p> <p>The table also collects items outside of Totex including non controllable costs to come to the total operating costs.</p>
Guidance on completing this worksheet	<p><del>Licensees are</del><a href="#">NGET only is</a> required to provide either actual or forecast costs for each of the eight years of RIIO-T1 (unless otherwise specified – see below). Forecasts should be input in the real price of the year to which the RIGs relate. Forecasts will therefore include impacts of real price effects, but not inflation.</p> <p>Cost data should be input on a gross cash controllable cost basis on Table 3.1b and the amount of capitalisation in Table 3.1c as indicated by the boxes shaded yellow. Costs should be input as positive values (exceptions to this are <del>row cells D57, 64, 66, and D_104</del> <a href="#">and 108</a> where the value can be either a positive or negative value). Table 3.1a (net costs) are automatically populated <a href="#">for the current reporting year</a>.</p> <p>SO costs should be reported separately from TO costs where appropriate.</p>

	<p>Table 3.1a also required items outside of Totex to be added to come to a total operating costs figure that reconciles to the regulatory accounts figure for operating costs.</p> <p>Pension deficit payments relating to established schemes are not part of opex but should be recorded as memo items for both TO and SO (where applicable).</p> <p>All costs above the controllable cost line should be cash costs i.e excluding provisions. Table 3.1a also required items outside of Totex to be added to come to a total operating costs figure that reconciles to the regulatory accounts figure for operating costs</p> <p>Table 3.1d: <del>TOs are required</del> <u>requires NGET only</u> to split the 'Related Party Margins Disallowed Total' by the opex categories in table 2.2. This will then be an input to table 2.1.</p> <p>Table 3.1e: requires NGET only to provide a breakdown of EMR preparatory costs from 1<sup>st</sup> March 2014 to 31<sup>st</sup> July 2014 only.</p> <p><u>Row Cell F686 (TO) and 113 (SO):</u> The sum of the costs in tables 3.112, 3.123 and 3.134 equal the total "Network Innovation Costs" category. <u>This is fully auto-populated.</u></p> <p><b>Rows 56 and 103 (Provisions movements) to be left blank.</b></p> <p><del>In NGET's case, forecast cost breakdown for the remaining RIIO T1 period may be completed on a discretionary basis by 31 July 2017. This will allow NGET to provide a full 8 year view of costs within the price control in areas that it considers it can compile to the highest reasonable level of accuracy available from their source systems at that time (e.g. 'Business support' total, 'CAI' total, 'Direct cost' total, 'not for UM' total, 'Fault Repairs' and 'Planned Inspection').</del></p>
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### 3.1 Opex summary – cash controllable costs SPTL and SHE Transmission ONLY

Purpose and use by Ofgem	<p>The purpose of this table is to provide a breakdown of cash controllable costs into activities <del>within</del> (business support, closely associated indirect and direct costs) <u>and -enables the company to explain the reasons for increases and decreases in costs year on year of £0.5m or more.</u></p> <p>Table 3.1a shows the net amounts, Table 3.1b shows the <u>Net Related Party Margins Disallowed</u> gross amounts and Table</p>
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	<p>3.1c shows the <del>capitalised amount</del> <u>EMR preparation costs</u>. <u>Table 3.1a (net costs) are automatically populated.</u></p> <p>The table also collects items outside of Totex including non controllable costs to come to the total operating costs.</p>
Guidance on completing this worksheet	<p><u>The majority of data is auto-populated from Table 3.2. For the remaining yellow input cells,</u> Licensees are required to provide either actual or forecast costs for each of the eight years of RIIO-T1 <del>(unless otherwise specified—see below).</del></p> <p>Forecasts should be input in the real price of the year to which the RIGs relate. Forecasts will therefore include impacts of real price effects, but not inflation.</p> <p><del>Cost data should be input on a gross cash controllable cost basis on Table 3.1b and the amount of capitalisation in Table 3.1c as indicated by the boxes shaded yellow. Costs should be input as positive values (exceptions to this are cells D57 and D104 where the value can be either a positive or negative value). Table 3.1a (net costs) are automatically populated.</del></p> <p><del>SO costs should be reported separately from TO costs where appropriate.</del></p> <p><del>Table 3.1a also required items outside of Totex to be added to come to a total operating costs figure that reconciles to the regulatory accounts figure for operating costs.</del></p> <p><del>Pension deficit payments relating to established schemes are not part of opex but should be recorded as memo items for both TO and SO (where applicable).</del></p> <p><del>All costs above the controllable cost line should be cash costs i.e excluding provisions. Table 3.1a also required items outside of Totex to be added to come to a total operating costs figure that reconciles to the regulatory accounts figure for operating costs</del></p> <p><del>Table 3.1bd: TOs are required to split the 'Related Party Margins Disallowed Total' by the opex categories in table 2.2. This will then be an input to table 2.1.</del></p> <p><del>Table 3.1ce: requires NGET only to provide a breakdown of EMR preparatory costs from 1<sup>st</sup> March 2014 to 31<sup>st</sup> July 2014 only.</del></p> <p><del>Cell F66Row 66: The sum of the costs in tables 3.112, 3.123 and 3.134 equal the total "Network Innovation Costs" category. This is fully auto populated.</del></p>

	<p><b>Rows <del>556 and 1003</del> (Provisions movements) to be left blank.</b></p> <p><del>In NGET's case, forecast cost breakdown for the remaining RII0-T1 period may be completed on a discretionary basis by 31 July 2017. This will allow NGET to provide a full 8 year view of costs within the price control in areas that it considers it can compile to the highest reasonable level of accuracy available from their source systems at that time (e.g. 'Business support' total, 'CAI' total, 'Direct cost' total, 'not for UM' total, 'Fault Repairs' and 'Planned Inspection').</del></p>
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### **3.2 Indirect costs summary SPTL and SHE Transmission ONLY**

<p><u>Purpose and use by Ofgem</u></p>	<p><u>The purpose of this table is to provide a breakdown of indirect costs into activities (business support, closely associated indirect and direct costs) and enables the company to explain the reasons for increases and decreases in costs year on year of £0.5m or more.</u></p> <p><u>Table 3.2a shows gross amounts, and Table 3.2b shows the cash controllable capitalised amount and 3.2c shows the net opex amount.</u></p> <p><u>Cost data should be input on a gross cash controllable cost basis on Table 3.2a and the amount of capitalisation in Table 3.1b as indicated by the boxes shaded yellow. Costs should be input as positive values (exceptions to this general rule will apply, for example cells F56:M56 and cells F100:M100 where the value can be either a positive or negative value). Table 3.1a (net costs) are automatically populated.</u></p> <p><u>There is no requirement on NGET to populate this tab for 2017-18</u></p>
<p><u>Guidance on completing this worksheet</u></p>	<p><u>Licensees should fill in the reasons for changes in costs in the boxes shaded in yellow. The table should be completed to clearly explain the year on year movements, additional explanations can be provided in the commentary if required.</u></p> <p><u>All exceptions items should be clearly identified.</u></p>

Specific definitions for [this worksheet](#) **T3.1 & 3.2**

	<b>TO Closely Associated Indirect Costs</b>
Operational IT and Telecoms	IT equipment which is used exclusively in the real time management of network assets, but which does not form part of those network assets



Project Management	<p>Project Management from authorisation through preparation, construction and energisation to completion.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Overall responsibility for major project delivery.</li> <li>• Determining resource requirements.</li> <li>• Planning and requisitioning materials &amp; equipment.</li> <li>• Liaising with procurement for non-standard materials as required.</li> <li>• Work and resource programming.</li> <li>• Risk assessments of the overall project content.</li> <li>• Preparation of work instructions.</li> <li>• Issue of work to own staff and contractors.</li> <li>• On-site supervision and technical guidance.</li> <li>• Quality checks on work undertaken.</li> <li>• Organising network access and co-ordination of outages.</li> <li>• Organising and supervising (where appropriate) the undertaking of commission tests.</li> <li>• Issuing completion certificates.</li> <li>• Arranging energisation of assets.</li> <li>• Cost control.</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>• Any IT or property costs associated with Project Management.</li> <li>• Any employees managing other indirect activities.</li> </ul> <p>Any design work relating to new connections new or replacement assets</p>
Network Design and Engineering	<p>All processes and tasks involved in the:</p> <ul style="list-style-type: none"> <li>• Strategic planning of the network at all voltages.</li> <li>• Detailed engineering design of new connections, extensions and changes to the network at all voltages.</li> </ul> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Strategic planning of the network – Relates to the tasks associated with the network in totality rather than individual projects. Includes: <ul style="list-style-type: none"> <li>○ Maintenance of network design data models.</li> <li>○ Development of long term development statements.</li> <li>○ Capital planning for business plans and budgets.</li> <li>○ Network wide demand forecasting.</li> <li>○ Network Modelling associated with determination of Use of System charges.</li> <li>○ Strategic planning of the network in respect of new connections, load related network reinforcement and all aspects of the “non-load new and replacement asset installation” activity.</li> </ul> </li> <li>• General and Fault Level Reinforcement – Relates to the tasks associated with the project specific network design and engineering of General and Fault Level Reinforcement projects.</li> </ul>

	<ul style="list-style-type: none"> <li>• Demand Connections – Relates to the tasks associated with the project specific network design and engineering of Demand Connections projects and enquiries.</li> <li>• Other Network Investment – Relates to the tasks associated with the project specific network design and engineering of all other aspects of Network Investment projects.</li> </ul> <p>The tasks associated with General and Fault Level Reinforcement projects, Demand Connections projects &amp; enquiries &amp; enquiries and all other aspects of Network Investment projects including:</p> <ul style="list-style-type: none"> <li>• Load forecasting.</li> <li>• Network modelling.</li> <li>• Network and engineering design of the network to accommodate new connections, specific changes in either demand or distributed generation and all aspects of the “non-load new and replacement asset installation” activity.</li> <li>• Provision of connection charge quotations.</li> <li>• Approval of network designs undertaken by other parties, such as independent connection providers and related parties.</li> <li>• The surveying of a specific overhead line in order to identify the detailed work required to address an identified problem/issue.</li> <li>• The determination of land profiles to select the routes and pole sizes for new or replacement lines.</li> <li>• The surveying associated with new and existing operational sites in order to identify detailed work requirements.</li> <li>• Network performance monitoring and evaluation of impact of salient policies.</li> <li>• Planning new projects up to the point of authorisation.</li> </ul> <p>Network Design and Engineering excludes:</p> <ul style="list-style-type: none"> <li>• The surveying, patrolling or inspection of system assets to collect condition information.</li> <li>• Any IT or property costs associated with network design &amp; engineering.</li> </ul>
System Mapping	<p>The activity of mapping of the network and operational premises of the network to geographical locations.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Updating the geographical system maps with asset and locational information following the installation, removal or repositioning of system assets.</li> <li>• The updating of Geographic Systems (GIS) records following Ordnance Survey mapping rebasing upgrades.</li> <li>• Responding to the New Roads and Street Works Act NRSWA notices sent to the Company by other parties.</li> <li>• Ordnance survey licence fees.</li> </ul> <p>Excludes:</p>

	<ul style="list-style-type: none"> <li>• Clerical support and admin associated with New Roads and Street Works Act (NRSWA).</li> <li>• updating the network control diagram</li> <li>• onsite collection of asset and locational information where this task is undertaken with the installation of the asset which is part of the associated direct activity:</li> </ul> <p>IT &amp; Property costs associated with System Mapping activity</p>
Engineering Management and Clerical Support	<p><u>Engineering Management &amp; Clerical Support</u></p> <p>The office-based activities of engineering and clerical support staff (ie depot clerical staff, managers, work planners, etc) managing or assisting employees undertaking direct activities and Wayleave Administration.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Strategic Network Plan Development and implementation: <ul style="list-style-type: none"> <li>○ Managing the delivery organisational structure to achieve the long and short term company goals.</li> <li>○ Agreeing resource requirements (own employees, contractors, finances and outcome targets).</li> <li>○ Managing the allocation and distribution of delivery resources to achieve plans.</li> <li>○ Managing key corporate policies and standards for investment/ service delivery.</li> <li>○ Leading the management team for service delivery.</li> <li>○ Monitoring the achievement of plans.</li> <li>○ Overseeing the management of teams with responsibility for service delivery.</li> </ul> </li> <li>• Identification and implementation of improvement initiatives: <ul style="list-style-type: none"> <li>○ Redesign of business processes</li> <li>○ Customer service improvements</li> </ul> </li> <li>• Work Planning, Budgeting, Allocation and Control: <ul style="list-style-type: none"> <li>○ Monitoring delivery of major works</li> <li>○ Monitoring fault activity.</li> <li>○ Monitoring budgets of Inspections and maintenance, faults and major works.</li> <li>○ Setting and agreeing performance targets, monitoring actual performance.</li> <li>○ Reporting and analysis of Key Performance Indicators ("KPIs").</li> </ul> </li> <li>• Line management of staff undertaking direct activity work: <ul style="list-style-type: none"> <li>○ Standards of performance, disciplinary and sickness absence procedures.</li> <li>○ Monitoring absence, back-to-work-interviews and welfare visits.</li> <li>○ Establishing day to day work plans.</li> <li>○ Managing the allocation tasks to achieve the delivery of operational and capital plans.</li> <li>○ Scheduling and monitoring the achievement of work jobs.</li> <li>○ Managing budget.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Ensuring work activity adheres to company technical and health &amp; safety requirements.</li> <li>• Mobile generation Management: <ul style="list-style-type: none"> <li>○ Managing the use of mobile generation.</li> <li>○ Managing and scheduling the maintenance of mobile generation.</li> </ul> </li> <li>• Operational Performance Management: <ul style="list-style-type: none"> <li>○ Health and Safety checks on work and personnel</li> <li>○ Compliance checks on staff and contractors work carried out</li> <li>○ Site safety inspections</li> <li>○ Providing safety advice to cable contractors and others (to help prevent damage)</li> <li>○ Investigation, report and corrective action following an accident or environmental incident</li> <li>○ Authorisation of team members for operational and non operational duties</li> <li>○ Operational safety checks</li> </ul> </li> <li>• Providing safety advice to persons working in proximity to network assets.</li> <li>• Streetworks admin: Customer Funded funded: <ul style="list-style-type: none"> <li>○ Processing of NRSWA notifications.</li> <li>○ Processing the payment of notification penalties (but not the cost of the penalties).</li> <li>○ Processing permit applications (but not the costs of the permits).</li> <li>○ Processing the payment of permit penalties (but not the cost of the penalties).</li> <li>○ Processing payment of inspection penalties (but not the costs of the penalties).</li> <li>○ Liaising with local authorities.</li> <li>○ Liaising with contractors and direct labour force to undertake remedial works following inspections (but not the cost of the remedial works).</li> <li>○ Processing of congestion charges payments (but not the cost of the payments).</li> <li>○ Processing of lane rentals payments (but not the cost of the payments).</li> <li>○ Processing of overstay fines (but not the cost of the fines).</li> <li>○ Updating the Street Gazetteer.</li> </ul> </li> <li>• Wayleave Payments: <ul style="list-style-type: none"> <li>○ Annual payments made in advance to the owner and/or occupier to cover the financial impact of having equipment on their land.</li> </ul> </li> <li>• Wayleaves and Easements/Servitudes: Admin Costs: <ul style="list-style-type: none"> <li>○ Obtaining, managing and administering Wayleave, substation rents, easements and servitudes.</li> <li>○ Negotiating new Wayleaves.</li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>○ Managing Wayleave terminations.</li> <li>○ Administration of existing Wayleaves including the preparation of payments.</li> <li>○ Negotiation conversions from Wayleave arrangements to permanent easement/ Servitudes, substation rents and Wayleave payments.</li> </ul> <ul style="list-style-type: none"> <li>● Clerical Support: <ul style="list-style-type: none"> <li>○ Updating plant and overhead line support asset inventory databases following asset commissioning and decommissioning.</li> <li>○ Updating plant and overhead line support asset condition data following inspection and maintenance.</li> <li>○ Dealing with verbal and written enquires for new connections, or faults.</li> <li>○ Programming of minor works.</li> <li>○ Issuing of work instructions.</li> <li>○ Preparation of quotations for minor works.</li> <li>○ Sending quotations to customers.</li> <li>○ Customer liaison.</li> <li>○ Liaising with contractors.</li> <li>○ Preparing plans, schematics, notices, materials schedules and work instructions.</li> <li>○ Preparing shutdown notices.</li> <li>○ Environmental notifications.</li> <li>○ Clerical support for staff answering verbal and written enquiries regarding faults, liaising with contractors and other stakeholders.</li> </ul> </li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>● Any Employees managing indirect activities (eg logistics manager) (include under the relevant indirect activity heading).</li> <li>● Design work relating to new connections new or replacement assets.</li> <li>● Responding to NRSWA notices sent to the Company by other parties (include under Systems Mapping).</li> <li>● Maintenance of mobile generation plant (include under Vehicles and Transport).</li> <li>● Any employees engaged in maintaining the financial asset register.</li> <li>● Idle, down and sick time of direct field staff (include with their normal direct time in the appropriate direct activity).</li> <li>● IT or property costs associated with Engineering Management &amp; Clerical Support.</li> <li>● Apprentices undertaking classroom training (include under Operational training and workforce renewal)</li> <li>● Time of employees attending training (include as labour costs under the relevant activity).</li> <li>● Training courses and training centre costs for staff relating to working on system assets (include under operational training and workforce renewal).</li> </ul>
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	<ul style="list-style-type: none"> <li>• Engineering and health and safety training, courses for staff involved in indirect activities (include under operational training and workforce renewal).</li> <li>• Updating of underground cable and overhead line asset data bases (include under System Mapping).</li> <li>• Updating financial asset register (Finance &amp; regulation).</li> <li>• Compliance checks on staff and contractors' work carried out.</li> <li>• Site safety inspections.</li> <li>• Investigation, report and corrective action following an accident or environmental incident.</li> <li>• Authorisation of team members for operational and non-operational duties.</li> <li>• Operational field safety checks.</li> <li>• Time of employees attending training (include as labour cost under the relevant activity of that employee).</li> <li>• Purchase of equipment (include under non-operational capex).</li> <li>• Training, courses and training centre costs for staff relating to working on system assets (include under operational training and workforce renewal).</li> </ul>
Network Policy (incl. R&D)	<p>All processes and tasks involved in the development and review of environmental, technical and engineering policies, and including research and development.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Evaluating the impact of changes in relevant legislation.</li> <li>• Development, regular review and updating of asset risk management policies, such as: <ul style="list-style-type: none"> <li>○ asset maintenance policy</li> <li>○ asset inspection policy</li> <li>○ technical standards and specifications team</li> <li>○ plant, equipment and component specifications</li> <li>○ vegetation management policy</li> <li>○ asset replacement policy</li> <li>○ network design and protection policy.</li> </ul> </li> <li>• Analysis and interpretation of asset condition data.</li> <li>• Development, regular review and updating of environmental policy.</li> <li>• Research and development (including Fees paid to research and development organisations).</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>• Any of the IT or Property costs associated with Network Policy.</li> <li>• Excludes IFI related research and development.</li> </ul>
Health Safety and Environment	<p>The activity of promoting and maintaining health and safety of employees, contractors, customers and the public.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Developing the company's overall health and safety policy.</li> </ul>

	<ul style="list-style-type: none"> <li>Establishing procedures to comply with best practice for health and safety.</li> <li>Maintenance of records to show compliance with Factory and Health and Safety at Work Acts.</li> <li>Providing advice on security matters both for property and personnel and provision of advice on fire prevention.</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>Health &amp; Safety checks on work and personnel such as: <ul style="list-style-type: none"> <li>compliance checks on staff and contractors' work carried out</li> <li>site safety inspections</li> <li>investigation, report and corrective action following an accident or environmental incident</li> <li>authorisation of team members for operational and non-operational duties</li> <li>operational field safety checks</li> <li>time of employees attending training (include as labour cost under the relevant activity of that employee)</li> <li>purchase of equipment (include under non-op capex)</li> <li>training, courses and training centre costs for staff relating to working on system assets (include under operational training)</li> <li>engineering and health and safety training, courses for staff involved in indirect activities (include under operational training).</li> </ul> </li> </ul>
Operational Training	<p>Includes operational training and graduate trainees and apprentices.</p> <p>Includes training Workforce Renewal new recruit, Operational Upskilling and Operational Refresher Training.</p> <p>Operational Upskilling - covers all training (whether classroom based or on-the-job) where employee's skill level is increased in order to undertake activities requiring a higher skill level or to undertake activities requiring a different skill set (eg multi-skilling or redeployment) or the undertake activities via more efficient / effective processes. (Does not cover, eg, routine operational refreshers, and safety briefings, non-operational training courses eg MS Excel, training for CPD purposes once qualified eg accountant).</p> <p>Apprentices are engaged under approved apprentice's schemes. Trainees are employed under a formal training programme.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>Classroom training.</li> <li>On the job training.</li> <li>Trainer and course material/running costs (classroom training).</li> </ul>

	<ul style="list-style-type: none"> <li>• Training admin.</li> <li>• Recruitment and external advertising costs for trainees/apprentices.</li> <li>• Salaries of apprentices and trainees in full time continuous training up to the point they become fully engaged in operational activities.</li> <li>• Costs of staff that organise and provide operational training and maintain employees training records.</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>• HSE costs (include under Health, Safety &amp; Environment).</li> <li>• IT &amp; Property management costs associated with Ops Training and Training Centres (include under IT &amp; Property costs respectively).</li> </ul>
Stores and Logistics	<p>The activity of managing and operating stores.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Delivery costs of materials or stock to stores.</li> <li>• Labour and transport costs for the delivery of materials or stock from a centralised store to a satellite store/final location (and vice versa), taking into account the stock management policies.</li> <li>• Monitoring stock levels.</li> <li>• Quality testing of materials held in stores.</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>• Costs of oil or other insulation medium (report under the activity for which it is used, eg maintenance, faults).</li> <li>• Any of the IT systems associated with stores/logistics (include under IT &amp; Telecoms).</li> <li>• Any property management and maintenance costs of depots/stores locations (include under property management).</li> <li>• Vehicles and Transport - the activity of managing, operating and maintaining the commercial fleet and mobile plant (include under Vehicles and Transport).</li> </ul>
Vehicles and Transport	<p>The activity of managing, operating and maintaining the commercial fleet and mobile plant utilised by the Network or any other related party for the purposes of providing services to the Network.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Lease costs associated with the vehicle fleet and mobile plant.</li> <li>• Maintenance costs of the vehicle fleet and mobile plant, including mobile generation.</li> <li>• Cost of accident repairs to business' own vehicles whether covered by insurance or not and the cost recovery where recovered by insurance.</li> <li>• Fuel costs of the vehicle fleet and mobile plant.</li> </ul> <p>Excludes:</p>



	<ul style="list-style-type: none"> <li>• Direct field staff time spent on utilising the vehicles for a direct cost activity (include under direct cost activity).</li> <li>• IT &amp; Property costs associated with vehicle management.</li> <li>• Purchases of vehicles, mobile plant and equipment (include under non-op capex).</li> <li>• Cost of providing company cars to employees which are benefits in kind (include as labour cost under the relevant activity of that employee).</li> </ul>
Market Facilitation	<p>This covers the following activities:</p> <ul style="list-style-type: none"> <li>• Network code governance and development.</li> <li>• Proposing and managing industry code modifications.</li> <li>• Generation and demand forecasting.</li> <li>• Information provision to the industry.</li> <li>• Calculation and implementation of Transmission charges.</li> </ul>
Network Planning	<p>This covers the following activities:</p> <ul style="list-style-type: none"> <li>• Asset assurance and management of the asset registers.</li> <li>• Business expert input into IT system development.</li> <li>• Performance monitoring and improvement.</li> <li>• Co-ordination and completion of benchmarking activities.</li> <li>• Control Centre - Operational management and control of the network <ul style="list-style-type: none"> <li>○ Outage planning and management</li> <li>○ Real time control and monitoring</li> <li>○ Dispatch</li> <li>○ Major incidents and emergency planning</li> </ul> </li> </ul>
	<b>SO Direct Costs</b>
Planning	Long term and short term planning
Real Time Operations	Control room day to day operations
Operational Support	post event analysis and forecasting, control room scheduling and data analysis
IS Business Resource	support for capital works programmes
Market Facilitation	<ul style="list-style-type: none"> <li>○ Network code governance and development.</li> <li>○ Proposing and managing industry code modifications.</li> <li>○ Generation and demand forecasting.</li> <li>○ Information provision to the industry.</li> </ul>
Engineering Support	The costs involved in supporting engineering staff in direct engineering activities.
Processing Capacity Market Applications	The costs involved in implementing, managing or running the processing of capacity market applications.
Processing Capacity Market Appeals	The costs involved in implementing, managing or running the processing of capacity market appeals.
Processing Capacity Agreements	The costs involved in implementing, managing or running the processing of capacity market agreements.
Running Capacity Market Auctions	The costs involved in implementing, managing or running the capacity market auction process.
Processing Contracts for Difference Applications	The costs involved in implementing, managing or running the processing of contract for difference applications.

Processing Contracts for Difference Appeals	The costs involved in implementing, managing or running the processing of contract for difference appeals.
EMR	Electricity Market Reform

### 3.2 Year-on-year movement in controllable costs

Purpose and use by Ofgem	The purpose of this table is to enable licensees to explain the reasons for increases and decreases in costs year on year of £0.5m or more (these are the net increases and decreases year on year in table 3.1a).
Guidance on completing this worksheet	Licensees should fill in the reasons for changes in costs in the boxes shaded in yellow. The table should be completed to clearly explain the year on year movements, additional explanations can be provided in the commentary if required.  All exceptions items should be clearly identified.

Specific definitions for [year-on-year variations within this T3.1 and 3.22 worksheets](#)

Cost reclassification:	This would include movements in costs caused by re-categorisation decisions, restructuring activity and organisational review in the past year.
Upward Cost Pressures:	This includes cost increases attributable to changes in assumptions underpinning cost categories such as pension adjustments, national insurance costs on employee benefits, insurance premiums etc.
Work Volume & Mix:	This should include all year on year cost movements associated with changes in work volume and mix and its impact on workload. This will include items such as employee costs, professional fees, travel and subsistence, training and the impact of any one-off costs or revenues.
Management Initiatives:	This would include detail of all cost efficiencies and reductions achieved directly through management initiatives, contract management and movements attributable to changes in organisational design. It will also provide the detail of costs incurred as a result of management initiatives (eg establishment of new teams).

### 3.3 Asset management opex

Purpose and use by Ofgem	<p>The purpose of this worksheet is to shows the amount of cash controllable operating costs spent on fault repairs, planned inspections and maintenance, vegetation management, operational property management, BT 21 CN teleprotection and offshore transmission project.</p> <p>The table includes all the RIIO price control years. Licensees will compile the forecast information to the highest reasonable</p>
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	<p>level of accuracy available from their source systems at that time.</p> <p><del>In NGET's case, the forecast cost breakdown for the remaining RIIO T1 period may be completed on a discretionary basis by 31 July 2017. This will allow NGET to provide a full 8 year view of costs within the price control in areas that it considers it can compile to the highest reasonable level of accuracy available from their source systems at that time.</del></p>
Guidance on completing this worksheet	<p>"Fault Repairs" and "Planned Inspections and Maintenance" are defined in the Glossary.</p> <p>The sub-totals detailed in cells E9 to E14: <u>L9 to L14</u> should agree to the opex summary table 3.1 <u>NGET only</u> (cells <u>FH40 to FH45</u>; <u>M40 to M45</u>). <u>The equivalent cells in table 3.1 SPT and SHET only are auto populated.</u></p> <p>The main items included within "other" should be identified in the cells highlighted in yellow.</p>

#### Specific definitions for this worksheet

NRR (Non-Recurring Revenue) Substation Assets	NRR substation asset work represents the non-routine maintenance carried out on substations. This work includes, but is not limited to, civils work, transformers, and cables, greasing drawings, switchgear and plant painting.
Fault Repairs	See glossary definition
Planned Inspection and Maintenance	See glossary definition
Vegetation Management	The activity of physically felling or trimming vegetation
Operational Property Management	Premises which contain network assets and are not maintained for accommodating people eg Substations, Boiler Stations, Holder Stations, Compressor Stations, Governor Houses etc.
BT 21 CN Teleprotection	Opex costs incurred as a result of the BT21CN transition.
Offshore Transmission Project	Costs incurred from all licensee activities relating to the connection and integration of offshore projects to the licensees onshore network.

### 3.4 Business support – group costs

Purpose and use by Ofgem	The purpose of this table is to provide 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.
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	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.
Guidance on completing this worksheet	<p>This table must be completed on a group basis and split by form of control as appropriate. <del>Group net cash controllable cost rows input to table '3.5 Business support—allocation' for both transmission and gas distribution.</del></p> <p>Group net cash controllable costs should be split into the specified categories (net staff costs, materials, etc.) for each activity. Group gross cash controllable costs for each activity are not further split by category.</p> <p>This table is to be completed by all licensees in every network submission. All licensees must complete column <u>G</u> ('group total') and <u>H</u> ('<u>T network</u>') and at least one column from <u>H-I</u> to <u>M</u>. Each licensee must detail group costs, in columns <u>H</u> to <u>M</u>, by as many forms of control as they have access to the data. Any 'group' costs not detailed in columns H to M or under 'external customers' should be included under 'other group'. Please note that the definition of 'group' may vary between companies (see definition below).</p> <p>For single network licensees who do not receive any allocated costs from parent company or larger group then costs must be entered under group total with activity totals entered in the relevant column <u>H-I</u> to <u>M</u>.</p> <p>For multiple network licensees, while the values in each submission under 'group total' must be the same, the submissions may have different columns <u>H-I</u> to <u>M</u> completed.</p>

#### Specific definitions for this worksheet

	<b>Business support activity definitions:</b>
IT & telecoms	<p>Provision of IT services for the day to day service delivery. Includes:</p> <ul style="list-style-type: none"> <li>• The purchase, development, installation and maintenance of non-operational computer and telecommunications systems and applications.</li> <li>• Provision of IT services for the day to day service delivery and includes the cost of Help Desk, data centres, IT application development, maintenance and support; establishing and maintaining IS infrastructure projects (IT Network Provision, Network Maintenance, Servers support/services).</li> <li>• Voice and data telecoms (e.g. WAN, landline rental and call charges, ISDN data and costs/rental of mobiles except where costs are charged directly to user departments).</li> </ul>

	<ul style="list-style-type: none"> <li>• Developing new software for non-operational IT assets including the costs of maintaining an internal software development resource or contracting external software developers. This will include any cost of software licences to use the product where those costs cover more than one year.</li> <li>• Installing new or upgrading software, other than where it is capitalised. This does not include upgrading of software that is included within the costs of annual maintenance contracts for the software.</li> <li>• Maintenance and all the operating costs of the IT infrastructure and management costs and Applications cost. This includes any annual fee for the maintenance of software licences, whether or not they include the right for standard upgrades or 'patches' to the software as they become available.</li> <li>• IT applications maintenance and running costs.</li> <li>• IT new applications software and upgrade costs.</li> <li>• Voice and data telecoms (e.g. WAN, landline rental and call charges, ISDN data. includes costs/rental of mobiles except where costs are charged directly to user departments).</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>• IT equipment which is used exclusively in the real time management of network assets but which does not form part of those network assets.</li> <li>• Any of the property costs associated with IT &amp; Telecoms (include under Property Management), except where the cost of specific IT environmental control systems can be distinguished from other property costs.</li> </ul>
Property management	<p>The activity of managing, providing and maintaining non-operational premises i.e. premises used by people such as stores, offices and depots. This should include costs such as rent, rates (business), and utilities costs including electricity, gas and water, maintenance/repair costs of premises and also should include the provision of the facilities / property services such as reception, security, access, catering, mailroom, cleaning and booking conferences. The costs of property surveyors should also be included here.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Stores, depots, offices (including training centre buildings &amp; grounds).</li> <li>• Rent paid on non-operational premises.</li> <li>• Rates and taxes payable on non-operational premises.</li> <li>• Utilities including electricity, gas and water (supply and sewerage).</li> <li>• Inspection and maintenance costs of non-operational premises.</li> <li>• Facilities management costs including security and reception.</li> <li>• Training centre buildings &amp; grounds.</li> <li>• Control rooms and data centres.</li> </ul>

	<p>Excludes:</p> <ul style="list-style-type: none"> <li>Any costs relating to operational property (ie premises which contain network assets and are not maintained for accommodating people e.g. Substations, Boiler Stations, Holder Stations, Compressor Stations, Governor House etc (include under operational property)).</li> <li>Any IT systems associated with property management (include under IT &amp; Telecoms).</li> <li>Depreciation and profit/loss on Fixed Assets Relocation costs to or from non-operational premises.</li> <li>Network rates.</li> </ul>
HR & non-operational training	<p><i>HR</i></p> <p>This would include provisions of the HR function ie the full range of professional activity for an individual's career path from recruitment to retirement and post retirement where applicable, e.g. management and administration of pension payments (NB PPF scheme administration costs are excluded) and from related professional advice to directly resolving grievances for staff.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>Costs of payroll and pension's management and operation.</li> <li>Facilitating staff performance, development and reviews.</li> <li>Industrial and employee relations including HR strategy, policies and procedures.</li> <li>Monitoring equal employment opportunities.</li> <li>HR advice to management, succession planning and also retentions and rewards.</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>Pension Scheme Administration and PPF levy costs</li> <li>Pension deficit repair payments relating to the „established deficit“ and for the avoidance of doubt, all unfunded early retirement deficiency costs (ERDC) post 1 April 2004</li> </ul> <p><i>Non-Operational Training</i></p> <p>Facilitating and operating training courses of a non-technical nature for office-based staff.</p> <p>Includes</p> <ul style="list-style-type: none"> <li>Staff who organise and provide non-operational training and maintain employees training records.</li> <li>Cost of running the non-operational training costs e.g. course fees.</li> <li>Leadership development training.</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>Any operational training costs</li> <li>Non-operational costs associated with formal training and apprentice programmes (included under operational training)</li> </ul>

	<ul style="list-style-type: none"> <li>• Time of employees attending training (include as labour costs under the relevant activity for non-operational).</li> <li>• HSE costs (include under Closely Associated Indirect costs).</li> <li>• IT systems associated with HR &amp; Payroll (include under IT &amp; Telecoms).</li> <li>• IT &amp; Property management costs associated with Non-Ops Training (include under IT &amp; Property costs respectively).</li> </ul>
Finance, audit & regulation	<p>Performing the statutory, regulatory and internal management cost and performance reporting requirements and customary financial and regulatory compliance activities for the network.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• Process of payments and receipts.</li> <li>• Time sheet evaluation where not part of the payroll process.</li> <li>• Financial &amp; risk management - e.g. credit &amp; exposure management.</li> <li>• Financial planning, forecasting &amp; strategy.</li> <li>• Financial accounting.</li> <li>• Management accounting.</li> <li>• Investment accounting.</li> <li>• Treasury management.</li> <li>• Transportation income accounting.</li> <li>• Pricing.</li> <li>• Statutory &amp; regulatory reporting.</li> <li>• Tax compliance &amp; management.</li> <li>• Internal audit &amp; management of the relationship with external audit function.</li> <li>• External audit fees.</li> <li>• Cost of regulatory department.</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>• Insurance costs (include under Insurance).</li> <li>• Any of the IT systems associated with finance, audit and regulation (include under IT &amp; Telecoms).</li> </ul>
Insurance	<p>Support and expertise to develop the business risk profile, managing the claims process and provision of information and understanding to the business in relation to insurable and uninsurable risks.</p> <p>Includes</p> <ul style="list-style-type: none"> <li>• Insurance premiums</li> <li>• Insurance premium tax</li> <li>• Insurance contract negotiating and monitoring</li> <li>• Insurance claim processing</li> <li>• Insurance risk management</li> <li>• Payments relating to uninsured claims</li> <li>• Costs of in house insurance team</li> <li>• Brokers fees</li> </ul>

Procurement	<p>Responsible for the procurement of goods &amp; services in the support of the business operations, through the management of procurement contracts with suppliers.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• The cost of carrying out market analysis.</li> <li>• Identifying potential suppliers, undertaking background review, negotiating contracts, purchase order fulfilment &amp; monitoring supplier performance.</li> <li>• Setting up and maintaining vendor accounts within the accounting system, and maintaining e-procurement channels.</li> <li>• Setting procurement guidelines and monitor adherence to the guidelines.</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>• Any of the IT systems associated with procurement (include under IT &amp; Telecoms).</li> <li>• Stores &amp; Logistics - The activity of managing and operating stores (include under Closely Associated Indirect costs for transmission and record in separate stores and logistics category in table 3.1).</li> <li>• Vehicles and Transport - the activity of managing, operating and maintaining the commercial fleet and mobile plant (include under Closely Associated Indirect costs).</li> </ul>
CEO & group management	<p>Includes:</p> <ul style="list-style-type: none"> <li>• Communications - communication within the UK businesses, internal communications, external communications, media relations, issues management, regional communications, community relations, community awareness, branding, events management</li> <li>• Group Strategy- function has the responsibility of evaluating the strategic options of the Group.</li> <li>• Legal / Risk and Compliance/ Company Secretary - legal department, the management corporate governance for all companies to ensure they comply with legislation, regulations and best practice.</li> <li>• Corporate Responsibility and investor relations - corporate responsibility and interaction with institutional equity investors and market analysts, management of rating agencies also advertising, charity and sponsorship arrangements.</li> <li>• Board Members and Other – staff and other costs of Board members and other corporate costs not fitting into other categories.</li> <li>• Non-executive &amp; group directors' labour costs (where they are not carrying out specific departmental duties) and Board meeting costs.</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>• Insurance management.</li> <li>• Legal advice relating to way leaves/servitudes/easements.</li> </ul>



	<ul style="list-style-type: none"> <li>Group costs relating to specific activities e.g. HR, Finance, Audit, Regulation, Taxation, HSE, Insurance, etc (include under the specific cost category).</li> </ul>
	<b>Other indirect activity definitions:</b>
Training & apprentices	<p>Training and apprentices covers the cost of operational training and the cost of training any employees engaged on approved formal training or apprentice programmes (either operational or non-operational).</p> <p>Excludes:</p> <ul style="list-style-type: none"> <li>any non-operational training costs falling under 'HR and non-operational training'</li> </ul>

Common definitions for business support worksheets (3.4, 3.5, 3.6)

Group	<p>For these purposes (tables 3.4, 3.5, 3.6) a group consists of a parent company and its participating interests (participating interest as defined in transmission and gas distribution licenses).</p> <p>Definition of 'group' for this purpose may be different for different companies depending on the levels at which they can realistically provide the data. Group should as minimum include all UK regulated network companies.</p> <p><u>Licensee group definitions for reporting</u></p> <p><i>National Grid</i> To include all UK regulated networks plus all other group companies</p> <p><i>NGN</i> Single UK regulated network</p> <p><i>SGN</i> Limited to SGN's UK regulated networks</p> <p><i>SHE Transmission</i> All SSE companies in receipt of services from SSE Services Ltd</p> <p><i>SPTL</i> To include all UK regulated networks plus all other group companies, where costs are allocated to regulated network and non regulated businesses</p> <p><i>WWU</i> Single UK regulated network</p>
Licensee	As defined in transmission or gas distribution license
Other costs	Any costs not falling under the above categories plus any cost under the above categories cumulatively less than £0.1m in value. Where individual categories are less than £0.1m but the cumulative total of these categories are greater than £0.1m then the costs should be allocated to the most appropriate category/categories so that all category costs are greater than £0.1m.
Specific definitions for this worksheet	
ETO	Electricity transmission owner licensees
ESO	Electricity system operator licensee (NGET SO)
GTO	Gas transmission owner licensee (NGGT TO)
GSO	Gas system operator licensee (NGGT SO)
ED	Electricity distribution licensees
GD	Gas distribution licensees

Other group	Depending on definition of group. Other group may include other UK regulated networks (where not already specifically detailed) plus non regulated group companies.
External customers	Other external customers charged out of group cost base.

### 3.5 Business support – allocation (There is no requirement to populate this tab)

<del>Purpose and use by Ofgem</del>	<del>The purpose of this table is to trace the group net cash controllable costs (from table 3.4) to individual activity allocated net cash controllable costs including any cost transfers to/from direct activity functions of the company's organisation. This table allows Ofgem to reconcile costs allocations from the various forms of control to the business support activity definitions given above.</del>
<del>Guidance on completing this worksheet</del>	<p><del>Where costs are identified as 'plus' then these should be entered as positive values. Where cost adjustments are identified as 'less' then these should be entered as negative values.</del></p> <p><del>Where a group allocates its costs to UK regulated businesses and non regulated entities from the same 'Group net cash controllable costs' as submitted on table 3.4 without any further transfers between business support activities or to/from direct activities then no entries are required in this table.</del></p> <p><del>This section must include all business support costs including costs charged to business support from direct activities.</del></p>

#### ~~Specific definitions for this worksheet~~

<del>Other adjustments (free form)</del>	<del>Any adjustments not falling under the defined categories. These should be explained in commentary.</del>
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### 3.6 Business support – supplementary detail

Purpose and use by Ofgem	The purpose of this table is to collect additional information required to effectively monitor and understand business support cost drivers and allocations and to facilitate comparison between network sectors and against other industries.
Guidance on completing this worksheet	Costs should be input as positive values

	<p>Unless stated otherwise all costs are gross (i.e. before capitalisation).</p> <p>The total "Group gross cash controllable cost" on this table should be the same as on table 3.4</p>
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Specific definitions for this worksheet

	<b>IT &amp; Telecoms</b>
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 other than in data centres, including cloud storage costs?
Network (LAN & WAN)	The costs involved in implementing and supporting the computer networks, Local Area Network (LAN) and Wide Area Network (WAN)
Business Telecoms	The 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
Data centres	A facility used to house computer systems and associated components, such as telecommunications and storage systems, redundant/backup power supplies and redundant data communications connections.
End users	<ul style="list-style-type: none"> <li>N.B. typically end users' relates to individuals (FTEs) and not devices, except where individuals share devices. A single individual using multiple devices counts as one end user. The number of end-users will never exceed the FTE count of employees plus contractors plus other users.</li> <li>An end user is defined as an individual (typically <b>either an employee or contractor</b>) that spends <b>at least 10% of his or her time using a network company provided, funded, supported computing device</b> that is part of the network company's IT infrastructure (ie desktops, laptops, hand held devices, etc.) to support his or her business functions. The user must have direct access to internal applications/systems to execute specific transactions on behalf of the network company. Examples: (i) full time employee, working 40 hours per week uses several devices for a total 20 hours per week – counts as one end user, (ii) a part-time employee working 20 hrs per week uses several devices for a total of 2 hours per week – counts as 0.5 end users, (iii) a contractor engaged 20 hours per week on network company business</li> </ul>

	<p>using his or her own devices for 10 hours and network company devices for one hour – counts as zero end users.</p> <ul style="list-style-type: none"> <li>• The end user count does NOT include casual users of voice response systems, mobile phones, and pagers.</li> <li>• The end user MAY include some <b>users that are not employees or contractors</b> (ie agents/brokers/dealers/distributors/supply chain partners), but only if they are using a computing device provided, funded, and supported by the network company at least 10% of their time, and use network company applications/systems to execute specific business transactions. These '<b>other</b>' users must be named users on the network company systems and use the network company's IT support organisation.</li> <li>• Smart phone users should only be counted if the user uses the smart phone as the primary device to access internal applications and does this for at least 10% of his or her time. Smart phone users are NOT to be counted if the phone is only used for voice calls and email.</li> <li>• Only count end users once even if they have multiple devices.</li> <li>• Shared devices used in multiple labour shifts or for groups of people should be counted as a single end user per shift. Do not count each user separately since the device is shared. Network printers should not be counted as a workstation. Example: there are 4 employees using one PC at a workstation. This would count as 1 end user. If the scenario occurs across 3 shifts, this should be counted as 3 end users.</li> </ul>
	<b>Property Management</b>
Office	A property is defined as an office if its primary function is to accommodate office based staff during their business hours.
Depot	A building other than an office used for operational purposes.
Training Centre	A property is defined as a training centre if its primary function is to accommodate staff while on operational or non-operational training courses or programmes.
No. of buildings	<p>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% (<math>30\% + 35\% \times (30/50)</math>) of an office building (<math>30/(30+20+15)</math>), 34% training centre and 20% depot.</p> <p>Where a site contains multiple buildings/facilities then the site should be counted as one building.</p>
Net internal area (NetIA), m <sup>2</sup>	As per the Valuation Office Agency <sup>3</sup> definition (as at 19 March 2013):

<sup>3</sup> Valuation Office Agency definition:  
<http://www.voa.gov.uk/corporate/Publications/comp.html>, accessed 19 March 2013

	<p>Broadly speaking the usable area within a building measured to the face of the internal finish of perimeter or party walls ignoring skirting boards and taking each floor into account.</p> <p>NetIA will include:</p> <ul style="list-style-type: none"> <li>• Perimeter skirting, moulding, or trunking</li> <li>• Kitchens</li> <li>• Any built in units or cupboards occupying useable areas (subject to height exclusion below)</li> <li>• Partition walls or similar dividing elements</li> <li>• Open circulation areas and entrance halls, corridors and atria</li> </ul> <p>NetIA will exclude:</p> <ul style="list-style-type: none"> <li>• Toilets and associated lobbies (but extra measurements may be required for shops where they are either in excess of normal staff requirements considering the type and size of shop) or it is apparent additional toilets have been installed)</li> <li>• Cleaners' cupboards</li> <li>• Lift rooms, boiler rooms, tank rooms, fuel stores and plant rooms other than those of a trade process nature</li> <li>• Stairwells, lift wells, those parts of entrance halls, atria, landings and balconies used in common or for the purpose of essential access</li> <li>• Corridors and other circulation areas where used in common with other occupiers or of a permanent essential nature</li> <li>• Areas under the control of service or other external authorities</li> <li>• Internal structural walls, walls (whether structural or not) enclosing excluded areas, columns, piers, chimney breasts, other projections, vertical ducts etc</li> <li>• The space occupied by permanent air conditioning, heating or cooling apparatus and ducting which renders the space substantially unusable having regard to the purpose for which it is intended</li> <li>• Areas with headroom of less than 1.5m (this area should be shown separately but excluded)<sup>4</sup></li> <li>• Car parking areas (this area should be shown separately and the number of spaces noted)</li> </ul>
Owned (property)	Any premises used by the regulated businesses where the group owns the freehold or the leasehold for the premises.
Leased (property)	Any premises where the group does not own the freehold or leasehold, including where the regulated businesses pay rent. Where rent is paid to a related party then ownership of the premises and the leasing arrangements should be explained.
	<b>Insurance department costs</b>

<sup>4</sup> Note: this figure is given in error as 15m in the Valuation Office definition of 19 March 2013

Insurance premiums	Cost of insurance premiums including insurance premium tax and brokers fees
Other insurance costs	All insurance department costs except for insurance premiums and brokers fees
	<b>Insurance premiums (* indicates definition based on ABI advice doc.<sup>5</sup>)</b>
Loss or damage due to adverse events*	Insurances that protect against loss or damage caused to licensee's property or trade by adverse events
Property - buildings and contents*	Buildings and contents including fire, lightning, explosion, riot, malicious damage, storm, flood, impact by aircraft, road and rail vehicles, escape of water from tanks or pipes and sprinkler leakage.
Engineering failure*	Engineering insurance cover against electrical or mechanical breakdown for machinery, including computers.
Crime and theft	Includes: <ul style="list-style-type: none"> <li>• Crime</li> <li>• Theft</li> <li>• Money</li> </ul>
Goods in transit*	Loss or damage of machinery, materials etc. while in licensees own vehicles or when sent by carrier.  Includes: <ul style="list-style-type: none"> <li>• Marine cargo</li> </ul>
Business interruption*	Cover for loss of income and extra expenses, including any increased working costs and extra accountants' fees incurred, resulting from damage to a licensee's property or assets.
Trade credit insurance*	Cover against the risk of bad debt due to the insolvency or default of trade debtors.
Motor vehicles*	Cover against third party legal liability for injury to others and damage to their property arising from the use of vehicles on the road and against damage to licensee's vehicles.
Legal expenses*	Cover against the cost of taking or defending legal action including legal costs such as solicitors' fees and expenses, the cost of barristers and expert witnesses, and court costs and opponent's costs if awarded against the licensee in civil cases.
Network assets	Includes: <ul style="list-style-type: none"> <li>• Property (towers &amp; poles, etc.)</li> </ul>
Terrorism and sabotage	Cover against loss due to deliberate acts of terrorism or sabotage.
Aviation	Cover against losses associated with ownership and operation of aircraft
Other	Includes: <ul style="list-style-type: none"> <li>• Business services allocation</li> </ul>
Third party legal liability*	Cover against licensee's legal liabilities in the event of some aspect of the licensees business causing damage or harm to a third party or their property
Employers' liability*	Cover against legal liability for injury, disease or death to employees sustained by them and arising from their employment. Employees for this purpose may include, in addition to those under a contract of employment, apprentices and other trainees, agency staff, and contractors.

<sup>5</sup> <http://www.abi.org.uk/Information/Business/15310.pdf>, accessed 19 March 2013

Public and product liability and professional indemnity*	Cover against legal liability to pay damages to members of the public for death, bodily injury or damage to their property which occurs as a result of a licensee's business activities.
Environmental impairment liability	Cover against losses and liability arising from damage to property due to pollution or environmental damaged caused a network company's regulated business operations
Employee*	Cover that protects a network company and its employees against the consequences of serious illness, injury or death, and the effects these events could have on the network company's employees, on their families, and on the network company's business.
Personal accident and sickness insurance*	Cover paid for, fully or in part, by a network company that provides income to an employee to compensate for the loss of earnings through incapacity resulting in inability to work. Where the cost of cover is shared between network company and employee, or where the network company recovers part of the cost from employees, then only the network company's net contribution should be reported.
Income protection insurance*	Cover paid for, fully or in part, by a network company that provides income to an employee to compensate for the loss of earnings through incapacity resulting in inability to work. Where the cost of cover is shared between network company and employee then the network company's contribution should be reported. Where the cost of cover is shared between network company and employee, or where the network company recovers part of the cost from employees, then only the network company's net contribution should be reported.
Private medical insurance*	Private medical cover paid for, fully or in part, by a network company. Where the cost of cover is shared between network company and employee, or where the network company recovers part of the cost from employees, then only the network company's net contribution should be reported.
Life assurance*	Cover paid for, fully or in part, by a network company that provides financial security for employees' dependants and protect the profitability of the business upon death of an employee. Where the cost of cover is shared between network company and employee, or where the network company recovers part of the cost from employees, then only the network company's net contribution should be reported.
Travel	Includes: <ul style="list-style-type: none"> <li>• Overseas travel</li> <li>• Personal accident/travel</li> </ul>
Directors & officers	Includes: <ul style="list-style-type: none"> <li>• Primary and excess directors' and officers' liability</li> </ul>
Employment practice liability	Cover against claims made for alleged acts of discrimination, harassment or inappropriate employment conduct.
Pension trustees indemnity (recharged to pensions)	Cover that protects a network company and /or its pension funds and/or its employees and trustees against claims made by third parties for breach of trust, maladministration and wrongful acts arising from the actions of the trustees to the pension funds.

Self retained claims costs (below deductible)	The amount of any claim which falls below policy excesses or deductibles where the cost is paid by the network company and not the insurers.
Brokers fees	The fee charged by an insurance broker for arranging insurance cover
	<b>Captive insurance</b>
Captive insurance	Insurance cover provided by an insurance entity that is a related party
Premiums invoiced	The amount charged to the policy holders for insurance cover provided
GBRA/P&L	The GBRA (General Business Revenue Account) details the insurance transactions and P & L (Profit and Loss Account) details any non-insurance related income and expenses of the company.
Total Written Premiums	The total amount charged for the insurance cover provided
Reinsurance Costs	The amount paid out to third party reinsurance companies for reinsurance cover
Net premium	The premium income after the deduction of reinsurance costs
Claims Costs	The amounts paid out as insurance claims and claims related fees
Underwriting Expenses	The amounts paid out in expenses required to conduct the insurance business (broker fees, actuarial fees)
Underwriting Profit	The insurance profit/(loss) for the year
Investment Income	The amount generated from the investment of the company's assets
Operating Expenses	The amount paid for the general running expenses of the company
Retained Profit / (Loss)	The profit or loss generated by the company for the year
Unrealised Investment Gain	The amount arising from an increase in market value of assets available for sale
Total Movement in SH Funds	The sum of the retained profit/(loss) and the unrealised investment gain/(loss)
UK Tax Adjustment	The amount charged to the group for UK taxation
Profit After Taxation	The profit or loss generated for the year once taxation has been deducted
Total Written Premiums	The total amount charged for the insurance cover provided
Balance Sheet	The statement of the financial position of the company at a point in time
Assets	The resources held by the company that have an economic value
Non-insurance Liabilities	The amounts owed to the general (non-insurance) creditors of the company
Gross Loss Reserves	The amounts expected to be paid out in insurance claims relating to current and past policy periods
Reinsurance Assets	The amounts recoverable from reinsurers under reinsurance contracts purchased
Shareholders' Funds	The value of the company and amount attributable to the shareholders of the company



Annual Retained Risk	The sum of the maximum exposure on all insurance policies issued in the year
Excess Capital Adequacy	Shareholders' funds less annual retained risk
Loss Ratio	The ratio of expenses to net premium income
	<b>CEO and group management</b>
Communications	Communication within the UK businesses, internal communications, external communications, media relations, issues management, regional communications, community relations, events management
Group strategy and group corporate affairs	Function has the responsibility of evaluating the strategic options of the Group
Legal / Comp Secretariat	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
Incremental ring-fence compliance costs	Costs that have necessarily been incurred as a direct result of complying with the additional ring fence condition requirements introduced by the Authority's licence modification direction dated 1 February 2013. Incremental costs reported may be one-off or ongoing in nature and must not have been included in any other cost reporting category. A comment should be included describing the nature of the costs that have been reported.
	<b>Finance, audit and regulation</b>
Network regulation	Any reasonable costs associated with network regulation, ie any costs that the network company would not reasonably have incurred were it operating in a non-regulated environment.
Other	All finance, audit and regulation costs (group net cash controllable costs)

### 3.7 Operational training

Purpose and use by Ofgem	The table records the numbers and costs of training employees engaged on formal training and apprentice programmes including staff costs as well as other operational training costs.
Guidance on completing this worksheet	Networks are required to split their training and apprentice costs and FTE numbers into the defined categories of 'craftsperson apprentice', 'engineer apprentice', and 'graduate and management trainee'. For TOs only the last category is mandatory. However, where it is possible the TOs should also

	<p>categorise by these categories. Where TOs cannot do this then they should explain their categorisation.</p> <p>With the exception of external funding, all costs should be input as positive values. External funding should be input as negative values.</p>
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#### Specific definitions for this worksheet

Craftsperson apprentice	Apprentices who are being trained to attain or retain skills commensurate with Level 1, 2 or 3 Jointers, Overhead Linesman, Fitters, Multi-skilled trades set out by Energy and Utility Skills
Engineer apprentice	Apprentices being trained on an apprenticeship programme leading to qualification as an engineer.
Graduate and management trainee	Employees engaged on graduate training programmes and other formal management training programmes.
Trainee/apprentice programme costs	Costs associated with trainees and apprentices engaged under a formal approved programme
Training costs	Specific costs of training courses materials and other costs specifically relating to training and apprentice programmes. This will only be the costs incurred in training apprentices and trainees whilst they are on engaged on the programme. Therefore the costs will not include the training of the existing workforce.
Apprentice/trainee recruitment costs	Costs associated with recruitment of trainees and apprentices
Other apprentice/trainee admin costs	Other programme costs other than net staff, training, and recruitment costs.
External funding	Funding from any body (for example the National Employment Service) – either paid directly to a third party training provider or to the network company or its parent company - towards any trainee/apprentice programme costs.
Other operational training costs	All operational training costs reported on table 1.3 excluding net programme costs already reported in this table. Detail should be provided in the free text fields and cost fields for any significant cost items falling under this heading.
Apprentice and trainee programme FTEs	First to fourth year apprentices should be calculated on an FTE basis. For example if an individual employee is engaged on the first year of a programme for the first three months of a reporting year and progresses to the second year of the programme for the remaining nine months, then that individual will count as 0.25 first year FTEs and 0.75 second year FTEs.

### 3.8 Total transmission salary and FTE numbers

Purpose and use by Ofgem	The purpose of this table is to show the total transmission and business support gross staff costs and FTEs. This will provide
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	a cost per FTE for comparisons of total transmission employment costs and business support employment costs
Guidance on completing this worksheet	<p>The licensee should fill in total gross staff costs by type, and FTEs as indicated by the boxes shaded in yellow.</p> <p>Apprentices include craft and engineering apprentices and come from Table 3.7. Other trainees represent Graduate and Other Staff/Management Trainees.</p> <p>NGET should fill the table in for the total gas and electricity transmission staff separating out TO from SO. SHE Transmission for the transmission company. SPTL for the whole of Scottish Power Power Systems Ltd (SPPS).</p> <p>Where TO and SO FTEs are allocated, the basis of allocation should be stated in the narrative accompanying the tables</p> <p>The business support staff numbers should be the total staff numbers not just the share attributable to the transmission business.</p>

#### Specific definitions for this worksheet

FTE	Full time equivalent
Craftsperson	Employees working in roles requiring the following qualifications - level 1, 2 or 3 Jointers, overhead linesman, fitters, multi-skilled trades set out by Energy and Utility Skills or equivalent
Engineer	Employees working in roles requiring engineering qualifications.

### 3.9 Analysis of excluded, consented, and de minimis services

Purpose and use by Ofgem	The purpose of this table is to collect information relating to Excluded, Consented, and De Minimis services provided by the transmission business by type of service.
Guidance on completing this worksheet	<p>Costs should be input as positive values.</p> <p>The description of services being provided should match those used in the revenue RIGs for the income received.</p> <p>It may be that some services have no identifiable costs</p> <p>The total costs are linked to Table 3.1a below the controllable cost line.</p>

	If consented and de Minimis services are reported outside of the TO business please do not complete the information but state this in the narrative.
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Specific definitions for this worksheet

None	
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### 3.10 Provisions

Purpose and use by Ofgem	The purpose of this table is to collect details of the provisions that have affected the results so that Ofgem can understand any significant events happening in the year.
Guidance on completing this worksheet	Data should be input as required in the yellow shaded cells. Costs should be input as positive or negative values as appropriate. SO costs should be reported separately from TO costs where appropriate. Provisions are those defined under standard accounting terminology.

Specific definitions for this worksheet

None	
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### 3.11 Related party transactions

Purpose and use by Ofgem	The purpose of this table is to provide an analysis and understanding of the nature and size of services provided to the transmission business and other GB regulated network businesses by each related party. The information is split between whether the profit margin is allowed or not allowed under Ofgem's rules.
Guidance on completing this worksheet	<p>Input a description of the services provided by each related party. Input as positive numbers the turnover data for the related party as charged to the transmission business, other regulated network businesses and external customers. Input as positive numbers the respective costs incurred.</p> <p>Where the total charge from a related party to the transmission business is less than £500k per annum that related party does not need to be included on this table.</p> <p>Whether a related party margin is allowed or not is defined in appendix</p>

Specific definitions for this worksheet

None	
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### 3.12 Innovation Rollout Mechanism (IRM) expenditure

Purpose and use by Ofgem	<p>The Innovation Rollout Mechanism allows a <a href="#">Licensee</a> to request additional funding from the Authority to roll out proven innovations if they have carbon or wider environmental benefits, provide long term value for money, the licensee cannot receive commercial benefits from the roll out within the remainder of the price control period and they are not used to fund ordinary business arrangements.</p> <p>The table includes all the RIIO price control years. The <a href="#">TO's Licensee</a> will populate actual data from 1 April 2013 up to and including the current reporting year and forecast data for the remaining RIIO-T1 period, i.e. all eight years of RIIO-T1.</p> <p><a href="#">Provision has been made to enable NGET to separately enter SO costs separately from TO costs where appropriate.</a></p>
Guidance on completing this worksheet	<p>The IRM worksheet provides Ofgem with the costs and other data relating to schemes designed to rollout a proven innovation.</p> <p>There are two reporting tables within this worksheet. The first is for the scheme name and category, with total costs reported by year. The categories can refer to capex or opex.</p> <p>The second is to split the total costs by cost type. These costs will be added to the RAV in accordance with other costs.</p> <p>This sheet will only need to be completed where the licensee has applied to, and the authority has approved a relevant adjustment for the purposes of the IRM.</p> <p>There are two potential application windows for a relevant adjustment. The first window opens on 1 May 2015 and ends on 31 May 2015 and the second application window opens on 1 May 2018 and closes on 31 May 2018. Therefore no expenditure should have been incurred (and therefore reported) prior to 30 November 2015.</p>

Specific definitions for this worksheet

None	
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### 3.13 Network Innovation Allowance (NIA) expenditure

Purpose and use by Ofgem	This table will report the amounts spent under the Network Innovation Allowance (NIA). The Network Innovation Allowance is a set allowance that the licensee can use to
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	<p>spend on innovation projects each year on a use it or lose it basis.</p> <p>The table includes all the RIIO price control years. The <del>TO's</del> <a href="#">Licensee</a> will populate actual data from 1 April 2013 up to and including the current reporting year and forecast data for the remaining RIIO-T1 period, i.e. all eight years of RIIO-T1.</p>
Guidance on completing this worksheet	<p>Costs reported in this table must be incurred in accordance with the most recent version of the NIA governance document, as published by Ofgem. This worksheet requires the same data broken down by different categories. The first requires detailed cost data to be reported by cost type. The second breaks the costs down as either Bid Preparation Costs, or against each (named) project.</p> <p>This is the total amount spent by the licensee under the NIA. However, it should be noted that this is not equal to the total Allowable NIA Expenditure, since the NIA includes the licensee's contribution, Unrecoverable NIA Project Expenditure and Direct Benefits. The allowable expenditure is shown in the revenue returns.</p> <p>The NIA Expenditure is required to monitor the total amount spent by the Licensee in order to align with the regulatory accounts. Allowable NIA Expenditure is required to monitor the amounts being claimed through the NIA Funding Mechanism.</p> <p>The status of the project should be reported by selecting the proper status from the drop-down list. The status of the project will enable the companies to disclose whether the project has been "successfully completed", "in progress", "stopped", or "Other". This data aligns with the information requested by the supporting commentary.</p> <p>The "other" category is intended as a broad category to be used as when the description does not comfortably fall in the other status categories.</p> <p><a href="#">Provision has been made to enable NGET to separately enter SO costs separately from TO costs where appropriate.</a></p>

#### Specific definitions for this worksheet

None	
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### 3.14 Network Innovation Competition (NIC) expenditure

Purpose and use by Ofgem	<p>This worksheet collects expenditure from the NIC Project bank account for any NIC project that is being implemented. The expenditure is recorded by project.</p> <p>The table includes all the RIIO price control years. The <a href="#">Licensee TO's</a> will populate actual data from 1 April 2013 up to and including the current reporting year and forecast data for the remaining RIIO-T1 period, i.e. all eight years of RIIO-T1.</p>
Guidance on completing this worksheet	<p>Any Disallowed or Halted Project Revenues should also be included in this worksheet.</p> <p>Expenditure incurred on NIC projects should be in accordance with the Project Direction issued by the Authority and the NIC governance document.</p> <p>This worksheet also records the Royalty Revenues that are generated, the Royalties Return Income and the Retained NIC Royalties by Project. Details on the Royalties mechanism is outlined in chapter 10 of the NIC governance document.</p> <p>As NIC projects does not form any part of T1 allowances and requires separate detailed reporting every 6 months in the Project Progress Reports, this table will serve only to balance this worksheet to the regulatory accounts.</p> <p>No expenditure should have been incurred (and therefore reported) prior to April 2013.</p> <p>The status of the project should be reported by selecting the proper status from the drop-down list.</p> <p>The TO should report if conditions have been met so far for the funding using the drop down list.</p> <p>There is a requirement to provide detail on whether the conditions set by Ofgem have been met and to disclose the funding of each project (including how much is licensee funded). This aligns with the information requested by the supporting commentary.</p> <p><a href="#">Provision has been made to enable NGET to separately enter SO costs separately from TO costs where appropriate.</a></p>

Specific definitions for this worksheet

None	
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### 3.15 Physical security opex

Purpose and use by Ofgem	This worksheet provides information on operating expenditure and activity on physical security directly related to DECC's enhanced physical security upgrade programme (PSUP), at sites classified as Critical National Infrastructure (CNI) by DECC. Operating expenditure should be reported for costs which are necessarily undertaken to meet requirements of the Secretary of State to enhance the physical security of licensee's transmission system, including the provision of necessary communication sites and associated infrastructure.
Guidance on completing this worksheet	<p><b>For security reasons companies should provide site codes in this table rather than the site name.</b></p> <p>Expenditure recorded in this worksheet includes Physical Security Operating Expenditure only (Table 4.8 records Physical Security Capital Expenditure).</p> <p>Operating expenditure on capital expenditure associated with upgrading physical security assets undertaken as part of the PSUP, or works which may have a consequential impact on the wider resilience of CNI sites, for example interconnection of networks, but which is not directly driven by the PSUP should not be reported in this worksheet.</p> <p>The worksheet contains a table where operating expenditure should be reported by activity level split and allocated to a specific site where possible. Where costs cannot be allocated to a specific site, they must be reported as Centralised Costs. Expenditure includes costs relating to PSUP spares and escrow.</p> <p>The activities for which operating expenditure should be reported comprise the following;</p> <ul style="list-style-type: none"> <li>• <b>PDSA</b> - any post-delivery support agreements (PDSA) relating to PSUP assets.</li> <li>• <b>PSUP Direct labour – costs associated with</b> personnel working directly on operational activities for the PSUP, for example maintenance activities or site specific audits.</li> <li>• <b>Data communications – any costs of transferring</b> video and other data between sites and the Alarm Receiving Centre.</li> <li>• <b>Other Operating Costs</b> - any other operating costs which are associated with the PSUP . Detail must be provided within the supporting commentary.</li> </ul>



	<p>Where costs cannot be allocated to a specific site, they must be included under Centralised costs. This includes costs relating to PSUP spares and escrow.</p> <p>This table specifically <u>excludes</u> funding associated with the provision of Ministry of Defence Armed Guards. See definition for 'security (armed guards)'.</p>
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#### Specific definitions for this worksheet

Escrow	Back-up for intellectual property associated with technology platforms associated with the PSUP.
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### 3.16 EMR data volumes (NGET only)

Purpose and use by Ofgem	The purpose of this table is to collect data relating to NGET EMR delivery function. It will be used by Ofgem to understand the amount of data NGET is processing relating to EMR and how effective it is performing the role
Guidance on completing this worksheet	<p>NGET should complete the yellow cells with the appropriate Data.</p> <p>Rows 10 - 20 should show absolute numbers for all capacity market prequalification activities during the reporting period.</p> <p>Rows 23 - 28 should show absolute numbers for all contracts for difference application and qualification activities during the reporting period.</p> <p>Rows 31 - 35 should show absolute numbers for demand side response prequalification activities during the reporting period.</p> <p>Row 36 should show the total volume, in gigawatts to 3 decimal places, of demand side response capacity prequalified during the reporting period.</p> <p>Row 39 should show the actual peak national demand (as defined in Grid Code) for the reporting period. The first year that this will be reported is 2017/18.</p> <p>Row 40 should show the forecast peak national demand (as defined in Grid Code) for the reporting period made 1 year before the reporting period. The first year that this will be reported is 2017/18.</p> <p>Row 41 should show the forecast peak national demand (as defined in Grid Code) for the reporting period made 4 years before the reporting period. The first year that this will be reported is 2018/19.</p>

	<p>Rows 44 &amp; 46 should show the absolute number of responses to the CM and CfD customer and stakeholder satisfaction surveys during the reporting period</p> <p>Rows 45 &amp; 47 should show the average score for the specific overall satisfaction question in the CM and CfD customer and stakeholder satisfaction surveys during the reporting period</p>
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Specific definitions for this worksheet

None	
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# 6. Instructions for completing the capital expenditure worksheets

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## Chapter Summary

The purpose of this chapter is to inform the completion of the capital expenditure worksheets by each TO. This is to enable Ofgem to effectively monitor the performance of the companies in relation to their business plans.

## Introduction

6.1. The purpose of the worksheets in this area is to report capital expenditure (capex) information at various different levels to enable Ofgem to fully understand capex year on year.

6.2. Licensees should submit accurate and (where instructed) audited figures of their costs for the relevant period. Further guidance is provided below.

6.3. All costs are to be entered on a cash controllable basis. This means exclusive of all provisions and all accruals and prepayments that are not incurred as part of the ordinary level of business.

## Overview of worksheets

6.4. The worksheets included within this chapter are:

- 4.1 Capex summary
- 4.2 Expenditure on load related schemes
- 4.3 Expenditure on non-load related schemes
  - 4.3.1 Non-Load Related Volume change
  - 4.3.2 T2 output cost deferral
  - 4.3.3 Tower steelwork
- 4.4 Uncertain Costs
- 4.5 TO Non operational capex
- 4.6 System operator (SO) capex (National Grid only)
- 4.7 Transmission Investment Renewable Generation (TIRG)
- 4.8 Physical security capex

## 4.1 Capex summary

Purpose and use by Ofgem	The purpose of this table is to collect information relating to the licensee's actual expenditure in the reporting year and forecast expenditure for future years.
Guidance on completing this worksheet	<p>Actual Expenditure: Please ensure that the numbers reconcile with the regulatory accounts. Costs in the reporting year are auto-populated from 4.4 (uncertain costs), 4.5 (Non operational capex) and 4.7 (TIRG) and table 4.8 Physical Security Capex.</p> <p><u>Load Related Expenditure</u></p> <p>Except for capitalised overheads (SHE Transmission only) <del>and</del> capitalised pension deficit contributions, <del>and</del> <a href="#">Pre Construction for Strategic Wider Works Projects (see below)</a> the load related data on this table is auto-populated from table 4.2.</p> <p>Allowance values (columns AJ to AQ) will reflect each company's own forecast view over the full RIIO-T1 period. This will incorporate allowances arising from the Annual Iteration Process and other relevant sources deemed relevant by the licensee (e.g. Innovation Rollout Mechanism). The narrative will provide a description and explanation of the component elements used to provide the relevant allowance value where appropriate.</p> <p><a href="#">For NGET the allowances in this table will reflect the company's view of allowance and might not necessarily align with table 2.3a. The allowances should not include pre-RIIO allowances ("WIP"). However, this allowance should also reflect allowances for outputs that will be delivered in year 1 and year 2 in the following price control period aligned with the relevant licence condition.</a></p> <p>Row 30: "Pre construction for strategic Wider Works projects" licensees must provide actual/forecast expenditure for Pre-construction engineering outputs (Special Condition 3L). Appropriate adjustments should be made to the values reported in row 35 (Strategic Wider Works (construction only) to remove the pre-construction element <del>that is automatically linked from Table 4.2.</del></p> <p>Row 35: "Strategic Wider Works (construction only)". Licensees must provide actual/forecast construction expenditure for 'agreed' and 'not yet agreed' schemes. TOs will provide additional explanation of the projects, their status as 'agreed' and 'not yet agreed' and any changes to the status since the last reporting year in the supporting narrative.</p>

	<p>Row 36: "Baseline Wider Works (6I)". Licensees must provide actual/forecast expenditure for baseline wider works projects listed under Special Condition 6I.</p> <p><u>Non-Load Related Expenditure</u></p> <p>Except for uncertain costs, capitalised overheads (SHE Transmission only) and capitalised pension deficit contributions, the non-load related data on this table is auto-populated from table 4.3.</p> <p><u>Uncertain Costs</u></p> <p>This includes TO capex schemes that fall under the licence conditions 'Uncertain costs' (<b>Special Condition 6H</b>) and 'Mitigating the impact of Pre-existing Transmission Infrastructure on the visual amenity of Designated Areas' (<b>Special Condition 6G</b>), which are detailed in each of the TO's special licence conditions. Where possible the data is auto populated from table 4.4.</p> <p><u>Capitalised Overheads (SHE Transmission only)</u></p> <p>These lines are for use by SHE Transmission as it does not allocate overheads to individual capital projects. Overheads for SHE Transmission are reflected in the totals of other lines on table 4.1.</p> <p>Memo information: TOs are required to split the 'Related Party Margins Disallowed Total' by the capex categories in table 2.2. This is will then input table 2.1.</p> <p><u>Forecasts</u></p> <p>Forecasts should be input in the real price of the year to which the RIGs relate. Forecasts will therefore include impacts of real price effects, but not inflation.</p> <p><u>Comparison (columns BS to CA)</u></p> <p><u>For each cost line on table 4.1 the licensee is required to provide the current view of allowance and cost for each year of RIIO-T1. To enable comparison, the licensee is further required to provide values for each of the following time periods sourced from the previous year's submission (provided in current reporting year prices)</u></p> <ol style="list-style-type: none"> <li>1. The current year (forecast of 2016-17/17-18 provided in 2016-17RRP)</li> </ol>
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	<p>2. <u>Current cumulative period to-date (three-fourFive years actual data and one year forecast data) provided in 2016-17RRP)</u></p> <p>3. <u>RIIO-T1 total (three-fourFive years of actual data and fourfive years of forecast data provided in 2016-17RRP).</u></p> <p><u>Business Plan allowance (Columns CCA to CLI): each licensee is required to provide the baseline allowance profile for each year of RIIO T1 (in current reporting year prices). Assumptions on the RPE proportion per cost category is requested in column CM.</u></p> <p><u>Opening allowance 1April 2013 (Columns CO to CX): each licensee is required to provide the opening baseline allowance profile for each year of RIIO T1 (in current reporting year prices). Please note that this is a one-off requirement for 2016-17. Assumptions on the RPE proportion per cost category is requested in column CYAT.</u></p>
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#### Specific definitions for this worksheet

Local Enabling (Entry – sole-use)	Defined as expenditure by the TO required to meet increases in the total power entering the network from generators and interconnectors. It only includes expenditure on assets that are covered by connection charges as of the connection charging boundary at the time.
Local Enabling (Exit – Sole-Use)	Defined as expenditure by the TO required to meet increases or changes in the power demand of grid supply points and other directly connected customers as a result of load growth, load transfer or closure of embedded generation. Only includes expenditure on assets that are covered by connection charges as of the connection charging boundary at the time.
Local Enabling (Entry)	Expenditure on assets covered by TNUoS charges yet directly triggered by one or more individual generation connection projects.
Local Enabling (Exit)	Expenditure on assets covered by TNUoS charges yet directly triggered by one or more individual demand connection projects.
Wider Works	Expenditure required for generation- or demand-driven reinforcement of the transmission system in order to fulfil the company's obligations to the transmission Licence.

	<p>Includes</p> <ul style="list-style-type: none"> <li>load related expenditure covered by use of system charges including all wider works as detailed in TO's licence conditions and final proposals as well as approved SWW projects.</li> <li>For forecast purposes only, the TO is permitted to assume that Strategic Wider Works allowance will equal its latest Strategic Wider Works forecasts.</li> <li>For forecast purposes only, Baseline Wider Works allowance will equal the value as published in Special Condition 6I, where no determination has yet been made.</li> </ul> <p>Excludes</p> <ul style="list-style-type: none"> <li>Local enabling (entry), Local Enabling (Exit) and TSS expenditure as well as expenditure allowed under TIRG.</li> </ul>
Infrastructure – TSS	Expenditure on schemes aimed primarily at improving the efficiency of system operation.
<u>Asset Replacement and refurbishment</u>	Expenditure necessary for the replacement of existing 'life expired' assets. Replacement schemes include the following main sub-categories: Transformers, Reactors, Switchgear, Overhead Lines, Underground Cables, Protection & Control.
<u>Cable Tunnels (asset replacement related)</u>	Capex spent on cable tunnels where there is asset replacement taking place.
Substation other	Non-load related investment within a substation not covered by other sub categories.
Other TO	Comprises all other miscellaneous items, which do not fall into any other sub categories, such as, non-load related investment in overhead lines and cables outside substations. Please clarify in the accompanying commentary what types of cost items are included here.
Weather related resilience	Projects undertaken where the primary driver is weather-related resilience.
Mitigating the visual impact of pre-existing infrastructure	This includes all project specific costs associated within this activity and may include preconstruction costs such as the costs incurred during the consultation process. Non project specific costs should not be excluded and treated the same as all other non-project specific costs.

Cable tunnels	Includes all non-load related expenditure on cable tunnels
Physical site security	Projects where the primary driver is security of assets and their operation.
BT21CN	This is an uncertain costs category for SHE Transmission only. This consists of capex spend associated with transitioning to the BT 21st Century Network programme.
Customer Contributions (enter as negative)	These exclude connection charges.
TIRG	Capex associated with any ongoing Transmission Investment for Renewable Generation schemes.
<a href="#">Pre construction for strategic wider works projects</a>	<p><a href="#">means the activities undertaken by the licensee in preparation of constructing the solution to be delivered on the National Electricity Transmission System. Activities in this category:</a></p> <ul style="list-style-type: none"> <li><a href="#">• contribute to defining scope of the proposed transmission reinforcement</a></li> <li><a href="#">• provide information on which to identify and develop the proposed transmission reinforcement (optioneering, technology selection, routing, cost estimating, feasibility etc.)</a></li> <li><a href="#">• are required for the environmental assessment</a></li> <li><a href="#">• are required for planning and consents</a></li> <li><a href="#">• assist in programme scheduling</a></li> <li><a href="#">• contribute to the preparation of technical specifications for cost tenders</a></li> </ul> <p><a href="#">In cases where an activity is deemed to be split between pre-construction and 'construction' activities (for example, project management overheads) the licensee must identify the level of allocation applied (e.g. 90%:10%) and its rationale for the pro-rata allocation.</a></p>
<a href="#">Construction for strategic wider works projects</a>	<p><a href="#">Construction activities relate to the constructability of the proposed transmission reinforcement to to be delivered. Activities includes:</a></p> <ul style="list-style-type: none"> <li><a href="#">• Land and property purchase including legal costs</a></li> <li><a href="#">• Wayleaves, easements and surveys for construction land access, including legal costs</a></li> <li><a href="#">• Continuing surveys beyond the requirement for planning and consents</a></li> <li><a href="#">• Procurement of assets and materials</a></li> <li><a href="#">• Detailed construction information</a></li> <li><a href="#">• Temporary works</a></li> </ul>

## 4.2 Expenditure on load related schemes

Purpose and use by Ofgem	The purpose of this table is to collect annual cost information incurred during the reporting year, keep track of past year expenditure on live projects and to provide forecast scheme
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	expenditure. Actual and forecast expenditure from this table will auto-populate the relevant load related sections of table 4.1 (capex summary).
Guidance on completing this worksheet	<p><b>Information provided will be subject to review and confirmation by Ofgem.</b></p> <p>The aggregated forecast profile must be consistent with the TO's best view generation and demand background. This must be consistent with the boundary capability development submitted within tables 5.3 and 5.4 as well as forecast volumes within table 2.3. A high level comparison between this best view scenario and published generation and demand backgrounds within the future energy scenario document (FES) should be provided in the separate commentary.</p> <p>Current year expenditure will be submitted by TOs in current year price base. Previous year expenditure is to be inflated to current year price base.</p> <p>Schemes are to be reported in Table 4.2 if:</p> <p style="padding-left: 40px;">Scheme has actual or forecast expenditure within RIIO-T1 OR Scheme has an associated RIIO-T1 Capital Contribution OR Scheme delivers Outputs within RIIO-T1 (Directly or Supporting delivery)</p> <p>Tables in 4.2 will reconcile to 4.1 in the following way (for each year <math>t</math> of RIIO-T1, and mechanism <math>i</math>):</p> $4.1_{i,t} = 4.2 \text{ summary}_{i,t} = 4.2a_{i,t} + 4.2b_{i,t} + 4.2c_{i,t} + De \text{ Minimis}_{i,t}$ <p>Table 4.2a will provide full scheme listings (and associated expenditure, outputs and allowances). Where the summation of these schemes does not lead to the TO's overall best view, 4.2b allows for an overall mechanism-specific adjustment (negative value input) so that the summary 4.2 table reconciles to 4.1<sup>6</sup>. The summary 4.2 table will sum 4.2a and negative adjustment values in 4.2b and 4.2c. Table 4.2c allows for mechanism adjustments for efficiencies (negative</p>

<sup>6</sup> For example, 4.2b may remove 40% of total scheme costs in each mechanism if this is how the TO forecasts that only 60% of schemes will continue expenditure and delivery.

	<p>value input) only where these efficiencies cannot be attributed to schemes themselves.</p> <p>For table 4.2a. Please input:</p> <ol style="list-style-type: none"> <li>1. Scheme name</li> <li>2. TO Lead Scheme Reference</li> <li>3. TO Scheme Reference</li> <li>4. Ofgem scheme reference</li> <li>5. Mechanism – category of the scheme as per the licence</li> <li>6. Start Year, which is the scheme start date (when actual expenditure on the scheme or lead project has first been incurred)</li> <li>7. End Year: this will mark the scheme or lead project's completion or expected final commissioning (when the asset is ready and available for connection). In cases where this date is not available, for example where a scheme / project is not forecast to continue, the end year should align to the profile of expenditure.</li> <li>8. View: Best/Other to show whether the scheme is in the TO's best view of current and future workloads or if it should be treated differently ('other'). All schemes with current expenditure must be listed (above the de minimis levels)</li> </ol> <p><b><u>(Columns described in 6,7 and 8 above can be completed on a discretionary basis)</u></b></p> <p><del>8;9.</del> <u>9.</u> SPT Only: Customer Funding Mechanism (TOCA or TORI), Customer Classification Mechanism (eg annual charge), Connection Assets (A%), Infrastructure Assets (H1%) and One-Off Works (C1%) require input on how the schemes are funded by customers</p> <p><del>9;10.</del> <u>10.</u> Scheme Status (as per similar categories in the non-load table 4.3) flags derived by mapping "Pre construction", "Under construction", "Commissioned" &amp; "Terminated/Cancelled" to Network Development Phase. Forecast final commissioning dates can be changed. The appropriate status is to be used where</p>
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	<p>scheme commissioning dates are changed, a scheme cancelled, or other cases listed.</p> <p>Note/Explanation This field may be used to:</p> <ul style="list-style-type: none"> <li>- Highlight and explain schemes that have moved between RRP mechanism year-on-year</li> <li>- Explain why TPWW schemes are no longer required in the original timescales (alternatively this may be detailed in the associated narrative)</li> <li>- Provide further detail on any entries within the "Other" category of asset additions</li> <li>- To capture status information on specific schemes, eg whether a project is "agreed" or "yet to be agreed" and the change in status since the last year (ie indicating year of approval).</li> <li>- To highlight schemes that are not currently within the Licensees' Best View plan (e.g. as a result of customer termination). The supporting commentary will provide further detail on projects that have been terminated and explain any interaction with table 4.2b and the generation connection volume driver.</li> </ul> <p>All notes will be the supported by further explanation in the supporting commentary.</p> <p><del>10</del><u>11</u>. <u>    </u> Output Delivery Specifies whether output is a "Direct" output or "Supporting" delivery of a direct output</p> <p><del>11</del><u>12</u>. <u>    </u> Output Reference, for each unique output, a separate output reference is required for each different output type, or where an output type is phased over several years.</p> <p><del>12</del><u>13</u>. <u>    </u> Actual expenditure pre-RIIO-T1</p> <p><del>13</del><u>14</u>. <u>    </u> Expenditure from 2014 to the current year (all actual), and for the remaining years of the 8-year forecast (into RIIO-T2) (columns U to AN)</p>
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	<p><del>14.15.</del> Customer contributions made in the past, current, and forecasted for the future 8 years (columns AP to BJ)</p> <p><del>15.16.</del> Net Totals to calculate net values across four periods.</p> <p><del>16.17.</del> Scheme costs by work type <del>(plant and materials etc) (columns BQ to BX) to split the costs by cost type</del>. <del>(This requirement is not applicable for reporting year 2016-17)</del> <u>has been deleted/removed.</u></p> <p><del>17.18.</del> Asset additions (columns CA to DA) associated with the scheme/output delivery, though not the regulatory output itself. Assets recorded in the "Other" category will be detailed in the narrative to the table.</p> <p><u>19.</u> Outputs, output delivery date and boundary references (columns DB to DG) associated with each scheme - actual and forecast. There are three output levels. Level 2 is subject to level 1. That is, options for level 2 can only be selected if a corresponding level 1 output is selected (eg IWW in level 1, level 2 can provide the boundary in order to calculate the allowance). Level 3 is to show whether the output is below or above a licence baseline, if applicable (otherwise leave blank). Outputs determine the number of rows needed; a scheme delivering one output directly need only be listed once, whilst a scheme delivering two or more outputs (directly or supporting) should be listed on a separate row for each output.</p> <p><u>NGET only: when completing "output level 1" the option "no output" (from the drop-down menu) must only be used in exceptional circumstances. For example, schemes where the output was delivered during the previous price control.</u></p> <p><u>Additional references have been added to drop-down menu to reflect additional categories relevant to the "non-variant" category of load-related expenditure applicable to NGET only.</u></p> <p><u>SPT only: when completing "output level 1" the option "no output" (from the drop-down menu) must only be used in exceptional circumstances. For example, instances of pre-construction and schemes where the output was delivered during the previous price control.</u></p> <p><u>SHE Transmission only: when completing "output level 1" the option "no output" (from the drop-down menu) must only be used in exceptional circumstances. For example, SWW projects that were</u></p>
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	<p><u>not listed as part of the original business plan submission can be listed as "no output" with a relevant output reference. Other examples include instances of pre-construction and schemes where the output was delivered during the previous price control. The column can be left blank for connection asset schemes (LR1/2).</u></p> <p><del>18-20.</del> <u>Output delivery date</u></p> <p><u>21.</u> Allowance calculations for all outputs (column DH). <u>This may be completed on a discretionary basis. Where a scheme does not deliver an output, and no allowances are clearly associated with the works, the allowance should be either left blank or estimated.</u> Allowances should include RPEs. Any assumptions should be clarified before submission.</p> <p><del>19-22.</del> <u>Work in Progress ("WIP"): NGET (only) must indicate whether the project was included as part of the WIP categorisation or not (Y/N).</u></p> <p>Expenditure, capital contributions and asset additions should only be entered once per scheme, even if there are several mentions of the scheme due to it delivering or contributing to several outputs. Similarly, there should not be an allocation or apportionment of these categories across multiple scheme entries.</p> <p>Expenditure for TPWW schemes should be provided with detailed commentary (in Note/Explanation and supported in the associated table narrative) explaining why the scheme is no longer required in the original timescales in an application of the Network Development Policy by the Licensee and cannot be used subsequently to contribute to the other outputs Delivered by the licensee.</p> <p>Past years' expenditure will be checked at an aggregated level (totals and subtotals for each category) and is not expected to change significantly (other than where it is based upon any restatements within the latest capital plan; in this case the changes will be explained in the supporting narrative). Changes due to rounding up and application of inflation rates are expected and should be reported in the rounding error row (row <del>341</del>). Any scheme movements between tables / RRP mechanism forming part of the rounding error will be explained in the "Notes/Explanation" column for those schemes.</p> <p>Any major reasons for reconciliations or changes to reconciliations, such as a change in the published</p>
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	<p>backgrounds within the Future energy scenario (FES), should be highlighted in the accompanying commentaries.</p> <p>Table 4.2b provides an opportunity for TOs to specify their forecast expected deviations of expenditure over the RIIO-T1 period from table 4.2a on a portfolio/mechanism basis. These adjustments that help reconcile 4.2 to 4.1 should be explained within the associated commentaries. Assumed adjustments should only be recorded where they cannot be allocated to specific schemes with reasonable levels of accuracy. Licensees should use best endeavours to allocate adjustments to individual schemes. Reconciliation can also be extended to customer contributions (ie adjust the customer contributions at the portfolio level to reconcile those stated in 4.2a with the best view for 4.1).</p> <p>Table 4.2c provides an opportunity for TOs to specify their forecasted efficiency savings over the RIIO T1 period. The efficiency initiatives included here should be explained within the associated commentaries. Assumed efficiency savings should only be recorded where they cannot be allocated to specific schemes with reasonable levels of accuracy. Licensees should use best endeavours to allocate efficiencies to individual schemes and include these savings to their forecasts provided in table 4.1. Reconciliation can also be extended to mechanism-level efficiencies (ie adjust expenditure for non-apportionable efficiencies at the portfolio level to reconcile those stated in 4.2a with the best view for 4.1).</p> <p>Customer contributions should be entered as negative values.</p> <p>Outputs</p> <ul style="list-style-type: none"> <li>• Where a scheme delivers more than one category of output or where an output type is phased over several years, then each output category and year should be reported on a separate line with the same Ofgem Scheme Reference</li> <li>• Each output delivered/planned to be delivered must be assigned an Output Reference</li> <li>• The details of an output should be listed only against the scheme directly delivering the output. Where a scheme is only supporting the delivery of an output then the Output Reference must be listed against these schemes and 'Supporting' must be entered in the 'Output Delivery' field</li> <li>• A direct output scheme will always have an output type entry in the "Output Level 1" field; a supporting output scheme will have a blank entry; and a scheme which neither directly delivers nor supports an output will have an entry of "No output".</li> <li>• Any outputs carried over from a licensee's business plan must be assigned the same output reference as</li> </ul>
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	<p>assigned to it in the 'RIIO T1 Scheme-Output Referencing Workbook'.</p> <p><u>Schemes not subject to Uncertainty Mechanisms</u> Schemes that are included in the 'Schemes not subject to Uncertainty Mechanisms' category are those that are Wider Works reinforcements or local enabling (exit or entry) that are not impacted by the adjustment mechanisms (eg SpC 6F, 6I, 6J, or 6H).</p> <p><u>Scheme and output referencing</u> Licensees are required to reference all load related schemes and outputs in accordance with the convention applying in the example given for table 4.2below)<sup>7</sup>.</p> <p><u>Allowances</u> Licencees should provide bottom-up estimates of their view of allowances based on the delivery of the output or scheme (where no output is required). Where supplied, allowances should be provided for all outputs to be delivered within the forecasted period. Real price effects should be included in these calculations. <u>De Minimis Schemes</u></p> <p><u>Lifetime Deminimis:</u></p> <ul style="list-style-type: none"> <li>Any schemes with total (lifetime) scheme cost &lt;£0.5m may be aggregated into the relevant De Minimis category. <a href="#">However, this should mainly include supporting schemes. Schemes that have direct significant outputs should be reported in the main table.</a></li> </ul> <p><u>Annual Deminimis:</u></p> <ul style="list-style-type: none"> <li>Any other schemes with annual gross expenditure for both the current and last prior year &lt;£0.1m, and <ul style="list-style-type: none"> <li>Outputs delivered prior to RIIO-T1 (Direct or Supporting output schemes) OR</li> <li>End year is Pre-RIIO-T1 (Non-output schemes) OR</li> <li>all future years' forecast annual expenditure &lt;£0.5m</li> </ul> </li> </ul>
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<sup>7</sup> As an example for the 'Output Delivery' field, a scheme might deliver 10km of 132kV OHL and one 275kV/132kV substation to both deliver 10MW across a boundary (output reference 'LR-1234'), and support another cross-boundary reinforcement of 5MW elsewhere (output reference 'LR-5678'). In this case, if this scheme leads the delivery of the 10MW boundary capability, 'Direct' is put into the 'Output Delivery' cell and 'LR-1234' in the 'Output Reference' cell. The outputs are entered into the 'Outputs – Current View' section and the assets in the 'Asset Additions' section. Where it supports the second cross-boundary reinforcement, this scheme will have another row (same scheme name and references), with 'Supporting' in the 'Output Delivery' cell and 'LR-5678' in the 'Output Reference' cell. However, no entries are made in the 'Outputs – Current View' section. Likewise, costs and asset additions are only reported for one of the instances of the scheme listing (and not for all, or apportioned across, several entries where there are several associated outputs).

	<p>may be aggregated into the relevant De Minimis category</p> <ul style="list-style-type: none"> <li>• All other schemes must be reported individually.</li> <li>• <a href="#">De minimis schemes should be reported in 4.2 in the de minimis table (rows 33-53). These should be summed for expenditure and asset additions and reported by mechanism. For outputs, these should be listed (eg if boundary X is reinforced by 1MW and boundary Y by 0.5MW, these would be reported in the boundary column as "X, Y" and the output columns as "1, 0.5"). Allowances should be provided on a sum basis.</a></li> <li>• <a href="#">If some of the outputs have been delivered pre RIIO and some delivered within RIIO price control, this should be highlighted in the narrative.</a></li> </ul>
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#### Specific definitions for this worksheet

Gencon	Drivers for the works that are triggered by a connection.
Non Output Projects	Those that will not result in any specific output as defined in the Transmission Licence and have no uncertainty mechanism (consistent with the non-variant capex expenditure allowance in the PCFM)
Non Output Performance	Relates to the difference between the baseline allowances provided ex-ante which have no automatic adjustment under the uncertainty mechanisms and the current forecast expenditure for projects in this category.

#### 4.2a Raw data

<a href="#">Purpose and use by Ofgem</a>	<p><a href="#">The purpose of this table is to collect information on 'raw' scheme-level load related capex information - without category headings - to facilitate quicker data manipulation and analysis by Ofgem.</a></p> <p><a href="#">Additional scheme-level data on volumes and outputs can be provided on a discretionary basis.</a></p>
<a href="#">Guidance on completing this worksheet</a>	

#### Specific definitions for this worksheet

<a href="#">None</a>	
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### 4.3 Expenditure on non-load related schemes

Purpose and use by Ofgem	<p>The purpose of this table is to:</p> <ul style="list-style-type: none"> <li>(a) collect historical and forecast cost data on all non-load related schemes with expenditure in RIIO-T1,</li> <li>(b) relate expenditure on non-load related schemes to outputs delivered.</li> </ul>
Guidance on completing this worksheet	<p>Total for RIIO-T1 from this table should reconcile with NLR total on table 4.1.</p> <p>All costs are to be entered in the price base of the current reporting year.</p> <p><u>Schemes to be reported in table 4.3 if:</u></p> <p style="padding-left: 40px;"><u>Scheme has actual or forecast expenditure within RIIO-T1</u></p> <p style="padding-left: 40px;"><u>OR</u></p> <p style="padding-left: 40px;"><u>Scheme has an associated RIIO-T1 Capital Contribution</u></p> <p style="padding-left: 40px;"><u>OR</u></p> <p style="padding-left: 40px;"><u>Scheme delivers Outputs within RIIO-T1 (Direct or Supporting delivery)</u></p> <ul style="list-style-type: none"> <li>• Every scheme listed on table 4.3 must be assigned a unique Ofgem Scheme Reference.</li> <li>• Any schemes carried over from a licensee's business plan must be assigned the same Ofgem Scheme Reference as assigned to it in the 'RIIO-T1 Scheme-Output Referencing Workbook'.</li> <li>•</li> <li>• Scheme Type should be allocated to each scheme based upon the options provided (i.e.) "Replacement", "Refurbishment", etc... and should be based upon the best estimate of categorisation.</li> </ul> <p><u>Outputs</u></p> <ul style="list-style-type: none"> <li>• Where a scheme delivers more than one category of output then each output category should be reported on a separate line with the same Ofgem Scheme Reference</li> <li>• Output delivery year will be the final year of asset delivery. (E.g. For a scheme delivering outputs in 2019, 2020, and 2021, the output Year will be 2021). Therefore the total output year will not align with the quoted value in the narrative for each year in table 6.15 and the associated narrative for table 4.3.</li> <li>• Each output delivered/planned to be delivered must be assigned an Output Reference</li> <li>• The details of an output should be listed only against the scheme directly delivering the output. Where a</li> </ul>

	<p>scheme is only supporting the delivery of an output then the Output Reference must be listed against these schemes and 'Supporting' must be entered in the 'Output Delivery' field<sup>8</sup>.</p> <ul style="list-style-type: none"> <li>Any outputs carried over from a licensee's business plan must be assigned the same output reference as assigned to it in the 'RIIO T1 Scheme-Output Referencing Workbook'.</li> </ul> <p><u>Lead assets (and &lt;132kV lead type assets)</u></p> <ul style="list-style-type: none"> <li>Asset count before intervention: For schemes that have commenced or completed, assets to be assigned to RP1 to RP4 category reflecting the RP at the time of scheme commencement. For schemes spanning more than one regulatory year then the RP at time of completion assuming no intervention to be reported<sup>9</sup>. For schemes that have not commenced, assets to be assigned to RP1 to RP4 category reflecting the RP as at the current reporting year.</li> <li>Asset count after intervention: Assets to be assigned to RP3 or RP4 category reflecting the actual or expected RP at time of completion. After intervention RP categorisation should assume no change in criticality between commencement and completion of the scheme.</li> <li>We do not expect outputs entered on this table to reconcile with those on 6.15.2.</li> <li>Outputs for &lt; 132kv assets is to be populated using the asset health index (as there is no asset replacement priority), and the rules for the AH used for each asset count is to be the same as those applied above for RP.</li> <li></li> </ul> <p><u>Non-lead assets (excluding &lt;132kV lead type assets)</u></p> <ul style="list-style-type: none"> <li>Licensees are required to report any outputs from non-lead asset schemes</li> <li>If a 'major proportion' of lead scheme's expenditure is on delivering non-lead outputs then the non-lead outputs must be separately reported (as individual lines). A 'major proportion' for this purpose is &gt;20% of the total scheme cost.</li> <li>All non-lead outputs from non-lead schemes being delivered that formed part of a licensee's RIIO-T1 business plan must be reported on table 4.3 even if</li> </ul>
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<sup>8</sup> E.g. 10 132kV circuit breakers are planned for replacement moving them from RP1 to RP4. Output Reference NLR-5555 is assigned to the replacement of these 10 circuit breakers. Three schemes are contributing to the replacement of these 10 circuit breakers. The 10 circuit breakers moving out of RP1 and into RP4 are entered in the 'Outputs Delivered' section against the scheme directly delivering the output, and 'Direct' and 'NLR-5555' are entered in the 'Output Tracking' section for this scheme. For the two schemes supporting the delivery 'Supporting' and 'NLR-5555' are entered in the 'Output Tracking' section. No entries are made in the 'Outputs Delivered' sections for these two supporting schemes.

	<p>the output it is now being delivered by a lead asset scheme.</p> <ul style="list-style-type: none"> <li>• Protection, Control, Telecoms and Metering: There are 11 asset sub-categories (e.g. settlement meters, bus section/coupler bays) under this non-lead category. Each sub-category output will be entered on a separate line with the appropriate output reference assigned</li> </ul> <p><u>Expenditure</u></p> <ul style="list-style-type: none"> <li>• Where a scheme is listed multiple times to reflect delivery of multiple outputs then a licensee must ensure that the costs (for all instances of the same scheme) aggregate to the total cost of the scheme.</li> <li>• Where it is meaningful to do so then licensees should use reasonable endeavours to allocate scheme costs to the relevant outputs. Where no meaningful allocation between across outputs is practical then licensees may assign all costs to a single output.</li> <li>• Historical expenditure: Licensees are required to report historical annual expenditure for each individual year of RIIO-T1 up to the reporting year as well as the total expenditure prior to RIIO-T1. Past years' expenditure will be based upon any restatements within the latest capital plan. Changes due to rounding up and application of inflation rates are expected and should be reported in the rounding error. Any scheme movements between tables / RRP mechanism forming part of the rounding error will be explained in the "Notes/Explanation" column for those schemes.</li> <li>• Forecast expenditure: Licensees are required to report forecast annual expenditure on a rolling eight year basis.</li> <li>• Licensees are required to report the total scheme cost for all schemes listed.</li> <li>• For provisions or rolling programmes (e.g. where a scheme does not have a defined end date) then we do not expect licensees to report costs beyond the eight year rolling forecast window.</li> </ul>
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	<p><u>Efficiencies</u></p> <ul style="list-style-type: none"> <li>Where licensees have identified initiatives to reduce costs then, where possible, these efficiencies should be embedded in the forecasts for the individual schemes.</li> <li>Where licensees overall forecasts (on table 4.1) embed assumed overall ongoing efficiencies related to NLR investments (that cannot be attributed at an individual scheme level) then these cost savings should be entered on table '4.3b NLR Scheme Assumed Efficiency Initiatives' to reconcile with table 4.1.</li> <li>These efficiencies should be appropriately allocated to the relevant asset category.</li> </ul> <p><u>De Minimis Schemes</u></p> <ul style="list-style-type: none"> <li>All lead asset schemes and &lt;132kV lead type asset schemes must be reported individually.</li> <li>Schemes may be aggregated into the relevant De minimis category where:</li> </ul> <p style="padding-left: 40px;">Scheme is a non-lead asset scheme (excluding 132kV lead asset type schemes) AND Scheme Total Lifetime Cost &lt; £0.5m (current year prices)</p> <p><u>Reconciliation to previous year submissions:</u></p> <ul style="list-style-type: none"> <li>See 'rounding error' definition. As 'Prior to RIIO-T1' column contains only costs associated with schemes with expenditure in RIIO-T1, we do not expect to be able to reconcile the costs in this column with TPCR4 submissions.</li> </ul> <p><u>4.3c Uncertain NLR SPTL (Memo): Non-Load Works Project Scheme Listing - Special Condition 6H</u></p> <ul style="list-style-type: none"> <li>This table applies only to SPTL.</li> <li>SPTL is required to report any claims it expects to submit for Uncertain NLR under SpC 6H.</li> <li>Schemes listed on 4.3c should also be listed on 4.3a</li> </ul> <p><u>Schemes associated with strategic spares or the provision of spares will be given appropriate specific output references as part of the SORW submission.</u></p>
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Specific definitions for this worksheet

Scheme types	See definitions on table.
Status	See definitions on table.
Scheme name	A name used to identify a scheme. Any scheme names referenced in the supporting commentary should agree with the names reported on this table.
Scheme category	As per table 4.1 NLR scheme categories
Note/Explanation	Optional field to provide additional information related to the scheme.

Rounding error	Licensees may enter a value to ensure the costs in the current year reconcile with previous submission(s). We expect licensees to provide an explanation of any material rounding errors.
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#### 4.3.1 NLR Volume Change

Purpose and use by Ofgem	The purpose of this table is to help identify the factors contributing to changes in replacement and refurbishment volumes from those implicit in RIIO-T1 allowances and to provide an estimate of the cost impact associated with each factor.
Guidance on completing this worksheet	<p>The table is split into seven sections, 2015 RIGS, 2016 RIGS, etc. Each of these sections are intended to reflect a licensee's intervention plan at the time of relevant RIGs submission. For example, in '2015 RIGS' section the licensee should report the replacement and refurbishment volumes in its 2014/15 RIGs submission and the views that it held at the time of that submission of the factors contributing to any volume changes in comparison to its RIIO-T1 business plan. Volume and expenditure/allowance figures should be the eight year total RIIO-T1 values.</p> <p>Licensees are required to complete historical sections only, e.g. 2016/17 RIGs should contain completed 2015 RIGs, 2016 RIGs, and 2017 RIGs sections.</p> <p>Each section contains six sub-tables with the final three characters in the table reference indicating the RIGs year and a sub-table letter, from A to F, which is common to each section. Guidance related to each of these sub-tables is given below.</p> <p>A Calculates an implied unit cost for each lead asset category for estimation of capex impact of each of the factors contributing to volume changes.</p> <p><u>Capex</u>: The RIIO-T1 eight year allowance for relevant lead asset category are to be entered in the 'Allowances' column. These values are entered in '2015 RIGs' section only with subsequent sections auto-populated. Expenditure estimates are auto-populated from table 4.1.</p> <p><u>Volumes</u>: Replacement and refurbishment volumes from the licensees RIIO-T1 business plan are to be entered in the 'RIIO-T1' column. These values are entered in '2015 RIGs' section only with subsequent sections auto-populated. The licensees updated view of replacement and refurbishment volumes over RIIO-T1 are to be entered in the RIGs column.</p> <p>OHL fittings volumes: We understand that some licensees RIIO-T1 business plan did not specify OHL fittings. Where this was the case then licensees should provide estimated figures. Licensees should agree the</p>

	<p>methodology they intend to use for estimating these figures ahead of 2016/17 RIGs submission.</p> <p>B Licensees are required to report their estimate of the impact of the various factors on their revised estimated replacement and refurbishment volumes.</p> <p>See below for explanation of the individual factors.</p> <p>C This table auto-calculates an estimate of the capex impact of the various factors from the figures reported in tables A and B.</p> <p>D No input required. Provides a check on whether tables A and B have been correctly populated. Licensees should ensure that all cells in this table display "OK" prior to submission.</p> <p>E Auto-calculates the net volume effect of reported factors.</p> <p>F Auto-calculates the net capex effect of reported factors.</p> <p><u>The narrative should provide explanation of figures reported in 'data quality revisions' and 'other' categories as well as explanation of any significant factors driving volume changes in other categories, for example changes in condition assessment policy, changes to maintenance regimes, or issues with particular asset families.</u><del>The accompanying narrative should provide explanation of the figures reported in the 'data quality revisions' and 'other' categories.</del></p>
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#### Specific definitions for this worksheet

Better/worse than forecast health	Relates to assets where re-evaluation of their health has led to them moving out of plan for replacement/refurbishments (better) or into plan for replacement/refurbishment (worse) during RIIO-T1.
Interaction with load related plan	Relates to assets where changes in LR plan impacts requirement for them to be replaced through NLR investment during RIIO-T1.
Criticality changes	Relates to assets where re-evaluation of their criticality has led to them moving out of plan for replacement/refurbishments (reduced criticality) or into plan for replacement/refurbishment (increased criticality) during RIIO-T1.
Reprioritisation due to re-evaluation of health/criticality of other assets	Relates to assets where their health/criticality assessment has not changed but re-evaluation of health/criticality of other assets has led to them moving in or out of plan for RIIO-T1 replacement/refurbishment.

Data quality revisions	Any data errors impacting asset populations or volumes requiring replacement/ refurbishment during RIIO-T1.
Other	The impact of any other factors affecting replacement/refurbishment volumes during RIIO-T1.

#### 4.3.2 RIIO-T2 output scheme cost deferral

Purpose and use by Ofgem	The purpose of this table is to help to estimate the impact of of cancellations or timing changes on NLR lead asset schemes with expenditure in RIIO-T1 but forecast to deliver outputs in RIIO-T2 or later.
Guidance on completing this worksheet	<p>Licensees are required to report their historical positions as per the plan used to inform their RIGs submission in each year of RIIO-T1 up to and including the current reporting year.</p> <p>The following is required in each instance:</p> <ul style="list-style-type: none"> <li>• Section 1: The number of schemes in each NLR lead asset category forecast, at the time of business plan submission as well as revised plan, to deliver RIIO-T2 outputs. This section is auto-populated from the data submitted in section 3.</li> <li>• Section 2: The RIIO-T1 total expenditure (actual or forecast) associated with the schemes listed in Section 3.</li> <li>• Section 3: List of schemes forecast (in RIIO-T1 business plan and/or revised plan) to deliver RIIO-T2 outputs with indication of whether they are: <ol style="list-style-type: none"> <li>1. T2 output schemes in RIIO-T1 business plan (i.e. business plan forecast expenditure during RIIO-T1 but final output delivery after 31 March 2021),</li> <li>2. Scheme cancelled or fully deferred beyond T1 (such that revised plan contains no expenditure during RIIO-T1),</li> <li>3. Schemes brought forward from T2 delivery to T1 delivery,</li> <li>4. New schemes added Schemes in Revised Plan with T2 Output Delivery (i.e. still in revised plan and still delivering outputs in RIIO-T2 or later).</li> </ol> </li> </ul>

#### Specific definitions for this worksheet

Implied allowance	<p>The allowance implied by the ratio of allowance and business plan forecast expenditure for a scheme in a given asset category.</p> $\text{Implied Allowance} = \text{BP Scheme RIIO - T1 Expenditure} \times \frac{\text{Asset Category Allowance}}{\text{BP Asset Category Forecast}}$
Pro-rata revised forecast brought forward (PRRF)	$\text{PRRF} = \text{Revised Scheme Total Expenditure} \times \frac{\text{BP Scheme RIIO - T2 Expenditure}}{\text{BP Scheme Total Expenditure}}$

Revised forecast	RIIO-T1 scheme expenditure as reported on table 4.3.
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#### 4.3.3 Tower steelwork volumes and expenditure

Purpose and use by Ofgem	The purpose of this table is to understand the impact of changes in tower steelwork replacement and refurbishment volumes and the impact of any intervention alternatives to replacement and refurbishment.
Guidance on completing this worksheet	<p>Licensees are required to report volumes and expenditure associated with replacement and refurbishment of tower steelwork contained in RIIO-T1 business plan as well current and historical NLR intervention plans.</p> <p><u>Tower steelwork interventions may be carried out under schemes in several different NLR categories, including:</u></p> <ul style="list-style-type: none"> <li><u>a. steelwork only schemes i.e. under 'Other TO'</u></li> <li><u>b. steelwork replacements related to 'OHL Fittings' schemes, and</u></li> <li><u>c. steelwork replacements related to 'OHL Conductor' schemes.</u></li> </ul> <p><u>Licensees should report all volumes and expenditure related to tower steelwork interventions from any relevant NLR categories.</u></p> <p><u>This Table is made up of seven sections (A-G). Guidance for population of each of the sections is given below. Licensees are permitted to report on either a "tonnage" or "per tower basis" depending on the available data from their source systems at that time. If information is reported and recorded only on a "per tower" basis then references to "Volume (tonnage)" and "Implied Unit Cost (£m/tonnage)" can be replaced with "Volume (per tower)" and Implied Unit Cost (£m/per tower)".</u></p> <p><b><u>Section A: Tower Steelwork Interventions - Volumes and Expenditure, &amp;</u></b></p> <p><b><u>Section B: Tower Steelwork Interventions - Technological Alternatives</u></b></p> <p><u>These sections are auto-populated.</u></p> <p><b><u>Section C: Tower Steelwork Replacement - Volumes and Expenditure</u></b></p> <p><u>Volumes and expenditure should be reported under 'Tower Steelwork Replacement' <del>if only when</del> interventions involve replacement of tower steelwork. This includes replacement of full towers as well as replacement of individual members. Any All other types of capex interventions that formed part of the RIIO T1 Business Plan should be reported under 'Tower Steelwork Refurbishment'.</u></p> <p><b><u>Section D: Tower Steelwork Replacement - Technological Alternatives</u></b></p>



	<p><u>A technological alternative to replacement may include, for example, the use of enhanced painting system. In order to be included for these purposes it must fulfil the following criteria-is:</u></p> <ul style="list-style-type: none"> <li><u>(i) Use of the technological alternative was not factored into the RIIO-T1 Business Plan</u></li> <li><u>(ii) Unavailability of the technological alternative would lead to a need for tower steelwork replacement</u></li> </ul> <p><u>s: savings should be reported in this section if the intervention technology did not form part of the RIIO-T1 business plan.</u></p> <p><b><u>Section E: Tower Steelwork Refurbishment - Volumes and Expenditure</u></b></p> <p><u>All other types of capex interventions that:</u></p> <ul style="list-style-type: none"> <li><u>(i) -formed part of the RIIO-T1 Business Plan, and</u></li> <li><u>(ii) are not already reported under Section C</u></li> </ul> <p><u>should be reported under 'Tower Steelwork Refurbishment' in this Section.</u></p> <p><u>Licensees are permitted to report on either a "tonnage" or "per tower basis" depending on the available data from their source systems at that time. If information is reported and recorded only on a "per tower" basis then references to "Volume (tonnage)" and "Implied Unit Cost (£m/tonnage)" can be replaced with "Volume (per tower)" and Implied Unit Cost (£m/per tower)".</u></p> <p><u>We note that it is the first time the licensees are compiling and submitting certain data, and in some specific instances the 31 July data submission may contain data compiled to the highest reasonable level of accuracy available from their source systems at that time. In such instances, we require all licensees to highlight the data items in question and to provide a clear indication of the steps being taken to develop the internal process required to ensure the quality of the RIGs data requested (the resources being expended) and the timetable for submitting accuracy checked and complete data no later than 15 September 2017.</u></p> <p><b><u>Section F: Tower Steelwork Refurbishment - Technological Alternatives</u></b></p> <p><u>A technological alternative to refurbishment may include, for example, the use of enhanced painting system. In order to be included for these purposes it must fulfil the following criteria:</u></p> <ul style="list-style-type: none"> <li><u>(i) Use of the technological alternative was not factored into the RIIO-T1 Business Plan</u></li> <li><u>(ii) Unavailability of the technological alternative would not lead to a need for tower steelwork replacement but would require tower steelwork refurbishment</u></li> </ul> <p><b><u>Section G: Additional Workings</u></b></p>
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	<a href="#">Licensees should include any additional workings that it feels will improve Ofgem's understanding of methods or assumptions used to populate in Sections GC-F. Data submitted in Sections C-FD may contain formulae with links to the workings provided in Section G.</a>
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Specific definitions for this worksheet

<a href="#">None</a>	

#### 4.4 Uncertain Costs

Purpose and use by Ofgem	The purpose of this table is to collect information on TO capex schemes that fall under the licence conditions 6G 'uncertain costs' and 6H 'Mitigating the impact of Pre-existing Transmission Infrastructure on the visual amenity of Designated Areas' detailed in each TO's special licence conditions.
Guidance on completing this worksheet	In the table we have identified those categories that are specific to an individual TO, in line with the special licence conditions for 'uncertain costs' and 'Mitigating the impact of Pre-existing Transmission Infrastructure on the visual amenity of Designated Areas'. Please note that no input is required for physical security as this line is linked to Table 4.8.

Specific definitions for this worksheet

Mitigating the visual impact of pre-existing infrastructure	Both the preliminary work costs and delivery of EPI output cost associated with the mitigation of visual impact of pre-existing infrastructure should be reported. Preliminary work costs are project specific costs and may include such items as project specific consultations.
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#### 4.5 TO Non operational capex

Purpose and use by Ofgem	The purpose of this table is report expenditure on non operational capex.
Guidance on completing this worksheet	The table requires the licensee to insert the name of specific IT systems / projects where the total expenditure is £1m or more. Full project details, not just expenditure in the year, should be entered as indicated by the column headings. Expenditure on all other assets and IT assets less than £1m should be entered in total. Where the total spent on a project is more than £1m but the expenditure within a particular year is less than £1m, this should be shown as an individual project and not included in the IT expenditure <£1m

	<p>category. The totals in this table feed into table 4.1 (capex summary).</p> <p>The table includes all the RIIO price control years. The TO's will populate actual data from 1 April 2013 up to and including the current reporting year and forecast data for the remaining RIIO-T1 period, i.e. all eight years of RIIO-T1. It also is a source data for auto populating table 4.1, therefore both historic and forecast years must be populated. Please insert the type of the system (new, refresh or enhancement). For convenience use drop down list.</p> <p><u>Outputs</u> Please enter the appropriate outputs using the RIIO descriptors where these can be identified.</p>
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#### Specific definitions for this worksheet

Non Operational Capex	<p>Expenditure on new and replacement assets which are not system assets.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>• IT &amp; telecoms (excluding SO IT expenditure).</li> <li>• Vehicles (including mobile plant and generators).</li> <li>• Land and Buildings used for administrative purposes.</li> <li>• Plant &amp; Machinery – including small tools and equipment and office equipment.</li> </ul>
New IT system	A new IT system that is an additional to or replaces an existing IT system.
Enhancement	A change to an existing IT system that add to the capabilities of the system.
Refresh	A change to the software or hardware of the system due to an upgrade from the supplier.

#### 4.6 System operator (SO) capex (National Grid only)

Purpose and use by Ofgem	The purpose of this table is to report the expenditure on SO capex. Ofgem shall use this table to collate all investments undertaken for the SO over the RIIO period.
Guidance on completing this worksheet	<p><u>Details of Project / Expenditure within category</u></p> <p>The licensee shall enter the appropriate asset heading for the first year the RIGs shall take effect from. Thereafter the licensee shall not change the asset headings without prior consent from Ofgem. Data Centres are a specific asset which Ofgem have separately identified for reporting (please see below).</p>

	<p>Note: Consent was granted to include an additional asset heading - Customer Sales and Interaction Management - in the 14-15 template.</p> <p>The table includes all the RIIO price control years. The TO's will populate actual data from 1 April 2013 up to and including the current reporting year and forecast data for the remaining RIIO-T1 period, i.e. all eight years of RIIO-T1. It also is a source data for auto populating table 4.1, therefore both historic and forecast years must be populated.</p> <p><u>IT System</u> Under each asset please enter details the project investment. Once a project investment descriptor has been entered it shall be retained in the table for all years going forward throughout the RIIO control. The licensee shall enter details of new investments as appropriate.</p> <p><u>New/Enhancement/Refresh</u> For each investment please indicate whether it is New / Enhancement / Refresh as appropriate.</p> <p><u>Outputs</u> Please enter the appropriate outputs using the RIIO descriptors, where these can be identified.</p> <p><u>Data Centres</u> For investments associated with Data Centres please enter the specific projects. Once a project investment descriptor has been entered it shall be retained in the table for all years going forward throughout the RIIO control. The licensee shall enter details of new investments associated with data centres as appropriate. Data Centres shall remain as an asset heading throughout the RIIO price control.</p> <p><u>EMR Preparation Capex</u> Capex expenditure related to the development of computer systems for EMR should be identified as a separate project within the table. EMR capex is then deducted from total SO capex at the bottom of the table. EMR Preparation capex is all expenditure up to December 2014. All expenditure after this date is enduring capex</p>
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Specific definitions for this worksheet

None	
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#### 4.7 Transmission Investment Renewable Generation (TIRG)

Purpose and use by Ofgem	To collect information relating to capital expenditure of all ongoing TIRG schemes.
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Guidance on completing this worksheet	<p>The totals in this table feed into table 4.1 (capex summary). We require TIRG forecasts to enable us to calculate total revenue/financing requirements of each TO.</p> <p>Scheme Status – For those projects where costs have been incurred and works are complete, these projects should be marked as 'complete'. For those projects where costs have been incurred but works are not yet complete, these projects should be marked as 'in progress'.</p>
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#### Specific definitions for this worksheet

Scheme Description and Unique ID	We expect this to match previous submissions within TPCR4, TPCR4 Rollover and previous RIIO-T1 template submissions. Schemes completing in this reporting year should reconcile with data in tables 5.8 (lead asset unit costs) and 5.9 (non lead asset unit costs).
Final Commissioning Date	This should be the year of commissioning of the scheme – which we would generally anticipate be the same as the year of last expenditure. TIRG spends remains in 'shadow' RAV for five years post commissioning (receiving a different rate of return). We require an estimation of the commissioning date so that the timing of the addition to RAV can be calculated.

### 4.8 Physical security capex

Purpose and use by Ofgem	The purpose of this table is to inform Ofgem of the capex spent on physical security in relation to DECC's enhanced physical security upgrade programme (PSUP).
Guidance on completing this worksheet	<p>Licensees must provide information for <b>all</b> sites where physical security has been upgraded, or where work is currently being (or planned to be) carried out, in relation to the PSUP. This does not include sites where general security resilience is being upgraded under the category 'security resilience (excluding BT21C)' which must be reported in Table 4.3 under the 'Non-load &gt; Other TO' category.</p> <p>Input the actual start and end dates for projects. The start date must be when the licensee begins designing the site specific operational requirement (SSOR) solution. The end date must be when the completed works are signed off (by CAST) as meeting the SSOR. Where dates are not known, the planned start/end dates must be populated.</p> <p>Licensees must input costs which have been incurred in the current reporting year and the total planned costs (VFM1) and, where applicable, total outturn costs (VFM2).</p>

	<del>NB. This table should be submitted separately to the RIGs submission.</del> <u>An agreed referencing system for schemes has been established that suitably anonymises the data submission and removes the need for the data to be separately submitted.</u>
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Specific definitions for this worksheet

CAST	Centre for Applied Science and Technology
VFM1	Audit carried out by consultants who provide a view as to whether quotations provided by contractors are efficient (value for money).
VFM2	Audit carried out by consultants who provide a view as to whether the final costs for the completed works are efficient (value for money).
<u>To be Constructed</u>	<u>PSUP site identified, works awaiting sanction and/or award prior to commencement of Design, construction or works of any form.</u>
<u>Under Construction</u>	<u>PSUP site sanctioned and/or awarded. Works associated with delivery have now commenced.</u>
<u>Under Review</u>	<u>PSUP works have been identified, requirement is to be or is currently being reviewed by BEIS / CPNI</u>
<u>Complete</u>	<u>The works are complete when they receive Technical 2 sign off as meeting the SSOR (specific site operational requirement) and are operationally accepted by the ARC. The output is met at this point however spend may continue until project closure</u>
<u>Closed</u>	<u>The project will be closed after all snagging issues have been resolved on site and final costs determined (in line with the contractual warranty period)</u>
<u>Stopped / Terminated</u>	<u>Project was stopped or terminated either prior to works commencement or during works due to reclassification or other reason</u>

# 7. Instructions for electricity network data worksheets

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## Chapter Summary

The purpose of this chapter is to inform the completion of the electricity network data worksheets by each TO. This is to enable Ofgem to effectively monitor the performance of the electricity transmission networks during RIIO-T1.

## Introduction

7.1. The purpose of the worksheets in this area is to report data on the network and its performance at various different levels to enable Ofgem to fully understand the network changes and network performance year on year.

7.2. Licensees should submit accurate and (where instructed) audited figures of their data for the relevant period. Further guidance is provided below.

## Overview of worksheets

The worksheets included within this chapter are:

- 5.1 System characteristics and activity indicators
- 5.2 Faults and failure reporting
- 5.3 Boundary transfers requirements
- 5.4 Boundary transfers and capability development
- 5.5 Demand and supply at substations
- 5.6 Lead assets additions and disposals
- 5.7 Non lead assets additions and disposals
- 5.8 Lead asset – unit cost actuals
- 5.9 Non lead asset unit costs
- 5.10 Average Circuit Unreliability

## 5.1 System characteristics and activity indicators

Purpose and use by Ofgem	The purpose of the table is to collect high-level information relating to physical characteristics of the transmission network and to provide key indicators of the overall level of transmission activity. The table requests data for each year of the RIIIO-T1 price control period. Forecast values are not required in this table.
Guidance on completing this worksheet	<p>General: All system characteristics should normally be entered as at the end (ie 31 March) for a reporting year.</p> <p><del>Transmission circuit length: Please provide the circuit kilometres for transmission circuits by operating voltage level and split by overhead and underground construction.</del></p> <p>Substations numbers: Please provide the number of substations in line with the specific definition below.</p> <p>Circuit Breakers numbers: Please provide the number of circuit breakers at each voltage level.</p> <p>Transformers numbers: Please provide the number of transformers by primary/secondary voltage. 'Other' transformers should include spare transformers and quadrature boosters.</p> <p>Reactive compensation numbers: Please provide the number of shunt reactors, mechanically switched shunt capacitors and static var compensators. Reactive compensation includes all static and variable reactive compensation devices owned by the licensee that are connected directly to the licensee's network. Variable compensation includes Static VAR Compensators (SVC) and rotating compensation but excludes that from generating plant. Reactor spares should be reported in the 'Other' category in row 44. The supporting commentary will specify the number of reactor spares being reported.</p> <p>Towers / supports numbers: Please provide the number of transmission towers by operating voltage. In the event of shared routes, the towers should be listed against the higher voltage level and not double counted.</p> <p>Grid Supply Points (GSPs): Please provide the number of Grid Supply Points. Grid Supply Points has the meaning as defined in the Grid Code. For clarity, in the event of exporting GSPs due to embedded generation, these should be counted as Grid Supply Points only and not as Grid Entry Points as well.</p>



	<p>Grid Entry Points: Please provide the number of Grid Entry Points. Grid Entry Points has the meaning as defined in the Grid Code.</p> <p>HVDC Links: Please provide details of existing HVDC links. NB. If HVDC link is jointly owned there is no need to fill in Km owned by TO.</p> <ul style="list-style-type: none"> <li>• In terms of defining the number of HVDC links the NETS SQSS definition of converters should be applied, which defines each bipole that operates in its own right as a link.</li> <li>• In terms of length, the definition of transmission circuit from this RIGs should be applied e.g. a 50km double-circuit HVDC circuit should be included as 50km + 50km in the HVDC 'Length Owned by TO' category</li> </ul> <p>Measured System Maximum Demand (GW) Actual outturn peak demand on the TO's network based on the maximum half-hour average. To be provided by each TO for their network.</p> <p>System Average Cold Spell (ACS) Demand (GW) As defined in the NETSSQSS for the reporting Year (y), ACS demand should be entered as the ACS corrected outturn.</p> <p>Measured System Summer Minimum Demand (GW) Actual outturn summer minimum demand on the TO's network based on half hourly average. To be provided by each TO for their network.</p> <p>Transmission losses at system maximum demand Total Transmission losses (GW) at measured system maximum demand (as defined above). To be provided by each TO for their network.</p> <p>Units transmitted to GSPs Total annual units (TWh) transmitted to GSPs as metered at the GSPs. To be provided by each TO for their network.</p> <p>Units of Transmission losses Total annual units (TWh) lost through Transmission System losses. To be provided by each TO for their network.</p> <p>Total directly connected generation (GW) Total capacity of generation connected directly to the licensee's network. To be provided by each TO for their network.</p> <p>Total directly connected wind generation (GW)</p>
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	<p>Total capacity of wind generation connected directly to the licensee's network. To be provided by each TO for their network.</p> <p>Total embedded generation (GW) Total capacity of embedded generation connected to the licensee's network that has use of system rights or equivalent. To be provided by each TO for their network.</p> <p>Supply (GW) Please provide the details of the demand from directly connected DNOs and customers.</p> <p>Transmission system utilisation (MW.km) based on ACS intact flow Total MW.km with MW flow on each circuit based on the planned transfer condition and an intact network as set out in the NETSSQSS. This will be provided by NGET as GBSO for all three TOs.</p> <p>External system External system includes: transmission systems owned by other transmission licensees within (transmission circuits) or outside GB (interconnectors), and distribution systems outside GB. To be provided by each TO for their network. Please name each interconnector and specify transfers as described below. Please provide the name of double or single circuits crossing the boundaries between transmission licensee systems and the measured transfers as described below.</p> <p>Transfer to/from External Systems - Maximum (GW) For the reporting year TOs should report maximum measured half-hour average transfer to and from an external system.</p> <p>Transfer to/from External Systems - (GWh) Total annual power transfer to and from an external system. To be provided by each TO for each linked External System on their network.</p>
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#### Specific definitions for this worksheet

Transmission circuits	Transmission circuits are as defined in the National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS) but exclude transformers. For clarity, a 50km double-circuit 400kV route should be included as 50km + 50km in the 400kV category. A 20km double-circuit construction with one side run at 400kV and the other at 275kV should be included as 20km in the 400kV category, and 20km in the 275kV category.
Substation	<p>To be counted as a substation, a site has to meet one or more of the following criteria:</p> <ul style="list-style-type: none"> <li>• Has voltage changing transformers, ie SGTs or GTs;</li> </ul>

	<ul style="list-style-type: none"> <li>• Has circuit breaking switchgear, ie a switching substation;</li> <li>• Has capacitors or voltage regulators;</li> <li>• Connects two or more transmission circuits through a busbar;</li> <li>• Is electrically separated from another substation of the same voltage on the same physical site, and this is reflected in the operational nomenclature.</li> </ul> <p>The number of substations at a site is dependent on the number of different voltage busbars there are, not the number of different voltages in use at that site. For example, one or more of the feeders may be transformer feeders, e.g. 400/275kV, but the site would only be considered as a 275kV site unless there was 400kV switchgear/busbar present.</p> <p>Cable compounds are not substations unless they have circuit breaking switchgear.</p> <p>Where there is more than one company's equipment at a substation, the owner of that substation is defined as being the owner of the busbars, couplers and sections, if present.</p>
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## 5.2 Faults and failure reporting

Purpose and use by Ofgem	The purpose of this table is to collect information relating to the quality of transmission service delivered.
Guidance on completing this worksheet	<p>The interpretation of faults and failures should be consistent with the specific definitions below. The causes of failures and faults should be consistent with codes from the National Faults and Interruption Reporting Scheme (NaFIRS).</p> <p>The TO should report any faults or failures that are currently under investigation or the cause is unknown, in the 'Unknown' category. Within the commentary the TO should state how many of these are currently under investigation and when it expects the investigation to be complete.</p> <p>Any faults or failures that the cause is known but is not on the list provided must be explained in the commentary.</p> <p>When reporting fault and failures caused by <b>airborne deposits</b> licensees should focus on the specific cause of the fault or failure – did the industrial pollution lead to corrosion of conductors which subsequently failed (in which case use code 15) or did the depositing of material on the conductors lead to arcing or similar (in which case use code 10) or was it the moisture content of the industrial pollution (code 14).</p> <p>Only faults and failures of cardinal assets are required to be broken down by asset type and cause. For sub-cardinal assets</p>

	<p>licensees are required to report only the total numbers of faults and failures for 'measurement transformers' and for 'other sub-cardinal assets'.</p> <p>Faults and failures are expected to be reported on a financial year basis.</p> <p><a href="#">Summary information on any events associated with significant disruption, loss of supply or customer disconnection greater than 3 minutes ('Category a') must provide detail on the duration of the event and magnitude of the associated MWh loss.</a></p> <p><a href="#">Summary information on significant condition related faults affecting a family or a number of lead or non-lead asset category that have occurred ('Category b') must provide a description of the fault, its cause, the actions that will be taken e.g. maintenance, replacement etc. and detail on the duration of the event and magnitude of the associated MWh loss (where applicable).</a></p>
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#### Specific definitions for this worksheet

Faults	An event which causes plant to be automatically disconnected from the HV system for investigation and further action if required.
Failures	<p>A power transformer failure is defined as an event that requires the unit to be taken off the plinth either for replacement or factory repair.</p> <p>A reactor failure is defined as an event that requires the unit to be taken off the plinth either for replacement or factory repair.</p> <p>Failure of circuit breakers is defined as an event that requires the replacement of the breaker, or repair equivalent to the replacement of at least one pole.</p> <p>An overhead line is considered to have failed if a conductor drops.</p> <p>Cable failures are events where a cable section, joint or sealing end has failed in service requiring its replacement. Third party causes are not counted. Pilot cable failures should be classified under protection and control.</p> <p>A protection or control failure is defined as an event that requires the bay (and associated primary equipment) to be removed from service to undertake repair which entails the replacement of a complete device (containing a protection or control function) without which the bay could not remain service on a continuous basis.</p>

	<p>Compensation failure is defined as an event that requires replacement of fault-damaged components other than those normally replaced under routine</p> <p>A substation auxiliary's failure is defined as an event that requires the replacement of the entire unit.</p>
Cardinal assets	Cardinal assets are: transformers, reactors, circuit breakers, overhead lines, underground cables, protection & control equipment, compensation (static VAR compensators & mechanically switched capacitors), and substation auxiliaries.
Sub-cardinal assets	Sub-cardinal assets are any network assets other than cardinal assets.

### 5.3 Boundary transfers requirements

Purpose and use by Ofgem	The purpose of this table is to collect information on transmission capacity against required transfer levels at key parts of the transmission system, as indicators of load-driven need for developing the transmission infrastructure.
Guidance on completing this worksheet	<p>TOs must provide as a minimum the planned, required and boundary capability of all the boundaries against which reinforcements have been justified within their RIIO T1 business plans or any boundaries against which they are now planning to deliver reinforcements. A single line diagram and geographical location diagram of these boundaries is to be included in the supporting narrative. The single line diagram and geographical location diagram are to be updated with completed reinforcements in subsequent years.</p> <p>The boundaries are not to be changed following 2014/15 RIG. TOs must include <del>in 2016/17</del> a table mapping the boundaries to boundaries included in the Electricity Ten Year statement (ETYS). Changes within this mapping should be highlighted in subsequent years in the supporting narrative (and maps resubmitted where appropriate) although we expect these to be minimal.</p> <p>In the RIGs table 5.3, a dropdown menu lists all boundaries identified within the latest ETYS and RIIO T1 submissions.</p> <p>Planned and required transfers are expected to be filled in for the RIIO-T1 price control period. The current and forecast planned and required transfer and boundary capabilities have to be consistent with the TO's best view generation and demand background and hence consistent with tables 4.1 and 4.2. In the accompanying commentary, the transmission owner should provide a description of each boundary including the circuits that cross the boundary and any specific challenges for transferring power across the boundary.</p>

	<p>Changes to current year boundary capability, planned and required transfers are to be explained either in terms of generation and demand changes or delivered reinforcements consistent with table 4.1 and 4.2. A high level explanation of the difference in boundary generation and demand assumptions compared with the published Future Energy Scenarios backgrounds should be included consistent with the requirement for tables 4.1 and 4.2</p> <p>If a boundary does not form part of the Main Interconnected Transmission System, the associated commentary should identify how the necessary capacities have been derived.</p> <p>The Planned Transfer for each boundary will be calculated as the value for the Planned Transfer Condition arising from scaling the (forecast) registered capacity of each directly-connected power station and embedded large power station such that the total of the scaled capacities is equal to the ACS peak demand minus imports from external systems. The scaling technique to be applied will be that resulting in the most onerous boundary transfer requirement, consistent with either the economy or security scaling technique.</p> <p>The Required Transfer for each boundary will be calculated by application of the interconnection allowance (for the security scaling technique) or boundary allowance (for the economy scaling technique) to the most onerous boundary transfer requirement. Where the interconnection allowance or boundary allowance are not required to be applied (e.g. due to the smaller part of the system having less than 1500MW of demand), the Required Transfer should equal the Planned Transfer and this should be discussed in the associated commentary. TO's should state in the accompanying commentary if interconnection or boundary allowances have been applied or not, e.g. in relation to demand group size in application of the NETS SQSS requirements.</p> <p>In NGET's case, forecast boundary capability information for the remaining RIIO-T1 period may be completed on a discretionary basis <del>by 31 July 2017</del>. Where it is meaningful to do so NGET will provide the highest reasonable level of accuracy available from their source systems at that time.</p> <p>Annual cycle: Ofgem understands that the annual cycle for boundary transfers may not always align with the regulatory reporting year. The annual cycle start and end dates should therefore be reported on this sheet.</p>
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#### Specific definitions for this worksheet

Boundary	A system boundary splits the transmission network into two parts across which transfer capabilities can be assessed. For
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	the avoidance of doubt, system boundaries are not network ownership boundaries and each licensee's network could contain multiple system boundaries.
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## 5.4 Boundary transfers and capability development

Purpose and use by Ofgem	The purpose of this table is to collect information on the capacity delivered during the reporting year.
Guidance on completing this worksheet	<p>Schemes included within this table should comply with the load related scheme categories listed in table 4.2.</p> <p>Commentary column: TOs should provide supporting commentary for tables 5.3 and 5.4 in their supporting narrative. High level summary commentary to explain the changes should be entered here. These can then be expanded on in detail in the supporting narrative as necessary.</p> <p>Copy and paste this table if needed to include those boundaries within which reinforcements have been delivered in the current year. Indicate the reinforcement as well as boundary capability increases (if any) that has been delivered as a result.</p>

### Specific definitions for this worksheet

Wider Works	Are other transmission reinforcement works (ie not Enabling Works) associated with reinforcing the network to accommodate the changes to generation and demand backgrounds and ensure compliance with the prevailing security standards.
Boundaries	As defined in Table 5.3.
Boundary Capability (MW)	<p>Thermal, voltage and stability: capabilities delivered for each boundary calculated in accordance with the prevailing security standards criteria. Thermal capability should be provided for all boundaries. Voltage and Stability should always be provided when it is known to be the limiting factor and when the information is known.</p> <p>The 'capability at start' refers the capability of the network at the start of the reporting year before any reinforcement has been completed. Where there is change to the network capability that has not been caused by additional reinforcement, the commentary should describe the changes that have caused this.</p>

## 5.5 Demand and supply at substations

Purpose and use by Ofgem	The purpose of this table is to collect information relating to actual and forecast demand of substations within access groups.
Guidance on completing this worksheet	<p>General: The assessment of demand and supply capacity for access groups should be completed in accordance with the relevant security standards (ie NETS SQSS), taking due account of any Distribution Network Owner (DNO) information provided as part of the Grid Code submissions.</p> <p>Actual outturn demand information should be used for the reporting year.</p> <p>NGET only: Transformer utilisation only and show the number of sites whose demand in MVA, as a percentage of transformer capacity, falls into each defined band across the specified years. This data only considers the transformer capacity at each Access Group and takes no account of lower voltage demand transfer capability or any contribution from embedded generation.</p>

### Specific definitions for this worksheet

Peak demand / intact capacity	The number of access groups in each loading band (>100%, 100-80%, <80%) with the maximum demand of the access group expressed as a percentage of the installed transformer capacity.
Seasonal peak demand / limiting n-1 capacity	The number of access groups in each loading band (>100%, 100-80%, <80%, No Capacity) with the most onerous access group seasonal demand expressed as a percentage of installed transformer capacity during the most onerous single circuit outage. The most onerous seasonal demand may not be coincident with the peak demand as the transformer rating may be reduced at other times of the year resulting in a higher relative level of loading.
Maintenance period access group demand / limiting n-2 capacity - >300MW groups	The number of access groups in each loading band (>100%, 100-80%, <80%, No Capacity) with the maintenance period access group demand (as agreed with the DNO) expressed as a percentage of installed transformer capacity during the most onerous two circuit outage. The access group demand used should be consistent with the access periods for each transmission interface circuit identified through the Grid Code submissions. This section is only completed for access groups where the total demand is above 300MW.



Maintenance period access group demand / limiting n-3 capacity - >1500MW demand groups only	The number of access groups in each loading band (>100%, 100-80%, <80%, No Capacity) with the maintenance period access group demand (as agreed with the DNO) expressed as a percentage of installed transformer capacity during the most onerous three circuit outage. The access group demand used should be consistent with the access periods for each transmission interface circuit identified as part of the Grid Code submissions. This section is only completed for access groups where the total demand is above 1500MW.
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## 5.6 Lead assets additions and disposals

Purpose and use by Ofgem	To collect information relating to the additions and disposals of lead assets on the licensee's network.
Guidance on completing this worksheet	<p>The following information is required for both load and non-load related expenditure.</p> <p>Volumes on Total number of lead assets commissioned onto the network during the reporting year within non-load related and load related schemes. Assets added on are expected to be in the range RP3 to RP4.</p> <p>Volumes Off Total number of lead assets removed from the network during the reporting year within non-load related and load related schemes. Volumes off captures lead assets of varying replacement priorities.</p> <p>Data quality revisions Table 5.6 should reflect the most up to date and accurate data available to the TO. If the TO has revised any of its asset data to improve data accuracy then the data quality revisions should be included within the non-load related volumes off and on within table 5.6 (ie it should not be recorded in the opening balance). Data that has been normalised to exclude the impact of any data quality revisions must be reported in table 5.6a. If there have been no data quality revisions since the TO's last (previous) submission, then tables 5.6 and 5.6a should be identical. We expect to see only minor data quality revisions from year to year. It should be noted that the Licensee must notify Ofgem of the possibility of any significant revisions to improve data quality. This notification must be issued to Ofgem as soon as it becomes evident to the Licensee that a reasonable likelihood exists of significant inaccuracies in any of its previously submitted data.</p> <p>Equipment volumes are reported on commission/decommission year rather than scheme completion year.</p>

Specific definitions for this worksheet

<del>None</del> Fittings Only	<del>This is to capture the number of circuit km of fittings replaced as part of stand alone 'fittings only' or 'minor refurbishment' schemes, and therefore excludes the volume of fittings that are replaced as a consequence of full re-conductoring schemes.</del>
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## 5.7 Non lead assets additions and disposals

Purpose and use by Ofgem	To collect information relating to the additions and disposals of non-lead assets on the licensee's network.
Guidance on completing this worksheet	<p>The following information is required for both load and non-load related expenditure.</p> <p>Volumes On Total number of non-lead assets commissioned onto the network during the reporting year within non-load related and load related schemes.</p> <p>Volumes Off Total number of non-lead assets removed from the network during the reporting year within non-load related and load related schemes</p> <p>Data quality revisions Any data quality revisions should be reported in column J. Where volumes have been revised downwards from previous year then these should be entered as negative values. See also related guidance on table 5.6.</p>

Specific definitions for this worksheet

None	
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## 5.8 Lead asset – unit cost actuals

Purpose and use by Ofgem	The purpose of this table is to understand the unit costs for key equipment classes on which material spend has been completed in the Reporting Year. This table covers both load-related and non-load related expenditure.
Guidance on completing this worksheet	<p>Table 5.8 captures the costs of schemes financially completed within the Reporting Year and identifies the lead assets delivered by those schemes. This allows the calculation of actual mean unit costs on an annual basis from load related and non-load related expenditure.</p> <p>The lead asset categories are as follows:</p>

	<ul style="list-style-type: none"> <li>transformers and other wound plant</li> <li>circuit breakers</li> <li>overhead line full re-conductoring</li> <li>overhead line minor refurbishment/fittings only</li> <li>underground cables</li> </ul> <p>More detailed definition of the cost allocations to be used for the lead asset categories is provided in Appendix 4 of this document. In summary unit costs for the lead asset categories should include plant purchase, delivery, installation and testing, as well as closely-associated overheads, such as commissioning costs for the specific lead asset.</p> <p>In case of doubt over interpretation, the unit costs should EXCLUDE:</p> <ul style="list-style-type: none"> <li>Business support overheads (e.g. programme management, type specification and testing)</li> </ul> <p>It is expected that the licensee will explain unit cost outliers or scheme-specific points of interest in the supporting commentary document.</p> <p>Non-unit costs are specifically defined to improve the comparability of reported unit costs. Any item not included in a unit cost should be added to an appropriate non-unit category, e.g. 'Other' (including non-lead electrical assets).</p> <p>In the case of unusual/bespoke items which are not within lead asset categories (such as SVCs), the cost should be identified as non-unit and the licensee should explain what was delivered in the supporting commentary.</p>
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Specific definitions for this worksheet

None	
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## 5.9 Non lead asset unit costs

Purpose and use by Ofgem	<p>The purpose of this table is to collect cost book unit costs for Metering, Telecommunications, Protection and Control.</p> <p>NB. Please note that this information is not required for the current reporting year. Ofgem will continue to assess whether there is a requirement for this level of detail on non-lead assets.</p>
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Guidance on completing this worksheet	Please provide the 'cost book' unit cost for these assets.
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Specific definitions for this worksheet

None	
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## 5.10 Average Circuit Unreliability

Purpose and use by Ofgem	The purpose of this table is to collect information on circuit unreliability to understand the performance of the system.
Guidance on completing this worksheet	<p><u>Average Circuit Unreliability (ACU) (%)</u> is the sum for all circuits of hours unavailable / (No. circuits * No. hours in period), where unavailability is due to functional failures.</p> <p>ACU is collected:</p> <ul style="list-style-type: none"> <li>• On monthly basis (for all circuits)</li> <li>• Split by the asset category and asset health index of the asset that caused the functional failure.</li> </ul> <p>For the number of monitored circuits for ACU (#) the TO's should enter the total number of circuits monitored in the relevant period<sup>10</sup>. The number of circuits within a month can change and therefore TO's should use a monthly average. Circuits which are out on outage (not due to functional failure) still form part of the total number of monitored circuits.</p> <p>To calculate the annual ACU the TO should use the weighted average number of circuits</p> <p>The ACU has been disaggregated by equipment group and Asset Health Index. The "Other" category is applied to those assets which contribute to the ACU figures but do not have an Asset Health Index assigned because they are not lead assets for driving replacement. For example, circuit breakers are the only switchgear equipment type scored for asset condition, so all other switchgear equipment types are included in the 'unclassified' category e.g. instrument transformers and disconnectors. Similarly, substation cables are not scored for condition although outages on these cables are included in the figures.</p>

Specific definitions for this worksheet

<sup>10</sup> Changes to number of monitored circuits could be due to splits and commissioning or decommissioning during the year

Functional failures	<p>The unreliability events which result in unavailability of the network due to outages which cannot be deferred until the next planned intervention and include:</p> <ul style="list-style-type: none"> <li>• Enforced unreliability outages taken at less than 24 hours-notice (unplanned unavailability)</li> <li>• Planned unreliability outage taken after 24 hours-notice.</li> </ul>
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# 8. Instructions for completing the outputs worksheets

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## Chapter Summary

The purpose of this chapter is to inform the completion of the outputs worksheets by each TO. This is to enable Ofgem to effectively monitor the performance of the companies in delivering their RIIO-T1 outputs and to determine any associated reward or penalty under the incentive arrangements consistent with the Final Proposals.

## Introduction

8.1. The purpose of the worksheets in this area is to report performance against the various outputs. This will allow Ofgem to monitor licensee's performance against the output targets year on year.

8.2. Licensees should submit accurate and (where instructed) audited figures of their data for the relevant period. Further guidance is provided below.

8.3. All costs are to be entered on a cash controllable basis (see Glossary). Cash controllable means exclusive of all provisions and all accruals and prepayments that are not incurred as part of the ordinary level of business.

## Overview of worksheets

8.4. The worksheets included within this chapter are:

- 6.1 Customer satisfaction / stakeholder satisfaction
- 6.2 Environment Business carbon footprint (BCF)
- 6.3 Reliability
- 6.4 SHE Transmission and SPTL Timely connections
- 6.5 SF6 emissions
- 6.6 Designated area visual amenity outputs for existing transmission infrastructure
- 6.7 Baseline Wider and Works Strategic Wider Works (SWW) outputs
- 6.8 SWW Pre-construction deliverables
- 6.9 SHE Transmission local generation volume driver
- 6.10 SPTL Local generation connections volume driver – sole use

- 6.10 SPTL Local generation connections volume driver – shared use
- 6.11 NGET wider works volume driver
- 6.12 NGET planning requirements
- 6.13 NGET local generation volume driver
- 6.14 NGET local demand volume driver
- 6.15.1 Network Output Measures (NOMS) Asset Health
- 6.15.2 NOMS Replacement Priority
- 6.16.1 Criticality substations
- 6.16.2 Criticality circuits
- 6.16.3 Criticality SPTL
- 6.17 Flood mitigation

## 6.1 Customer satisfaction

Purpose and use by Ofgem	The purpose of this table is to collect the results from surveys that the transmission owners are required to carry out under the customer/stakeholder satisfaction output. The output has two financial incentive elements. One is a stakeholder engagement discretionary reward. The second is a deterministic financial incentive rewarding or penalising the transmission owners for performance as appraised by its customers and/or stakeholders through survey. <sup>11</sup> This table relates to this second element reflecting survey results and supporting information. At this stage the supporting information is work in progress. This is information that will provide us with confidence that the overall reward through this financial incentive is appropriate.
Guidance on completing this worksheet	<p>To complete the worksheet each TO is required to include:</p> <ul style="list-style-type: none"> <li>• level of performance subtracted from a target level (as specified in Special Licence Condition 3D of the TO's Electricity Transmission Licence)</li> <li>• mean, 25% and 75% quartile survey scores; for National Grid this includes both the survey of customers and the equivalent scores for the survey of stakeholders;</li> <li>• for SHE Transmission and SPTL data is also reported on the key performance indicators and stakeholder external assurance elements.</li> </ul>

<sup>11</sup> NGET and NGGT shall include results from both a survey of customers and a survey of stakeholders. SPTL and SHE TRANSMISSION shall survey stakeholders.

	<p>The tables have been updated to reflect the decision published in November 2016:</p> <p><a href="https://www.ofgem.gov.uk/system/files/docs/2016/10/stakeholder_engagement_15-16_decision_letter_tos.pdf">https://www.ofgem.gov.uk/system/files/docs/2016/10/stakeholder_engagement_15-16_decision_letter_tos.pdf</a></p>
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#### Specific definitions for this worksheet

Customer vs Stakeholder	<p>Customer satisfaction scores are based on responses from those who meet the Licence definition of Customer ("any Stakeholder who pays the licensee through network charges or fees"), plus any other respondents who we treat as Customers (e.g. companies or organisations acting on behalf of paying customers or respondents whose connection application did not complete).</p>
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## 6.2 Environment Business carbon footprint (BCF)

Purpose and use by Ofgem	<p>The purpose of this table is to collect information on the licensee's Business Carbon Footprint (BCF) (in tonnes of CO<sub>2</sub> equivalent) in order for us to review the carbon footprint across all the TOs. This information may be published in future as part of a report on TOs performance across the RIIO-T1 outputs.</p> <p>SF6 emissions only are auto populated from table 6.5</p>
Guidance on completing this worksheet	<p>CO<sub>2</sub> equivalent emissions arising from losses on the licensee's transmission system are included in the table since to provide an annual estimate of total BCF that will align with other environmental reports produced by the company.</p> <p>The associated commentary must contain the methodology used, including detailed emission tables for each of the sections below, and further information on the methodology adopted.</p> <p>As stated below, a licensee can select the 12 month period that it intends to use as its confirmed reporting year. This confirmed reporting year must have prior approval from Ofgem. We expect the confirmed reporting year to align with the statutory or regulatory accounts.</p>
<i>General principles of the reporting methodology</i>	<p>The reporting methodology must be compliant with the principles of the Greenhouse Gas Protocol ("GHG Protocol"). In summary, the BCF reporting must be:</p> <ul style="list-style-type: none"> <li>• Relevant: the inventory must reflect the substance and economic reality of the company's business relationships, not merely its legal form.</li> <li>• Complete: all relevant emission sources must be included.</li> </ul>



	<ul style="list-style-type: none"> <li>• Consistent: accounting approaches, inventory boundary and calculation methodology must be applied consistently over time.</li> <li>• Transparent: information on the processes, procedures, assumptions and limitations of the BCF reporting must be disclosed in a clear, factual, neutral and understandable manner, enabling internal and external verifiers to attest to its credibility.</li> <li>• Accurate: GHG measurements, estimates, or calculations must be systemically neither over nor under the actual emissions value, as far as can be judged, and that uncertainties be reduced as far as practicable.</li> </ul> <p><i>Reporting boundaries</i> Licensee's must report on all Scope 1 and Scope 2 emissions (and a subset of Scope 3 emissions, as detailed below) on an "operational control" basis, ie report all emissions from operations on which the TO has full authority to introduce and implement its operating policy.</p> <p>Licensees must also report on 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 Transmission System, regardless of the legal entity carrying out each activity. According to this, we consider it valuable to focus on contractors emissions relating to the operational transport fleet and mobile power plants.</p> <p>A licensee that forms part of a larger corporate group must provide a brief introduction outlining the structure of the group. The commentary must detail which organisations are considered to be within the reporting boundary for the purpose of this exercise.</p> <p>Apportionment of emissions across a corporate group to the licensee's business units must be made clear in the commentary.</p>
<i>Contractors</i>	<p>The exclusion of any contractors must be justified and any thresholds used for exclusion must be stated in the commentary.</p> <p>The commentary must also include an indication of what proportion of contractors have been excluded. This figure could be calculated based on contract value.</p> <p>As far as possible, the licensee must try to ensure that data provided from different contractors is based on consistent assumptions.</p>

<p><i>Detailed reporting requirements</i></p>	<p>Licensees are given flexibility to set their own standards for:</p> <ul style="list-style-type: none"> <li>• Reporting year - we expect this generally to align with the statutory or regulatory accounts.</li> <li>• The use of estimates rather than direct measurement, and any exclusion from the reporting based on (lack of) materiality considerations. Any assumptions used to make estimates must be included in the commentary. It is anticipated that data will need to be estimated under two scenarios: <ul style="list-style-type: none"> <li>◦ when the type of emissions is not measured</li> <li>◦ when there is measurement data, but an estimate is required as the data is not at the same level of granularity as required by the summary BCF worksheet.</li> </ul> </li> </ul> <p>As a general principle, the licensees must focus more on the first type of estimation.</p> <p>The commentary must include data tables for each area of emissions (ideally at the same level of granularity as the Defra conversion factors) containing the following information:</p> <ul style="list-style-type: none"> <li>• the licensee in question</li> <li>• the level of emissions (in tonnes ofCO<sub>2</sub> equivalent (tCO<sub>2</sub>e))</li> <li>• the data source and collection process</li> <li>• the relevant physical units e.g. miles</li> <li>• the emission conversion factor used</li> <li>• the source of the emission conversion factor (this shall be Defra unless there is a compelling case for using another conversion factor)</li> <li>• the Scope of the emissions ie Scope 1, 2 or 3</li> <li>• whether the emissions have been measured or estimated</li> <li>• any tools used in the calculation</li> <li>• whether the emissions stem from contractors.</li> </ul> <p>The commentary must also include details of any auditing a licensee has performed to verify their emissions data.</p>
<p><i>Apportionment</i></p>	<p>When the emissions data is not available for the individual licensee then the apportionment factor used must be transparent. The basis for calculating the apportionment factor must also be included in the commentary.</p> <p>We expect that the basis for calculating the apportionment factor will vary according to the area of emissions. The table</p>

below gives the preferred basis for determining the apportionment factor. Other methodologies can be used, but they must be justified.

**Table 7.1: Apportionment factor determination**

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

*Buildings energy usage*

Emissions for electricity usage in buildings must be converted using carbon equivalent factor. The licensee must state in its methodology (included in the commentary) the conversion factor it has used and why it considers this to be appropriate.

Natural Gas, Diesel and other fuels are all categorised as fuel combustion and must be converted to tCO<sub>2</sub>e 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.

Electricity usage in substations must be captured under "Buildings energy usage". All substation consumption must be treated as energy supplied rather than losses. It is recognised that not all substations will be metered; rather, it is expected that licensees will in time register all substation as unmetered supplies and develop a common method for estimating consumption. Each licensee must include in its methodology (included in the commentary) the basis on which energy supplied has been assessed. Estimation could be based on a bottom-up approach, whereby the substation energy usage is split into estimates of its constituent parts, such as heating and lighting etc.

*Transport*

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. The reporting must, as far as reasonably practicable, use the full range of emission conversion factors available (as applicable to the range of means of transport actually used by the company).

Defra allows for transport to be entered in terms of both mileage and fuel consumption. Reporting must be based upon mileage, using conversion factors at the greatest level of disaggregation that is reasonably practicable. Reporting can

	<p>be based on fuel consumption only where detailed and reliable data is available, e.g. through fuel cards.</p> <p>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.</p> <p>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<sub>2</sub>e) must be estimated and summed to the closest means of transport ( e.g. "air" for helicopters). The methodology and assumptions used for estimating/measuring these emissions must be included in the commentary.</p> <p>Operational Transport is 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.</p> <p>Business Transport is that undertaken by staff travelling to locations that are other than their normal place of work or moving between sites for purposes such as meetings.</p>
<i>Fugitive emissions</i>	<p>This category caters for GHG emissions from a range of gases that may be relevant to the TO business. We anticipate that this will mainly include SF<sub>6</sub> emissions, but other gases may be included (e.g. HFC from air conditioning). SF<sub>6</sub> are auto populated from table 6.5</p> <p>The commentary must identify which fugitive emissions have not been calculated or estimated.</p>
<i>Fuel combustion (non-building)</i>	<p>This is to cover for 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 the licensee, related and affiliate undertakings, contactors and sub-contractors must be included in so far as it is reasonably practicable. The methodology must describe the degree of estimation, and decisions to exclude any sources of emissions, applied.</p>
<i>Losses</i>	<p>This is to consider TOs responsibility towards losses as a Scope 2 emission. Substation electricity usage must be excluded from the reported emissions for network losses, so that it is not double-counted.</p>

	<p>The TOs should use the most relevant DEFRA conversion factor for electricity generation.</p> <p>As explained above, an estimate of losses is required because it is important for Ofgem to have an indication of the overall BCF for a company and across all TOs.</p>
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#### Specific definitions for this worksheet

None	
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### 6.3 Reliability

Purpose and use by Ofgem	The purpose of this table is to collect information in relation to incidents on the licensee's transmission system and the volume of unsupplied energy that is a consequence of these interruptions for the calculation of the licensee's Energy Not Supplied (ENS) incentive.
Guidance on completing this worksheet	<p>To complete the worksheet each TO is required to give details of:</p> <ul style="list-style-type: none"> <li>the total number of transmission system incidents that occurred during the year, the number of events excluded from the definition of incentivised loss of supply events, the number of incentivised loss of supply events, and the number of incidents categorised as exceptional events</li> <li>the volume of energy that was not supplied to customers as a result of the total number of incidents, the volume of energy not supplied for incidents excluded from the definition of incentivised loss of supply events, the volume of energy not supplied for incidents due to Incentivised Loss of Supply Events, and the volume of ENS for incidents categorised as exceptional events.</li> </ul> <p>Exceptional events: The licensee should detail separately:</p> <ol style="list-style-type: none"> <li>the number of incidents and volume of unsupplied energy for incidents that the Authority has determined to be exceptional events under Part C of Special Condition 3C</li> <li>the number of incidents and volume of unsupplied energy for incidents that it views as exceptional events but the Authority has yet to make a determination under Part C of Special Condition 3C.</li> </ol> <p><u>6.3c Compensation Payments (SHE Transmission Only)</u></p> <p>This section applies only to SHE Transmission. SHE Transmission must provide the data required to calculate the Compensatory Payments Adjustment (SHCP<sub>t</sub>) made in each Relevant Year t. The required terms are as defined in Part D</p>

	<p>of Special Condition 3C (Reliability Incentive Adjustment in Respect of Energy Not Supplied).</p> <p>SHE Transmission is also required to provide additional data relating to the application of its Compensatory Payment Statement and the number of customers that have received compensation.</p>
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#### Specific definitions for this worksheet

Customers compensated within 30 days of receipt of completed response	For claims related to loss of supply incidents occurring in the relevant regulatory reporting year: the number of customers that received compensation within 30 calendar days from the date the licensee received the customer's completed claim form. Should include any compensation paid in the 30 calendar days after the end of the regulatory reporting year.
Customers compensated within 3 months of incident	For claims related to loss of supply incidents occurring in the relevant regulatory reporting year: the number of customers that received compensation within 3 calendar months from the date on which supply was restored. Should include any compensation paid in the 3 calendar months after the end of the regulatory reporting year.
Total number of customers in receipt of compensation	For claims related to loss of supply incidents occurring in the relevant regulatory reporting year: the total number of customers that received compensation.

### 6.4 SHE Transmission and SPTL Timely connections

Purpose and use by Ofgem	<p>This table applies only to SPTL and SHE Transmission as National Grid do not have the same financial incentive and the overall reporting in this area is undertaken separately under previously existing licence requirements.</p> <p>The purpose of this table is to summarise the performance of the TOs in delivering timely connections to the network. The data will support the timely connections output based on delivery against licence obligations and through this the obligations in the SO:TO Code (STC).</p> <p>The table includes all the RIIO price control years. The TO's should populate from 1 April 2013 up to and including the current reporting year.</p>
Guidance on completing this worksheet	<p>SPTL and/or SHE Transmission will have to identify the total number of connections by category of generation type where it made an offer. It will also need to indicate where this was done within the timing required by the obligation contained in the SO:TO Code referred to in D4A of their licence conditions. To enrich our information, and in part to inform the work to develop RIIO-T2 incentives in this area, SPTL and SHE Transmission will also need to report on whether further amendment was made following the delivery of the connection offer. Such amendment is not necessarily a sign of</p>

	<p>a problem. A commentary will be sought to provide the reason for the change.</p> <p><a href="#">SPTL and SHE Transmission to provide confirmation of the volume of new offers (or modifications to existing contracts) in its role as TO, the volume that were provided within the timescales set out in the Transmission Licence and the proportion of these offers that met the customer requested date.</a></p>
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Specific definitions for this worksheet

None	
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## 6.5 SF<sub>6</sub> emissions incentive

Purpose and use by Ofgem	<p>The purpose of this table is to collect information in relation to emissions of sulphur hexafluoride from assets comprising part of the licensee's transmission system for the annual calculation of the licensee's SF<sub>6</sub> incentive specified in Special Condition 3E (Incentive in Respect of Sulphur Hexafluoride (SF<sub>6</sub>) Gas Emissions).</p>
Guidance on completing this worksheet	<p>Each TOs SF<sub>6</sub> incentive mechanism varies slightly from the other two TOs' mechanisms. Table 6.5 has been designed to be common to the three TOs and fields not applicable to a specific TO's mechanism will be automatically shaded out.</p> <p>TOs are required to submit set of yearly data for each year of RIIO-T1 up to the current reporting year.</p> <p>The table is capable of being populated with data for full eight year RIIO-T1 period. However, licensees may hide rows relating to future years.</p> <p>To complete the worksheet each TO is required to input details of:</p> <ul style="list-style-type: none"> <li>the total amount of SF<sub>6</sub> gas (in kilograms) contained in assets forming the licensee's transmission system at the start of the year (or for SHE Transmission the agreed baseline set out in Final Proposals) measured in accordance with the licensee's methodology statement.</li> <li>the additions and disposals of SF<sub>6</sub> gas (in kilograms) in assets comprising part the licensee's transmission system during the year (or for SHE Transmission the additions comprising part of SWW Outputs delivered in the reporting year).</li> </ul>

	<ul style="list-style-type: none"> <li>• the total emissions of SF<sub>6</sub> gas over the Reporting Year as calculated in accordance with the licensee's methodology statement</li> <li>• the amount of any SF<sub>6</sub> emissions that the Authority has directed is the result of an Exceptional Event as defined in Special Condition 3E (Incentive in Respect of Sulphur Hexafluoride (SF<sub>6</sub>) Gas Emissions).</li> <li>• The conversion factor to be used throughout RIIO-T1 to quantify the carbon dioxide equivalent emissions from sulphur hexafluoride emissions is the emissions factor as published by the IPCC in its Second Assessment Report, Climate Change 1995<sup>12</sup>. This has the value of 23.9 kg of SF<sub>6</sub> to tonnes of CO<sub>2</sub>.</li> </ul>
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<sup>12</sup> The Science of Climate Change. Contribution of Working Group I to the Second Assessment Report of the Intergovernmental Panel on Climate Change. (Eds. J. T Houghton et al, 1996).



Specific definitions for this worksheet

None	
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## 6.6 Designated area visual amenity outputs for existing transmission infrastructure

Purpose and use by Ofgem	The purpose of this table is to collect information on the delivery of mitigation measures to improve the visual amenity of existing transmission infrastructure in Areas of Outstanding Natural Beauty, National Parks and National Scenic Areas ("designated areas").
Guidance on completing this worksheet	<p>In the first reporting year of the RIIO-T1 period the TO is required to input data on the amount of existing transmission infrastructure owned by the TO in designated areas as of 1 April 2013. Data on existing transmission overhead lines should be given in circuit kilometres by circuit operating voltage. Existing transmission substations should be identified consistently with the definition of a substation contained in the notes accompanying table 4.1.</p> <p>Visual Amenity (VA) Outputs should be added to the second table in the worksheet when the Authority has approved allowed expenditure for the delivery of these. The TO should input data on the mitigation measures that are specified as a VA Outputs. For underground cabling the section lengths are to be measured as the central core lengths between cable sealing end compounds or cable entry bushings per circuit, and shall be rounded to the nearest 0.1km. If two or more sections of underground cabling are required in a circuit, these sections shall be treated as discrete lengths. The TO should input an additional line in the table for any scheme which delivers two or more discrete cables that fall under the same category (cell) (e.g. 2 discrete cables under 3km in length under 1x&lt;2500mm<sup>2</sup>).</p> <p>The TO should include in its narrative any differences between the approved VA Output, and what is actually delivered.</p> <p>This table should only pick up project specific costs. Costs relating to feasibility studies or other preliminary costs unless capitalised should be recorded as part of opex.</p>

Specific definitions for this worksheet

None	
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## 6.7 Baseline Wider and Works Strategic Wider Works (SWW) outputs

Purpose and use by Ofgem	<p>The purpose of this table is to collect information on the licensee's progress in the construction and completion of Baseline Wider Works set out in Special Condition 6I (Specification of Baseline Wider Works Outputs and Strategic Wider Works Outputs and Assessment of Allowed Expenditure) in the licensee's Electricity Transmission Licence that are approved for funding by the Authority during the RIIO-T1 period.</p>
Guidance on completing this worksheet	<p>All BWW outputs should be entered into the table at the start of the price control.</p> <p>When a new SWW output is approved and appears in Special Condition 6I of the licence, the licensee should enter the SWW output stating the boundary it will affect, the name of the project and also the amount of additional transmission transfer capability (in MW) that has been agreed as the SWW output. Every year the licensee should report whether or not the project is progressing in line with the project milestones for delivering the project by the scheduled delivery date that is set out in the licence. For SWW outputs the TO will be required to project a project delivery plan setting out the key dates in its works programme for making the new output available to the system. The TOs should report against the key programme milestones that were submitted to Ofgem as part of the Project Assessment. The licensee should include an explanation in its narrative if annual milestones are not met or if there is any differences between the Baseline Wider Works specified in Final Proposals and the approved SWW Output and what is delivered.</p> <p>A SWW output is 'delivered' only after the final commissioning stage of the works on the transmission owner's network.</p> <p>When an output is delivered, the licensee is to provide a post construction technical report, accompanied by a construction completion certificate from independent technical advisors, setting out the actual capability of the delivered output. The RRP narrative should indicate whether this report has been submitted.</p> <p><b>Monitoring the needs case for SWW projects in construction</b></p> <p>Following a positive SWW decision, licensees are required to monitor the ongoing validity of the relevant needs case, the activities linked to the delivery of the construction project and the relevant inputs and the assumptions that were made as the basis for the needs case. Where changes in circumstances are identified then Ofgem must be notified of any material</p>

	<p>revisions to the needs cases for any large scale SWW projects under construction.</p> <p>The table includes summary tables for completion by the TOs. The first requires the TOs to populate the annual profile of expenditure incurred to date and forecast to be incurred in the delivery of SWW 'not yet agreed' and BWW outputs. The second summary table requires the TOs to populate their current view of the allowance profile for the full RIIO-T1 period.</p>
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Specific definitions for this worksheet

None	
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### **6.8 SWW Pre-construction deliverables**

Purpose and use by Ofgem	The purpose of this table is to collect information on the status of various pre-construction engineering activities in relation to a prospective SWW scheme.
Guidance on completing this worksheet	<p><i>The licensee should provide a description of the SWW pre-construction work undertaken in the previous year. This should include a description of the works and the costs incurred.</i></p> <p>The licensee should include more information in its narrative if it has made a planning application to specify the stage of the application and the expected timescales for a decision from the relevant planning authority.</p> <p><i>Where no work has been undertaken the licensee should provide a justification for this decision e.g. NOA recommendation to "delay".</i></p>

Specific definitions for this worksheet

None	
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### **6.9 SHE Transmission local generation volume driver**

Purpose and use by Ofgem	The purpose of this table is to collect information on forecast and delivered schemes that are subject to SHE Transmission's generation connection volume driver specified in Special Condition 6F of SHE Transmission's Electricity Transmission Licence. This information will allow us to adjust the baseline to reflect the forecast and actual capability delivered.
Guidance on completing this worksheet	This table has been automated on the basis that table 4.2 is accurately completed. In the event this does not hold, or if the automation fails to meet the needs for the PCFM, we will re-issue the previous version of this table with the below guidance.

	<p>In the worksheet there are two main tables: 6.9a and 6.9b. The tables collect scheme specific data for Completed Connections SHE Transmission has delivered and Forecast Connections SHE Transmission expects to have delivered in four years' time. There is a subsidiary table associated with each. The purpose of these tables is to collect information on the cumulative connection capacity that has been delivered since the start of the price control or is expected to be delivered in future years of the price control period.</p> <p><i>Completed Connections table</i></p> <p>Scheme name: The scheme name and references should be detailed in such a way that will allow us to cross reference information in table 4.2.</p> <p>Scheme reference: SHE Transmission should use the same unique scheme reference within the output tables and the cost information tables (ie table 4.2).</p> <p>Year of delivery: The year of delivery should be the year that the scheme has been commissioned.</p> <p>Atypical scheme: The TO should specify for each scheme whether or not the delivered connections capacity is an atypical scheme (choosing either 'y' or 'n' in column E) as per the definitions of atypical generation connections specified in SHE Transmission's Final Proposals.</p> <p>Generation Connections: The TO should input into the Completed Connections table only data for generation connections capacity it has delivered in the reporting year. The TO should input the delivered connection capacity associated with sole use (MW) and shared use (MVA) infrastructure works.</p> <p>Actual expenditure for atypical connections (2009/10 prices): Input data on the total delivery costs of atypical projects in column H in 2009/10 price base. SHE Transmission should explain the methodology used to calculate these unit cost allowances as part of the commentary tables supporting the RIGs tables.</p>
<p><i>Four-period Ahead Forecast Connections table</i></p>	<p>Scheme name and scheme reference: Provide details of unique identifier for project.</p> <p>Four-period ahead delivery detail: Specify the four-period ahead delivery.</p> <p>Atypical scheme: The TO should specify for each scheme whether or not the forecast connections capacity to be delivered will be an atypical scheme (choosing either 'y' or 'n')</p>

	<p>in column E) as per the definitions of atypical generation connections specified in SHE Transmission's Final Proposals.</p> <p>Generation Connections: The TO should input the amount of forecast generation connections capacity it expects to deliver where these are backed with a signed TOCA. The TO should input the connection capacity associated with sole use (MW) and shared use (MVA) infrastructure works in columns F and G respectively.</p> <p>Forecast expenditure for atypical connections (2009/10 prices): TO should input forecast total delivery costs of atypical projects in column H in 2009/10 price base. SHE Transmission should explain the methodology used to calculate these unit cost allowances as part of the commentary tables supporting the RIGs tables.</p>
<i>Delivered Cumulative Connection Capacity table</i>	The TO is to input the total amount of delivered connection capacity since 1 April 2013 before the start of the reporting year for each of the four categories listed in this table. The values in the grey boxes are automatically calculated.
<i>Four-period ahead Cumulative Connection Capacity table</i>	The TO is to input in the current reporting year its four period ahead forecast of cumulative connection capacity since 1 April 2013 for each of the four categories listed in this table. For the avoidance of doubt, in each reporting year the TO should input a value for each generation connection category into the column associate with that reporting year. For example, in 2013, SHE Transmission will only complete the column headed 2013 for 2017.

Specific definitions for this worksheet

None	
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#### 6.10 SPTL Local generation connections volume driver – sole use

Purpose and use by Ofgem	The purpose of this table is to collect information on delivered sole use generation connection works that are subject to SPTL's generation connection volume driver specified in Special Condition 6F of SPTL's Transmission's Electricity Transmission Licence. This information will allow us to adjust the baseline to reflect the actual connection capacity delivered.
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Guidance on completing this worksheet	
<i>Completed Connections table</i>	<p>Scheme name: The scheme name and references should be detailed in such a way that will allow us to cross reference information in table 4.2.</p> <p>Scheme reference: SPTL should use the same unique scheme reference within the output tables and the cost information tables (ie table 4.2).</p> <p>Year of delivery: The year of delivery should be the year that the scheme has been commissioned.</p> <p>Generation Connections: The TO should input into the Completed Connections table only data for generation connections capacity it has delivered in the reporting year. The TO should input the delivered connection capacity associated with sole use (MW) infrastructure works</p>
<i>Delivered Cumulative Connection Capacity table</i>	The TO should input the total amount of delivered connection capacity since 1 April 2013 before the start of the reporting year for sole use connections in this table. The values in the grey boxes are automatically calculated.

Specific definitions for this worksheet

None	
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## 6.10 SPTL Local generation connections volume driver – shared use

Purpose and use by Ofgem	The purpose of this table is to collect information on delivered shared use generation connection works (collector schemes) that are subject to SPTL's generation connection volume driver specified in Special Condition 6F of SPTL's Transmission's Electricity Transmission Licence. This information will allow us to adjust your baseline to reflect the actual connection capacity delivered.
Guidance on completing this worksheet	
<i>Completed Connections table</i>	Scheme name: The scheme name and references should be detailed in such a way that will allow us to cross reference information in table 4.2.

<p><i>Delivered Cumulative Connection Capacity table</i></p>	<p>Scheme reference: SPTL should use the same unique scheme reference within the output tables and the cost information tables (ie table 4.2).</p> <p>Year of delivery: The year of delivery should be the year that the scheme has been commissioned.</p> <p>Installed Asset Rating: The TO should input data for shared use connections capacity it has delivered in the reporting year. The TO should input the delivered connection capacity associated with shared use (MVA) infrastructure works into column E. The TO should complete the table with relevant scheme information by inputting data on the number of new collector substations, lengths of associated overhead line and volumes of platform civil works.</p> <p>The TO is to input the total amount of delivered connection capacity from shared used connections since 1 April 2013 before the start of the reporting year in this table. The values in the grey boxes are automatically calculated.</p>
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Specific definitions for this worksheet

None	
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### 6.11 NGET wider works volume driver

Purpose and use by Ofgem	The purpose of this table is to collect information required to operate the Wider Works volume driver set out in Special Condition 6J of NGET's Electricity Transmission Licence.
Guidance on completing this worksheet	<p><del>For each year of the price control</del> NGET should input data into the <u>second</u> table for <u>schemes/projects completed to date in that year</u> that were also determined by NGET through the application of its Network Development Policy (NDP) process <u>and expected to be completed in the remaining RII0-ET1 period and beyond (Columns B, C, D). Column E will capture data on the completion date of the project.</u> In the sixth year (2019) of the price control NGET should provide, in addition, forecasts for the Wider Works Outputs it will deliver in the first two years of the next price control period, as determined through its NDP. For the avoidance of doubt, data on Strategic Wider Works Outputs or Baseline Wider Works Outputs specified in Special Condition 6I of NGET's Transmission Licence should not be included in this table except for the following projects: B6 series and shunt compensation, Harker-Hutton-Quernmore reconductoring and <u>Pen</u>wortham Quad Boosters.</p>

	<p><u>NGET should add an additional lines in the table as necessary to capture all relevant projects.</u></p> <p><del>Lead Identifier: NGET should use the same unique scheme name within the output tables and the cost information tables (ie table 4.2).</del></p> <p>NGET should provide unit cost data for Boundary B14e and EC5 only (<u>columns G and H</u>). This unit cost should be provided in 2009/10 prices, in line with RIIIO-T1 Final Proposals. NGET should explain the methodology used to calculate these unit cost allowances as part of the commentary supporting the RIGs tables.</p> <p>Transfer capability increase (MW, <u>column D</u>): For each <u>scheme project</u> NGET should set out the increase in boundary transfer capability provided by the reinforcement on each boundary affected. The change in capability for each boundary reported by the licensee should be calculated according to the prevailing security standards and verified according to the licensee's methodology set out in its NDP.</p> <p><del>Total increase in boundary transfer capability after 1 April 2013: For each scheme NGET should set out the total amount of capability that has been added to the boundary, inclusive of the scheme from the start of the price control period. This information will allow us to determine when baseline capability has been delivered and a new unit cost is triggered for additional capability delivered.</del></p> <p>NGET should provide the results in its commentary for delivered WW Outputs from applying the verification methodology set out in its Network Development Policy.</p> <p><u>In Business Plan (Column F): NGET must indicate whether the project was included as part of the March 2012 Business Plan submission or not (Y/N).</u></p> <p><u>The information provided in the second table will auto-populate the first table.</u></p> <p><u>NGET should set out the total amount of capability that has been added to the boundary (column K) from the start of the price control period. This information will allow us to determine when baseline capability has been delivered and a new unit cost is triggered for additional capability delivered.</u></p>
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	<p><u>Expenditure under TPWW</u></p> <p><u>Lead Identifier: NGET should use the same unique scheme name within the output tables and the cost information tables (ie table 4.2).</u></p> <p>TPWW is defined in the license condition as: Allowed expenditure efficiently incurred by the licensee to progress an IWW output determined by the licensee in accordance with its network development policy (part B of special condition 6J) which is then not required in the original timescales in an application of the policy by the licensee in relevant year t-2 and cannot be used to subsequently contribute to the other outputs delivered by the licensee.</p> <p>This table will contain the costs on TPWW per lead scheme. TPWW subtotal should be automatically pulled out of 6.11 and reflected as one line in table 4.2. The IWW subtotal in 4.2 should then be readjusted for this change (minus). IWW cost and the subtotal TPWW are both shown on table 4.1 so that 4.1 shows a true account of all expenditure.</p> <p>Expenditure classified as TPWW should be shown in the current year price base.</p> <p>The narrative should explain why the expenditure should be treated as TPWW and include details of; when was the project spend started, when was the project delayed what has the money been spent on, and, if expenditure is on assets, justification for what asset and why the asset claimed for cannot be used for asset replacement or other benefits</p> <p>NB. We are looking at the requirement of a separate process for NGET to claim monies under TPWW.</p>
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Specific definitions for this worksheet

None	
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## 6.12 NGET planning requirements

Purpose and use by Ofgem	The purpose of this table is to collect scheme output information for DNO schemes and undergrounding provisions that are required as part of the planning consent process for delivering Wider Works Outputs only. For the avoidance of doubt, data on undergrounding works for local generation or
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	<p>local demand connection schemes should not be included in this table but instead specified in tables 6.13 and 6.14.</p>
Guidance on completing this worksheet	<p><i>Undergrounding of cables table</i></p> <p>This table will contain data for cable outputs (actual and forecast) in each reporting year that are the result of planning consent requirements. It should not include cables that are subject to any other volume driver such as local generation or demand.</p> <p>Data on all forecast and actual cable outputs need to be retained for all reporting years within RIIO-T1 to operate the volume driver set out in Special Condition 6K of NGET's Electricity Transmission Licence (because the formula derives allowed expenditure for all years for each year it operates).</p> <p>Lead Identifier: NGET should use the same unique scheme name within the output tables and the cost information tables (ie table 4.2).</p> <p>Forecast year: This is used to determine the profile of expenditure that NGET will receive before the output is delivered.</p> <p>Actual year: NGET should only fill this in when the scheme has been completed during the reporting year.</p> <p>NGET should add an additional line in the table for any scheme which delivers two or more discrete cables that fall under the same category (cell) (e.g. 2 discrete cables under 3km in route length under <math>1 \times &lt; 2500 \text{mm}^2</math>). The cable volume should be input in circuit km to the nearest 0.1 circuit km.</p> <p>NGET should identify in its commentary any differences between NGET's forecast of outputs and what was actually delivered.</p> <p><i>DNO Mitigation table</i></p> <p>This table will contain data for DNO mitigation outputs (actual and forecast) in each reporting year. Data on all forecast and actual DNO outputs need to be retained for all reporting years within RIIO-T1 to operate the volume driver set out in Special Condition 6K of NGET's Electricity Transmission Licence.</p>

	<p>Lead Identifier: NGET should use the same unique scheme name within the output tables and the cost information tables (ie table 4.2).</p> <p>Forecast year: This is used to determine any expenditure that NGET will receive before the output is delivered.</p> <p>Actual year: NGET should only fill this in when the scheme has been completed during the reporting year.</p> <p>Undergrounding: NGET should input the number of circuit km of overhead lines that have been undergrounded for each scheme, to the nearest 0.1 circuit km.</p> <p>OHL s/c: NGET should input the number of new circuit km of single circuit overhead lines constructed for each scheme, to the nearest circuit km.</p> <p>OHL d/c: NGET should input the number of new circuit km of double circuit overhead lines constructed for each scheme, to the nearest circuit km.</p> <p>Tower dismantling: NGET should input the number of Towers dismantled for each scheme.</p> <p>Bays: NGET should input the number of new substation bays that formed part of each scheme.</p> <p>Triggers that would increase the DNO mitigation costs would be any planning consent that is obtained that requires NGET to make changes to a local distribution network.</p>
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#### Specific definitions for this worksheet

None	
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### 6.13 NGET local generation volume driver

Purpose and use by Ofgem	The purpose of this table is to collect information on the actual outputs and expenditure associated with the local generation (shared use) volume driver set out in Special Condition 6F of NGET's Electricity Transmission Licence. This information will allow us to adjust the licensee's baseline to reflect the actual outputs delivered.
Guidance on completing this worksheet	A value for total generation entry capacity in 2012 should be provided in the table at the top of the sheet. The value should

	<p>be equal to the sum of the maximum entry capacity rights held by held by individual generators during 2012.</p> <p>A value for generation entry capacity for the Reporting Year should also be provided. The value should be calculated as the sum of the maximum entry capacity rights held by all individual generators during the period from 1 April 2013 up to and including Relevant Year t-2. A formula in the bottom grey row will automatically calculate a value for the licence term, AGCO.</p> <p>Information should be provided in the second table to give a breakdown of the AGCO value. This should detail the generation connections that have been completed during the Reporting Year. In the sixth year (2019), NGET should also provide forecasts for the first two years (2022 &amp; 2023) in RIIO-T2.</p> <p>NGET should highlight in the commentary where some of the generation and interconnector connections related to the scheme are delivered after the work (and expenditure) for the scheme has been completed. NGET should provide information on the relevant generation and interconnector capacity for the Reporting Year that the project started to pay for capacity.</p> <p>For the avoidance of doubt, where a directly connected generator, embedded generator in RD zone 2 or 22 or interconnector has an increase in system access capacity compared to the prior year, this should be included in the table listing even when there is no associated expenditure or expenditure completed in a prior reporting year.</p> <p><u>Information should be provided in the third table to NGET</u> <del>should</del> report the number of circuit kilometres of overhead lines delivered as part of a generation connection scheme. This should be reported when all the work to deliver generation connections have been completed and some of the generation connections in relation to this work have been connected during the reporting year.</p> <p><u>Information should be provided in the fourth table to NGET</u> <del>should</del> outline all discrete underground cable lengths associated with a scheme delivering a generation connection. NGET should add an additional line in the table for any scheme which delivers two or more discrete cables that fall under the same category (cell) (e.g. 2 discrete cables under 3 route km in length under 1x&lt;2500mm<sup>2</sup>). This should be reported when the work to deliver the relevant generation or interconnector capacity have been completed and some of the</p>
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	<p>generation or interconnector capacity in relation to this work have been provided during the reporting year.</p> <p><del>Lead Identifier: NGET should use the same unique scheme name within the output tables and the cost information tables (ie table 4.2).</del></p> <p>NGET does not always finalise closure of terminated schemes in the same timescales as customer billing, which is time limited and may be calculated on a generic (rather than cost incurred) basis, both of which are defined in the customer-facing Connection and Use of System Code (CUSC). This means that the reported scheme costs often occur in a period later than the income disclosure. TOs are required to provide an explanation in their narrative of the methodology, data sources, and assumptions used to complete this table.</p> <p>RD Zone: NGET should outline which RD zone the <a href="#">scheme project</a> is associated with as per the zones set out in appendix 1 to Special Condition 6F.</p> <p>Embedded Gen RD Zone (Y/N): NGET should indicate whether the scheme was associated with embedded generation for either RD zone North East (2) &amp; Mid-Wales (22).</p> <p><a href="#">In Business Plan (Y/N): NGET must indicate whether the project was included as part of the March 2012 Business Plan submission or not.</a></p>
<i>User terminated generation connection works &amp; TEC reduction - total expenditure table and termination receipts table</i>	<p>Lead Identifier: NGET should use the same unique scheme name within the output tables and the cost information tables</p> <p>NGET should report in the total expenditure table the amount of expenditure it has incurred on Generation Connection works for a specific scheme where the user has terminated the relevant bilateral agreements prior to commencing use of the Generation Connection.</p> <p>NGET should report the amount of termination receipts received in the form of revenues or capital contributions, for the Generation Connection. Expenditure associated with TEC reductions should also be reported.</p> <p>Expenditure and receipts should be provided in the current year cost basis.</p>

Specific definitions for this worksheet

Generation connections	As defined in the licensee's Electricity Transmission Licence.
User terminated generation connections works total expenditure	See definition in the licensee's Electricity Transmission Licence for TPG <sub>n</sub> .
User terminated generation connections works expenditure receipts	See definition in the licensee's Electricity Transmission Licence for TPRG <sub>n</sub> .

#### 6.14 NGET local demand volume driver

Purpose and use by Ofgem	The purpose of this table is to collect information on the actual outputs and expenditure associated with the local demand volume driver set out in Special Condition 6L of NGET's Electricity Transmission Licence. This information will allow us to adjust the licensee's baseline to reflect the actual outputs delivered.
Guidance on completing this worksheet	<p>Information should be provided for demand related outputs that have been completed during the reported year apart from in the sixth year (2019), NGET should also provide forecasts for the first two years (2022 &amp; 2023) in RIIO-T2.</p> <p><del>Lead Identifier: NGET should use the same unique scheme name within the output tables and the cost information tables (ie table 4.2).</del></p> <p><a href="#">(table 1)</a> SGTs: NGET should state the number of new SGT's associated with a demand-related scheme that have been completed during the reporting year.</p> <p><a href="#">(table 2)</a> Overhead Lines: NGET should outline the number of circuit kilometres of overhead lines delivered as part of the scheme. This should only be reported when all the work to deliver the demand connection has been completed and the SGT is available for load during the reporting year.</p> <p><a href="#">(table 3)</a> Undergrounding: NGET should report all discrete cable lengths associated with the scheme. NGET should add an additional line in the table for any scheme which delivers two or more discrete cables that fall under the same category (cell) (e.g. 2 discrete cables under 3 route km in length under 1x&lt;2500mm<sup>2</sup>). This should be reported when all the work to deliver demand-related connections has been completed and some of the demand-related connections in relation to this work have been available for load during the reporting year.</p>

	<a href="#">In Business Plan (Y/N): NGET must indicate whether the project was included as part of the March 2012 Business Plan submission or not.</a>
<i>User terminated demand works - total expenditure table and termination receipts table</i>	<p>Lead Identifier: NGET should use the same unique scheme name within the output tables and the cost information tables</p> <p>NGET should report in the total expenditure table the expenditure it has incurred on demand works for a specific scheme where the user has terminated the relevant bilateral agreements prior to commencing use of the demand connection.</p> <p>NGET should report the amount of termination receipts received in the form of revenues or capital contributions, for demand works.</p> <p>Expenditure and receipts should be provided on a 2009/10 cost basis.</p>

Specific definitions for this worksheet

User terminated demand works total expenditure	See definition in the licensee's Electricity Transmission Licence for TPD <sub>n</sub> .
User terminated demand works expenditure receipts	See definition in the licensee's Electricity Transmission Licence for TPRD <sub>n</sub> .

### 6.15.1 Network Output Measures (NOMS) Asset Health

Purpose and use by Ofgem	The purpose of this table is to collect information on current asset health to assess performance against business plans and reported expenditure.
Guidance on completing this worksheet	<p>Input information as indicated by the yellow shaded boxes on the table.</p> <p>The split between Asset health categories 4a and 4b only applies to NGET. The Scottish TOs should populate all assets with an Asset Health of 4 under AH4 and leave AH4a &amp; b blank.</p> <p>Each TO should submit their Network Output Measure Methodology, which should meet the conditions set out under Special Licence Condition 2L. The TO should specify whether the methodology has been modified during the reporting year. Where the output measure has been updated we would expect the TO to fill in two tables 6.15.1, one table in accordance with old methodology and one in accordance with</p>

	<p>the new methodology. The TO should also indicate what impact it would have on its NOM targets.</p> <p>Table 6.15.1 is split into two sections:</p> <ol style="list-style-type: none"> <li>1. <u>With NLR Investment Only</u> Data reported in this section should reflect the cumulative impact of all non-load related investment but exclude the cumulative impact of load-related investment up to the end of the Reporting Year. This will require licensees to start from the actual replacement priority of assets at the end of the Reporting Year and then add back in assets which were replaced as part of load-related schemes as though they had not been replaced.</li> <li>2. <u>Actual Network Position (Including Load Related Investment)</u> Data reported in this section should reflect actual replacement priority at the end of the Reporting Year. It should be equivalent to the NLR Investment Only data reported before the impact load related investment is added back.</li> </ol> <p>The TOs should specify whether it has carried out a re-assessment of assets health or criticality over the reporting year. If a re-assessment has taken place the TO should specify what impact it has had over the movements in the different health or criticality classes.</p>
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Specific definitions for this worksheet

None	
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## 6.15.2 NOMS Replacement Priority

Purpose and use by Ofgem	The purpose of this table is to collect information on replacement priorities to assess performance against business plans and reported expenditure.
Guidance on completing this worksheet	<p>With the exception of 'Actual Network Risk Position assumed at target setting' section this table is auto-populated.</p> <p>Actual Network Risk Position assumed at target setting</p> <ul style="list-style-type: none"> <li>• TOs are required to report assumed end of period actual network risk as was assumed at the time its Network Replacement Output Targets were set. The replacement priorities reported here should reflect the</li> </ul>



	<p>assumed cumulative impact of all assumed non-load and load related investment to the end of RIIOT1.</p> <p>Input information as indicated by the yellow shaded boxes on the table.</p>
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Specific definitions for this worksheet

None	
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#### 6.16.1 Criticality substations

Purpose and use by Ofgem	<p>The purpose of this table is to collect criticality information on substation assets as part of network output measures.</p> <p>Please note that as this table is security-sensitive it should be submitted separately from the main pack.</p>
Guidance on completing this worksheet	Input information as indicated by the yellow shaded boxes on the table.

#### 6.16.2 Criticality circuits

Purpose and use by Ofgem	<p>The purpose of this table is to collect criticality information on circuits as part of network output measures.</p> <p>Please note that as this table is security-sensitive it should be submitted separately from the main pack.</p>
Guidance on completing this worksheet	Input information as indicated by the yellow shaded boxes on the table.

#### 6.16.3 Criticality SPTL

Purpose and use by Ofgem	<p>The purpose of this table is to collect system criticality information as part of network output measures.</p> <p>Please note that as this table is security-sensitive it should be submitted separately from the main pack.</p>
Guidance on completing this worksheet	Input information as indicated by the yellow shaded boxes on the table.

## 6.17 Flood mitigation

Purpose and use by Ofgem	<p>The purpose of this table is to summarise work being undertaken to mitigate the risk of substation flooding. TOs must input the number of assets in each risk category which have had, or are forecast to have, flood mitigation work carried out. We will share this information with DECC and anticipate that it will align with data reported separately by the companies to DECC.</p>
Guidance on completing this worksheet	<p>The works specified in this table should align with the schemes captured under 'Weather Related Resilience' in table 4.3, this means that the TO's are only required to report on sites where work has been undertaken in the reporting year.</p> <p>TOs are required to report both the total number of customers directly connected to a substation and the number of critical customers directly connected.</p> <p>Critical customers are those customers that provide a vital service to the community, where the loss of supply to these sites is likely to lead to mass evacuation, and includes major water, sewage and land drainage sites (Ref. Electricity Supply Emergency Code).</p> <p>The probability of flooding, as identified as part of the ENA Substation Resilience to Flooding Task Group, is to be measured as a "return period" in years to the nearest whole number, ie the longest period in years that will pass without the site flooding. For example, if there is a risk of a substation flooding once in 20 years, this must be categorised as a flood risk of 1/20 (to be measured to the nearest whole number).</p> <p>Where this level of analysis is not available and/or the risk has been identified from the Environment Agency/Scottish Environment Protection Agency indicative flood maps, enter 1/100 for the 1/100 years contour, 1/200 for the 1/200 years contour or 1/1000 for the 1/1000 years contour. (These categories must be mutually exclusive, e.g. substations at 1/100 years risk must not also be categorised as 1/200 years or 1/1000 years risk – put the substation in the highest level of risk faced).</p> <p>The following risk of flooding bands should be used: 1/ 100, 1/200 &amp; 1/1000, where a risk of 1/100 or less must be categorised as 1/100, 1/101 to 1/200 as 1/200 and 1/201 to 1/1000 as 1/1000.</p>

# 9. Instructions for completing the Revenue Reporting -Pack

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## Chapter Summary

**The revenue return pack is provided in a separate workbook.**

The purpose of this chapter is to provide instructions and guidance for the completion of the Revenue Reporting Pack.

The Revenue Reporting Pack allows Ofgem to effectively monitor licensees' compliance with the licence conditions related to the calculation of Allowed Revenue [Special Condition 3A (Restriction of Transmission Network Revenue) and Special Condition 4A (Restriction of System Operator Internal Revenue)]. It also ensures the licensees submit data in a consistent format.

For the avoidance of doubt the RIGs are subordinate to those license conditions that may apply to the determination of allowed revenues or which contain associated reporting obligations. It will not change, alter or amend any definition or obligation contained within the electricity transmission licence and, in the event of any inconsistency between the licence conditions and these guidance, the licence conditions will take precedence.

## Introduction

The purpose of Special Condition (SC) 3A is as follows:

- (a) to establish the charging restrictions that determine the level of Maximum Revenue that may be recovered by the licensee through Transmission Network Charges; and
- (b) to set out the obligations of the licensee in respect of those charging restrictions.

The purpose of SC4A is as follows:

- (a) to establish the charging restrictions that determine the level of allowed revenue that may be recovered by the licensee, associated with its internal costs in relation to balancing services activity; and
- (b) to set out the obligations of the licensee in respect of those charging restrictions.

The Revenue Reporting Pack contains various worksheets used to calculate the Maximum Revenue that the TO or SO can claim.

Inputs required by the licensees are all as defined in the appropriate licence conditions and are not repeated here.

## Overview of worksheets

The worksheets that require licensee inputs are:

### Version Log Sheet

The log sheet is for information only. It is used to document any version changes and significant changes made to the Revenue Reporting Pack by OFGEM, and can be used by the licensee to document any changes made, after the agreed Revenue Reporting Pack template has been received by the licensee.

### Licence Condition Values

This worksheet contains the key licence parameters required to calculate allowed revenue. It is pre-filled by OFGEM using values quoted in the licence conditions. The data is derived principally from the annexes to Special Conditions 3A to 3L of the TOs special licence conditions (4A to 4L for the SO). These values are used in the formulae to derive the licence terms.

### Input Page

The light yellow cells represent the data that TOs (or SO) need to complete for each Formula year. Macroeconomic data, such as the specified interest rate and RPI, will be pre-filled by OFGEM.

### Excluded service revenues/ De minimis

This sheet details the revenue received by the licensee from excluded services or for de minimis activities.

### Reconciliation to statutory accounts

The purpose of this sheet is to reconcile the amount shown in the revenue return pack to the amount in the regulatory accounts. The revenue from the regulatory accounts is required to be input in this sheet.

### SO External Rev and SO Bal Services

The light yellow cells represent the data that NGET SO need to complete for each Formula year.

Other worksheets in the Revenue Reporting Pack do not require licensee inputs, but provide information on certain elements of allowed revenue, such as base revenue, pass through items, output incentives, innovation incentive, correction factor, TIRG, and SO internal revenue (where applicable).

# 10. Instructions for completing the RIIO-T1 Scheme-Output Referencing Workbook

## Chapter Summary

This chapter sets out the purpose of the RIIO-T1 Scheme-Output Referencing Workbook (SORW) as well as reporting requirements.

## Introduction

10.1. As was expected TOs capital plans have changed considerably from those that made up their RIIO-T1 business plans. In order to effectively monitor whether TOs capital programmes are delivering value for consumers, it is of the utmost importance that Ofgem is able to relate outputs to the cost of delivering them and to track any changes in outputs and associated costs over time.

10.2. To do this TOs are required to complete and submit the SORW that will:

1. list all outputs forecast to be delivered through the capital plans put forward by the TOs in their RIIO-T1 business plan (at the time the RIIO-T1 business plans were submitted)
2. assign a unique Output Reference to each output identified in 1 (to clarify "what" the expenditure was originally associated with the delivery of). For the avoidance of doubt, an output reference must be assigned to all capital schemes, including where it is not considered to directly contribute to the delivery of an "output" such as (but not limited to) {e.g. an additional MW of new generation or increase in boundary capability}.
3. assign a unique Ofgem Scheme Reference to each capital scheme listed in the TOs' RIIO-T1 business plans. Scheme references will be used to track the delivery of an output using the current regulatory reporting information. In other words, this will enable analysis on "how" expenditure has moved/increased/decreased/been deferred or terminated in comparison to the SORW.

10.3. Each TO will receive an individual SORW template that will contain its business plan scheme tables and assigned Ofgem Scheme References. The business plan scheme tables are commercially confidential and therefore the individual TO SORW templates are not publically available. A generic template without any business plan data has been published alongside this document.

## Guidance for completing the SORW

10.4. Each TO's SORW template is pre-populated with the scheme listing tables from its RIIO-T1 business plan. Each scheme has been assigned a new Ofgem Reference (see Appendix 1 for explanation and naming convention).

10.5. If a scheme was listed in a TO's RIIO-T1 business plan then it is required to report on that scheme in accordance with this guidance. It is also required to notify Ofgem of any schemes that have been omitted from the version of the SORW template provided to it for completion as soon as it becomes aware of the omission. Ofgem may issue a revised version of the SORW template to the TO or instruct it to make any necessary changes.

10.6. TOs are required only to populate tables O1 (Load Related Outputs) and O2 (Non-load Related Outputs) in their template workbook. Other tables are auto-populated. Both tables O1 and O2 will contain the full list of business plan schemes (load related, non-load related, other capex, flood mitigation, TIRG)

10.7. TOs are required to add a unique Output Reference for each output delivered as part of its business plan capital programme. If outputs delivered by a scheme are separable then they should be reported individually, e.g. for a OHL scheme where outputs are measured both in km of OHL and MW boundary reinforcement then the km and MW under separate mechanisms then both types of output should have unique output references. Output References should be in the format described in Appendix 1.

10.8. Table O1: TOs are required to:

- (1) add any load related outputs directly delivered by a scheme, and
- (2) indicate any outputs that a scheme is supporting the delivery of by entering the Output Reference against the scheme and selecting "Support" from the dropdown in the 'Output Delivery' column.

10.9. If a non-load related scheme is contributing to the delivery of load related outputs then these outputs should be entered on O1 against the non-load related scheme. Any non-load related outputs delivered by that scheme are entered on O2.

10.10. Table O2: TOs are required to:

- (1) add any non-load related outputs directly delivered by a scheme, and
- (2) indicate any outputs that a scheme is supporting the delivery of by entering the Output Reference against the scheme and selecting "Support" from the dropdown in the 'Output Delivery' column.

10.11. If a load related scheme is contributing to the delivery of non-load related outputs then these outputs should be entered on O1 against the non-load related scheme. Any load related outputs delivered by that scheme are entered on O1.

10.12. A new line is required for each output a scheme is directly delivering or contributing to the delivery of.

10.13. TOs are required to enter a unique Output Reference (according to the specified convention explained in Appendix 1) for each output. If multiple schemes are contributing to the delivery of a single output then the same unique Output Reference must be entered against each scheme reference.

10.14. Tables 4.2 and 4.3 have been revised to allow TOs to report Ofgem Reference and Output Reference. Any new schemes and/or new outputs should be assigned new references sequentially according to the referencing convention as illustrated in table 1 below.

**Table 1 – Referencing convention**

Reference type	Convention <sup>13</sup>	Example referencing	
		Last/highest reference no.	Next reference no. in sequence
Load Related Output	LR-xxxx	LR-0200	LR-0201
Non Load Related Output	NLR-xxxx	NLR-0300	NLR-0301
NGET Scheme	NG-xxxxx	NG-00500	NG-00501
SHE-T Scheme	SH-xxxxx	SH-00500	SH-00501
SPTL Scheme	SP-xxxxx	SP-00500	SP-00501

## Submission requirements

10.15. The deadline for submission of the SORW is 31 May ~~2017~~2018. Further updates may be requested if deemed necessary.

<sup>13</sup> Each "x" represents a single numeric digit.

# 11. Supporting Commentary

## Chapter Summary

This chapter sets out the guidance for the completion of a commentary that supports the licensees' RIGs returns

11.1. Alongside the submission of its RIGs tables, each licensee must complete the commentary template provided. The commentary should give more details on specific areas which aid Ofgem's understanding of the results from a number of perspectives. It should also give more information about the likely outturn in the future.

11.2. The supporting commentary must provide a strategic context to the overall RIIO-T1 performance expected by the network company at this point in the price control period. The commentary must therefore distil key messages of what the network company sees as important indicators of performance, provide clear strategic insights on the expected performance over the RIIO-ET1 period and any areas for improvement.

~~11.3.~~ In doing so, the narrative must will:

- Identify the main reasons and drivers of actual/forecast spend for the current reporting year, view for the entire price control period and expected outturn position at the end of the RIIO-ET1. Where it helps support the strategic narrative, additional detail can be provided on what has driven performance to date and what is expected to drive performance in future years.
- and Explain the material differences between allowances and spend between last year's information and the latest information.
- Confirm the outputs delivered and currently forecast to be delivered during the price control period, and how these levels vary from last year's information.
- Separately identify the proportion of expenditure incurred (actual and forecast) within the current submission that is associated with the delivery of outputs in RIIO-T2 with no associated allowance. Note that a further requirement is placed on NGET to identify the proportion of expenditure (actual and forecast) and forecast allowance related to the delivery of outputs in "T1+2" timescales.

11.3 A list of drivers that will inform the strategic performance explanation is set out below (more detail is set out in the narrative template).



**A: Efficiency:** Associated with projects that deliver outputs exactly as per with the original 'baseline' assumptions at a different cost (or where there have been substitutions the delivery involves like-for-like replacements<sup>14</sup>).

**B: External factors:** factors outside the control of network companies' and unforeseeable at the time of the price control. This includes factors such as weather and economic conditions.

**C: Circumstantial factors:** Associated with the delivery of outputs in line with the original 'baseline' assumptions but where the method of delivery differs in some regard (factors within the control of the network company).

**D: Provision in the price control settlement:** assumptions made within the RIIO-ET1 settlement that have varied against the actual position.

11.4 Where possible, the narrative will provide a high level summary of the eight year estimate of the totex under -/ over-spend cost drivers. Network companies can use the table below or its own graphics.

<u>Driver</u>	<u>Notes</u>	<u>Mechanism (as defined in T4.2)</u>	<u>8 year estimate of totex over- / under spend driver (£m, current reporting year prices)</u>					<u>% of totex underspend</u>
			<u>LR capex</u>	<u>NLR capex</u>	<u>Non-op capex</u>	<u>Opex</u>	<u>Totex</u>	
<u>e.g. A (Efficiency)</u>		<u>e.g. LR1, LR2</u>						
<u>e.g. C (Circumstantial factors)</u>		<u>e.g. LR 20</u>						

11.5 The appropriateness and materiality of the information provided should be set at a level that avoids the need for Ofgem to ask supplementary questions. Where visual representations of information (e.g. waterfall diagrams) may aid understanding these should be included.

<sup>14</sup> For example, a 275kV overhead line project has been substituted with another 275kV overhead line with the same replacement priority and the overall volume of overhead replacement is largely unchanged compared with the original submission.

~~11.3~~11.6 Additional appendices can be used to provide further detail on specific performance areas. Examples include a deeper explanation of any missed outputs, to provide an overview and timelines to mitigate any perceived delivery risks, or explanation of changes in data methodologies/organisation structure and the effect that this has on reporting.

~~11.4~~11.7 The template references all tables in the RRP. Licensees should ignore any tables that do not apply to them.

~~11.5~~11.8 Guidance to complete each chapter in the template is as follows:

~~11.6~~11.9 **Executive summary:** Provide a summary of the key messages from the commentary.

~~11.7~~11.10 **Chapter 1- Table by table:**

~~11.7.1~~11.10.1 *Allocation methodology* – This should be filled out by exception and note any issues regarding how the table was completed which Ofgem should be aware of. For example, was the table filled out differently to how instructed in the guidance or how previously stated it would be? What was the justification for this change and what impact did it have? Were there any allocations between cost categories required that Ofgem are not already aware of?

~~11.7.2~~11.10.2 *Summary views* – This is only included for certain tables and the information required is table specific. Provide summaries of all of the areas noted, quantifying assertions wherever possible and appropriate. Each numbered section will have a guide word limit specific to that table.

~~11.7.3~~11.10.3 *Additional commentary* – Provide any further important information related to the relevant table if necessary.

~~11.8~~11.11 **Chapter 2 – Revenue:**

~~11.8.1~~11.11.1 *NGET only* – Provide commentary on revenue. It is suggested that this is provided under the following subheadings: maximum allowed revenue, collected income, collection on behalf of third parties, incentives, BSUoS, and future revenue.

~~11.8.2~~11.11.2 *SHE transmission and SP transmission only* – Provide brief commentary on the main reason(s) for significant changes in value compared to last year in each of the Allowed Revenue components (base revenue, pass-through costs, output incentives, innovation incentive, transmission investment for renewable generation, and the correction factor).

~~11.9~~11.12 **Chapter 3 – Forecasting:** Some forecasting information is likely to have already been provided in the 'summary view' and 'additional commentary' within Chapter 1. This chapter should focus on the TO's organisational approach to forecasting on issues that are relevant to multiple tables. It should also note if and how forecasting is being improved.

~~11.10~~11.13 **Appendices:** Any information the licensee considers important that does not fall under one of the preceding chapters should be included in the appendices.

~~11.11~~11.14 Information provided by the licensee in Chapter 3 and the appendices should come under sub-headings. At the end of each subsection the licensee should reference which table(s) the information is most relevant to.

# Appendices

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# Appendix 1 – Glossary and Definitions

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1.1. The purpose of this appendix is to provide definition of the terms included in these instructions and in the associated worksheets (with the exception of Totex which is defined in Appendix 2).

1.2. Most definitions apply to specific tables and therefore are included as part of the table instructions for completion, this appendix provides definitions that cover more than one table and more general definitions. Any word or expressions used in the Utilities Act 2000, Electricity Act 1989, the Energy Act 2004, or standard or special licence conditions of the electricity transmission licence shall have the same meaning when used in these rules, similarly for standard accounting terms, IFRS/IAS and/or UK GAAP and Companies Act 2006 definitions should be applied.

1.3. In the circumstance where no definition is given the licensee should include in explanatory notes details of the treatment it has applied and inform The Authority of the omission. Where a definition set out in this appendix is not the same as that applied by a licensee for other purposes, the definition set out herein must be used in the preparation of the RIGs templates.

1.4. Except where the context otherwise requires, any reference in this appendix or in the RIGs to a numbered standard or special condition (with or without a letter) or Schedule is a reference to the standard or special condition (with or without a letter) or Schedule bearing that number in the electricity transmission licence, and any reference to a numbered paragraph (with or without a letter) within such a standard or special condition is a reference to the paragraph bearing that number in the standard or special condition or Schedule of the electricity transmission licence in which the reference occurs, and reference to a Section is a reference to that Section in the standard or special conditions of the electricity transmission licence .

1.5. Where terms are defined within the licence conditions (standard or special) or other documents approved by the Authority (such as the NOMs Methodology Statement), they are not replicated here and the user should refer to the licence condition or such other document for these definitions.

## **A**

### **Accounting Costs**

Costs as per statutory or regulatory accounts before any adjustments for non controllable costs and atypical, provisions etc.

### **Accruals and Prepayments**

For the purpose of determining what amounts should be excluded as non cash items. These are only those items that are not incurred as part of the ordinary level of business activities and would be atypical. Normal business activities include, normal trade accruals and prepayments and holiday pay provisions.

### **Affiliate IDNO**

An independent distribution network operator owned by the group and operating within the group's own electricity distribution network area

### Annual iteration Process

The annual iteration process is the process of annually updating the variable (blue box) values in the price control financial model and running the model in order to provide updated MOD and SOMOD values.

## C

### Cash Controllable Costs

The normal ongoing cash operating costs, excluding non-recurring / one off costs that are controllable by the transmission company.

### Change in market value of investments

The change in the market value of a scheme's investments over a period of time where the approach used to assess the market value of an asset is the same as the approach used for the purposes of a triennial valuation

### Closely Associated Indirect Costs

Costs that support the operational activities. Closely associated indirect costs includes network policy (including research and development), network design and engineering, engineering management and clerical, wayleaves administration, control centre, system mapping and health and safety functions.

### Customer / Capital contributions

Financial contribution received from / repaid to a customer in respect of the provision of a new connection to the transmission network.

## D

### De Minimis

The activity of conducting de minimis business, ie non-transmission activities, which are subject to the limitation provided for in standard licence condition B6 Paragraph 4

### Direct Costs

Opex relates to the activities required to maintain and operate the transmission networks. Direct opex can be divided into planned work largely associated with maintenance tasks that are driven by asset management policies and technical standards, and unplanned work driven largely by faults on the network.

### Directly Attributable Costs (Network Innovation)

The costs of maintain and managing Foreground Intellectual Property Rights (IPR)

## E

### Excluded services

Has the meaning given in the relevant special licence condition

## F

### Fault Repairs

Repair of system assets which have unexpectedly failed to operate as expected. For the purpose of T3.3, this can also include costs incurred to mitigate the impact of a fault through the use of a third party retainer or stand-by costs.

## **G**

### **GDN**

Gas distribution network

## **I**

### **Investment income**

The income received on scheme assets, net of investment management fees where it is deducted from investment income

### **Investment management expenses**

Any scheme investment management expenses which are charged separately or have not been implicitly allowed for in the "Change in market value of investments" item or as a deduction from the "Investment income" item

## **L**

### **Lead assets**

Lead assets are the main assets comprising the transmission network that are required for the safe and reliable transfer of electricity from one point on the network to another. Any assets of operating voltage 132kV or greater in the following seven categories are lead assets: circuit breakers, transformers, reactors, underground cables, overhead line (OHL) conductors, OHL fittings, OHL towers.

Reference to lead type assets means assets in the categories listed above of any operating voltage.

### **Low risk assets**

Assets where the focus is on protecting capital and gaining a modest return (e.g. gilts)

## **M**

### **MOD Term [TO and SOMOD for SO]**

The term of that name included in the formula for Base Transmission Revenue (System Operator Internal Revenue) set out in Special Condition 3A (or Special Condition 4A for SO) of the Electricity Transmission licence. It represents the incremental change to base revenue for the Relevant Year concerned, ascertained in accordance with the methodologies set out in this Handbook. The value of the MOD term is calculated through the annual iteration of the ET1 Price Control Financial Model (see Chapter 1) and is specified in a direction given by the Authority by 30 November in each Relevant Year.

## **N**

### **Network rates**

Prescribed rates levied on the transmission network assets as determined and set by the Valuation Office Agency (VOA) in England and Wales Electricity Supply Industry (Rateable Values) (England) Order 2005 and Scottish Assessors Association (SAA) in Scotland.

### **NIA Allowable Expenditure**

NIA Allowable Expenditure is the total expenditure that can be recovered from the NIA. It includes Bid Preparation Costs and Eligible NIA Expenditure.

#### NIA Direct Benefits

Direct Benefits are the benefits of a Project accruing to the Network Licensee during the Project implementation and comprises any expenditure included within the Network Licensees Business Plan for RIIO-T1/GD1 that will be saved as a result of undertaking the Project.

#### NIA Eligible Expenditure

Means the amount of expenditure spent or accrued by the Network Licensee in respect of Eligible NIA Projects and forms part of Allowable NIA Expenditure as set out in Part B of the NIA Licence Condition.

#### NIA Unrecoverable Project Expenditure

Means expenditure on a NIA Project the Authority has determined does not satisfy the requirements of the NIA governance document.

#### NIC Eligible Bid Preparation Costs

Means the amount of expenditure spent or accrued by the Network Licensee when preparing submissions for the Network Innovation Competition that appear to have been spent in such a way that satisfies the requirements of the NIA governance document as are necessary to enable the projects to be funded under the provisions of this condition.

#### NIC funding

Funding received from customers via the NTS Operator for Eligible NIC projects. The NIC funding amount will be directed by the Authority in accordance with the NIC governance document.

#### NICF

The amount directed by the Authority to be recovered by National Grid Gas on behalf of all gas distribution and transmission licensees.

#### Non-lead assets

Are any assets comprising a transmission network that do not fit into the 'lead asset' definition plus assets built to maintain or improve flood or weather related resilience. Non-lead assets include lead type assets below 132kV operating voltage.

#### Non – Transmission

Costs attributable to activities other than transmission e.g. Non regulated, Gas Distribution

#### Non Controllable Costs

Costs not deemed to be controllable by the transmission business, transmission licence fees, and network rates

#### O

#### Ofgem Scheme Reference

A unique reference number assigned to each TO capital scheme. Schemes that were in TO's RIIO-T1 business plan will have Ofgem Scheme Reference assigned by Ofgem. TOs are required to assign an Ofgem Scheme Reference to any additional schemes reported on table 4.2 or 4.3 in accordance with the following convention:

- Ofgem Scheme reference shall be in the format TOID-SchemeID.



- TOID is a two letter reference to identify the licensee (NG, SH, SP representing NGET, SHE Transmission, and SP Transmission Respectively).
- SchemeID is a five digit number assigned sequentially (starting at 00001) to uniquely identify each of the licensee's capital schemes.
- Example: SP-00212 identifies SP Transmission's 212<sup>th</sup> referenced scheme.

### Outputs

Primary and secondary outputs were agreed at the time of setting the RIIO-T1 price control, including safety, reliability, availability, environment, customer satisfaction, connections and wider works.

However, reference to outputs for the purpose of RIGs reporting does not always solely mean those as defined in the licence or final proposals. For cost categories where licensees have allowances but no associated outputs explicitly defined within either their licence or final proposals, proxy outputs may be defined within the RIGs to enable Ofgem to assess efficiency and delivery of value to consumers.

### Output Reference

A unique reference number assigned to each output delivered or forecast to be delivered under a TO's capital scheme. All outputs forecast to be delivered under any of the scenarios covered by the TOs RIIO-T1 must have an Output Reference assigned by the licensee as part of its RIIO-T1 Scheme-Output Referencing Workbook submission. Licensees are required to assign an Output Reference to any additional outputs reported on table 4.2 or 4.3. Output References must be assigned in accordance with the following convention:

- Ofgem Scheme reference shall be in the format TypeID-SequenceID.
- TypeID is a two or letter reference to identify the type of output. It will be either 'LR' representing a load-related output or 'NLR' representing a non-load related output.
- SequenceID is a four digit number assigned sequentially (starting at 0001) to uniquely identify each output delivered or planned for delivery through a licensee's capital programme.
- If the output delivered by a scheme or number of schemes changes then this must be assigned a new Output Reference.
- Example Output Reference: LR-0099 identifies a TOs 99th load related output referenced scheme.

## P

### Pension Deficit Payments relating to Established Deficit

Established deficit means the difference between the assets and liabilities, determined at any point in time, attributable to pensionable service up to 31 March 2012 and relating to regulated business activities under our second Pension Principle. The term applies equally if there is a subsequent surplus.

### Physical Security Capital Expenditure

This refers to capital expenditure incurred, or expected to be incurred, by the licensee for the purposes of implementing any formal recommendation or requirement of the Secretary of State to enhance the physical security of any of the sites within the licensee's Transmission System.

### Physical Security Operating Expenditure

This refers to operating expenditure incurred, or expected to be incurred, by the licensee for the purposes of implementing any formal recommendation or

requirement of the Secretary of State to enhance the physical security of any of the sites within the licensee's Transmission System.

#### [Planned Inspections and Maintenance](#)

Visual checking of the external condition of assets, including helicopter and foot patrols; and reading gauges (Inspections). Maintenance is an activity that is performed purposely and regularly in order to prevent physical assets from deteriorating or breaking down such that they continue to perform in accordance with manufacturers' recommendations.

### **R**

#### [RAV](#)

Regulatory Asset value

#### [RD Zone](#)

Revenue Driver zone

#### [Related party](#)

Is an affiliate, a joint venture of the licensee or of an affiliate or an associate of the licensee or of an affiliate or a relevant associate of the licensee.

#### [Related Party Margins](#)

The profit or loss recorded on a transaction with an affiliate being the excess or deficit on actual direct costs and indirect costs (including financing costs) fairly attributable to the transaction or the charge and the cost of providing that transaction.

#### [Retained Gas Distribution Networks](#)

The 4 Gas Distribution Networks retained by National Grid

#### [Return seeking assets](#)

Assets which may be exposed to greater risk, but where the potential return is higher than low risk assets (e.g. equities)

#### [Royalties Revenues](#)

Revenue earned from intellectual property generated through eligible NIC projects

#### [Returned Royalties Income](#)

Revenue earned from intellectual property generated through eligible NIC projects less any Directly Attributable Costs, and that is payable to customers under the NIC, as calculated in accordance with the NIC governance document.

#### [Retained NIC Royalties](#)

Total royalties earned through all NIC projects to be retained by the licensee

### **S**

#### [Salary / staff costs](#)

Includes: salaries and wages, national insurance contributions, overtime standby and other allowances, all ongoing pension costs and incremental deficit repair payments, share based schemes, and sick pay and sickness benefits.

#### [Security \(pertaining to SO\):](#)

Shall mean costs (operating and capital expenditure) for enhanced security activities as specifically directed by Department of Energy and Climate Change ("DECC") or the Centre for the Protection of National Infrastructure ("CPNI") pursuant to Special Licence Condition XXX. These cost are subject to an uncertainty mechanism.

### **T**

#### [TIRG](#)

Transmission Investment for Renewable Generation

#### [Totex](#)

see Appendix 2

#### [Transmission Licence Fee](#)

Payments by the licensee to the Authority determined in accordance with the standard condition licence A4.

#### [TII](#)

Transmission Investment Incentive

### **W**

#### [Workforce Renewal Costs \(SPTL only\)](#)

Refers to operating costs associated with the Workforce Renewal as prescribed in Special Condition 6H of SPTL's licence

# Appendix 2 – Definition of Totex

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## Introduction

1.6. The Regulatory Asset Value (RAV) is a key building block of the price control review. RAV represents the value upon which the companies earn a return in accordance with the regulatory cost of capital and receive a depreciation allowance. Additions to the RAV are calculated as a set percentage of totex. Totex is dealt with as follows:

- an agreed percentage of Totex(see below) will be funded as slow money (ie as an addition to RAV)
- the remainder will be funded as fast money (ie which is expensed and funded in the year of expenditure)

1.7. At the end of each year of a price control, as part of the Annual Iteration Process, we will publish an updated ET1 Price Control Financial Model (PCFM) which will give an indicative updated RAV for each licensee. In ascertaining these values it is important that the treatment of expenditure that licensees incur in this period is consistent with the principles and specific issues set out in the Final Proposals – that is, the same constituents of costs are included as Totex. We add all costs on a normal accruals basis. This excludes provisions, except for the actual cash utilisation thereof.

## Definition of totex

1.8. The annual net additions to RAV will be calculated as a percentage of totex. Totex consists of all the expenditure relating to a licensees regulated activities with the exception of:

- all costs relating to de minimis activities;
- all costs relating to excluded services activities (with the exception of capex relating to sole use exit connections);
- pension deficit repair payments relating to the established deficit and for the avoidance of doubt, all unfunded early retirement deficiency costs (ERDC) post 1 April 2004;
- Pension Scheme Administration and PPF levy costs;
- costs associated with specific incentive schemes (to include TIRG, Network Innovation Competition and Network Innovation costs);
- all statutory or regulatory depreciation and amortisation;
- profit margins from related parties (except where permitted as defined below);
- costs relating to rebranding a company's assets or vehicles following a name or logo change;
- fines and penalties incurred by the licensee (including all tax penalties, fines and interest) except if, exceptionally Traffic Management Act costs can be shown to be efficient;
- any costs relating to the SO for external purposes (ie balancing services activity);
- costs relating to preparatory costs that NGET SO will incur to establish systems and processes in readiness for taking on the EMR delivery functions if it is appointed to this role;
- compensation payments made in relation to standards of performance;

- bad debt costs and receipts (subject to an ex post adjustment to allowed revenues);
- any cost reporting which is not on a normal accruals basis as referred to in paragraph 1.2 above (for the avoidance of doubt, accruals to recognise the present value obligation to the defined benefit pension scheme (in accordance with International Accounting Standard 19) are excluded from totex);
- costs in relation to pass-through items, including business rates (except for business rates on non-operational buildings); and
- interest, other financing and tax costs<sup>15</sup> (except for business rates on non-operational buildings and stamp duty land tax).

1.9. It should also be noted that:

- any change in the Totex amount for the licensee under the Totex Incentive Mechanism (TIM) is included as an adjustment to fast/ slow money;
- pension deficit repair payments relating to any incremental deficit (ie not part of the established deficit) are considered to be part of the licensee's labour costs and as such are part of Totex; and
- customer contributions (which mainly relate to connection works) and other proceeds received (including from legal and insurance claims) that relate to the transmission business are treated as an offset to Totex expenditure, unless specifically subject to different treatment under the Cost and Revenue reporting RIGs.

1.10. For avoidance of doubt, in each case normal ongoing pension service costs will follow employment costs in each activity to RAV.

1.11. Costs added to RAV are all intended to refer to costs incurred by the licensee or a related party of the licensee undertaking regulated business activities. Where those costs are recharged to the licensee, they should not include any internal profit margins of the licensee or related party, except where permitted. The treatment of related party margins is set out in paragraphs [1.23] to [1.28] below.

1.12. For the avoidance of doubt costs that are eligible for a reopener mechanism will follow the Totex treatment as set out above at the time they are incurred.

## **Deductions from RAV**

1.13. The following items are not included in the costs added to the RAV but are netted off additions to the relevant cost categories in carrying out the RAV roll forward calculation:

- cash proceeds of sale (or market value of intra-group transfer) of operational assets – by netting off the proceeds from the calculated additions to RAV
- cash proceeds of sale of assets as scrap – by netting off the proceeds from the calculated additions to RAV

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<sup>15</sup> Tax costs include corporation tax, capital gains tax, recoverable valued added tax and network rates

1.14. These deductions from RAV will be made (on an NPV neutral basis) at the end of the RIIIO-T1 Price Control as part of the RIIIO-T2 Price Control process.

## **Other RAV requirements**

### **Efficient costs**

1.15. Ofgem reserves the option to disallow costs from the RAV for any of the Totex expenditure if they do not relate to the regulated business or are demonstrably inefficient or wasteful. We will specifically review all costs in relation to restructuring of a company's business or operations in relation to corporate transactions, including the associated redundancy costs to satisfy ourselves that these costs are efficient and will deliver future savings for the benefit of the consumer.

### **Restated costs**

1.16. For all costs, in whatever category, activity or exclusion, where a company makes any restatement of costs, we will apply these in to the year in which they were originally incurred rather than in the year of the restatement.

### **Related party costs**

1.17. Related party costs are only included within Totex to the extent they represent the cost of services required by the licensee's business. Costs for services recharged to the licensee by a related party<sup>16</sup> will only be admissible if the licensee would otherwise have needed to carry out the service itself or procure it from a third party. We expect these services and associated costs to be itemised and justified. Such costs are only included to the extent that they satisfy the criteria regarding the prohibition on cross-subsidy in the relevant standard or standard special licence condition unless licensees already hold derogations.

1.18. All companies and related parties charging the licensee should be able to demonstrate they have a robust and transparent framework governing the attribution, allocation and inter-business recharging of revenues, expenses, assets and liabilities. There should be documented procedures to demonstrate compliance with EU Procurement directives and implementing national legislation where these apply.

1.19. We expect the network company to be able to justify the charge by reference to external benchmarking, or by reference to market-related testing, or tendering. We expect related parties to be able to support their charges by either service level agreements or contracts; and that such contracts would be finalised on a timely basis and not remain in draft for an unreasonable period<sup>17</sup>.

1.20. The attribution of costs relating to shared services must be on a demonstrably objective basis, not unduly benefiting the regulated company or any other company or organisation and be based on the levels of service or activity consumed by each

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<sup>16</sup> A related party is a term used to cover both Affiliate and Related Undertakings as defined in Standard Licence Condition 1 for electricity transmission and standard special licence condition for gas transportation

<sup>17</sup> Whilst not defined, we expect licensees to demonstrate to our satisfaction why a period in excess of 6 months was reasonable

entity. We expect licensees to document the basis on which they approve these at board level and provide evidence of this together with details of how the continuing assessment and challenge, annually takes place.

1.21. The basis should be consistent from year to year and where there are changes the licensee should both document and justify them.

1.22. The method used to attribute costs from the related party to the licensee and to activities should be transparent and the revenues, costs, profits, assets and liabilities separately distinguishable from each other.

### **Related party margins**

1.23. We will exclude related party profit margins from costs added to RAV unless the related party concerned earns at least 75 per cent of its turnover from sources other than related parties and charges to the licensed entity are consistent with charges to external customers. For this purpose, we consider an entity to be a related party if it is an affiliate or related undertaking or if that entity and the network company have any other form of common ownership. A key indicator of entities being in common ownership is that they are affiliates of the ultimate controller (or controllers where there is more than one).

1.24. Where network operators utilise captive insurance companies, these shall be excluded from the related party exclusion. We will not allow any excess losses relating to these captive insurers (to the extent that they are covered by captive insurers) to be funded by customer.

1.25. When an entity ceases to be a related party, for example on a change in ultimate controller, then from the time it ceases to be a related party its margins will be allowable, if it meets the following requirement. There must be an unambiguous demonstration that its charges to the transmission business (in the original or amended contract) remain competitive and are in line with market rates, or the contract was re-tendered and that there was more than one bidder.

1.26. Whilst not precluding other demonstrations of competitiveness, we consider that an open competitive tender is likely to be the clearest indicator. In the absence of an open competitive tendering exercise, we will seek strong evidence that the terms of any contract are competitive.

1.27. Irrespective of whether the network company demonstrates competition and they no longer disallow margins, the licensee must arrange to comply with the requirements of the relevant standard or standard special licence condition (on the maintenance and provision of information). It must continue to report the former related party's costs and margins as if it were still a related party for the remainder of the price control period. The data is required in order for us to be able to monitor performance against the price control and carry out cost analysis to inform future reviews.

1.28. Where a principal related party resource provider<sup>18</sup> ceases to be a related party during a price control period, for example on the restructuring of a group, we shall continue to treat them as a related party until the end of that price control period and we will continue to disallow the margins charged. At the next price control period the margins will be allowed provided that there is unambiguous demonstration that the charges to the regulated business (in the original or amended contract) remain competitive and are in line with market rates, or that the contract is re-tendered and that there is more than one bidder.

## Transmission Incentive for Renewable Generation (TIRG)

1.29. This scheme dealt with the funding of costs that were considered uncertain at the time of the relevant price control. We will continue to deal with these in accordance with the conditions under which they were established.

1.30. TIRG covers a finite number of schemes for which licensees report the expenditure separately and this expenditure is not part of totex. The scheme allows efficiently incurred expenditure into RAV five years after completion of construction, providing the agreed outputs have been delivered. In the interim, we consider the costs to be in a shadow<sup>19</sup> RAV. We will add the capex under this scheme to RAV as already established (subject to the efficiency review).

## Appendix 3 – Definitions contained in individual table guidance

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<u>Asset Replacement and refurbishment</u>	Infrastructure – TSS .....	70
.....	<i>Innovation Rollout Mechanism (IRM)</i>	64
Boundary .....	Insurance.....	52
Boundary Capability .....	IT & telecoms .....	49
BT 21 CN Teleprotection.....	Local Enabling.....	70
CEO & group management .....	<i>Losses</i> .....	103
Embedded Gen RD Zone .....	Market Facilitation .....	46
Engineering Management and Clerical	Net internal area (NetIA).....	57
Support.....	Network Design and Engineering .....	39
Failure .....	<i>Network Innovation Allowance (NIA)</i>	65
Fault.....	<i>Network Innovation Competition (NIC)</i>	66
Finance, audit & regulation .....	.....	66
<i>Fugitive emissions</i> .....	Network Planning .....	46
Functional failures .....	Network Policy (incl. R&D).....	43
Generation connections .....	Non Operational Capex .....	79
Grid Entry Points .....	Offshore Transmission Project.....	48
Grid Supply Points.....	Operational IT and Telecoms .....	38
Health Safety and Environment.....	Operational Property Management...	48
HR & non-operational training.....	Operational Training .....	44

<sup>18</sup> A principal related party resource provider is one that has a contract to operate or manage a substantial part of a licensee's day-to-day operations, and that the licensee entered into the contract before or as part of the arrangements for a change in ultimate controller, or controllers, where there is more than one

<sup>19</sup> Shadow RAV: a notional pool of expenditure relating to specific schemes where it has been agreed that the expenditure will be added to RAV at a later time.



Peak demand / intact capacity .....	91	Transmission Circuits.....	84
Procurement.....	52	<i>User terminated demand works ....</i>	120
Project Management.....	38	User terminated generation	
Property management .....	50	connections .....	119
Reactive compensation .....	84	Vegetation Mangement .....	48
Stores and Logistics.....	45	Vehicles and Transport.....	45
System Mapping .....	40	Wider Works.....	70
Training & apprentices .....	53		

## Appendix 4 – Definition of Unit Costs

**Definition of unit costs for use in data tables 5.8 and 5.9 - cost items to be included or excluded per specified asset category.**

Unit cost scopes	Within Total Gross Scheme Cost (Y/N)	Share over units & non-unit (Y/N)	Allocate to unit (Y/N)	Allocate to non-unit (Y/N)	Commentary
<b><u>Business Support Overheads &amp; Closely-Associated Indirects</u></b>					
Central Functions: apportionment for direct project work (e.g. Asset Mgmt, Finance, Property, Procurement) inc wayleave & easement negotiations	Y			Y	Including type specification and testing
Planning consent & community consultation costs	Y			Y	
Construction Management	Y			Y	Central programme management function
Health, Safety & Environment	Y			Y	Central management function
<b><u>Common to substation works (non-unit)</u></b>					
<b><u>Non-unit 'Other (Civils)'</u></b>					
Land purchase & access rights	Y			Y	
Permanent access (e.g. roads)	Y			Y	
Site levelling, preparation, drainage	Y			Y	
Environmental	Y			Y	Such as ecological surveys, relocating ponds
Permanent site security & fencing	Y			Y	Enduring measures
Buildings	Y			Y	Permanent buildings
Site surveys (civil, site investigations, ground conditions)	Y			Y	
Temporary works	Y			Y	Including temporary accesses & temporary towers
Site clearance (e.g. removing decommissioned assets)	Y			Y	
<b><u>Non-unit 'Other (inc non-lead electrical assets)'</u></b>					
Changes to overhead line entries	Y			Y	New towers, etc, should not be captured as new build; atypical costs
Diesels	Y			Y	
LVAC auxiliary systems	Y			Y	
DC auxiliary systems, inc batteries	Y			Y	
Telecoms systems	Y			Y	
<b><u>Non-unit 'Cross-Site Connections'</u></b>					
Cables	Y			Y	
GIB	Y			Y	
Overhead	Y			Y	
<b><u>Common to cable and overhead line works (non-unit)</u></b>					
<b><u>Non-unit 'Other (Civils)'</u></b>					
Permanent access (e.g. roads)	Y			Y	
Site levelling, preparation, drainage	Y			Y	

<b>Unit cost scopes</b>	<b>Within Total Gross Scheme Cost (Y/N)</b>	<b>Share over units &amp; non-unit (Y/N)</b>	<b>Allocate to unit (Y/N)</b>	<b>Allocate to non-unit (Y/N)</b>	<b>Commentary</b>
Environmental works	Y			Y	Such as diverting culverts & protecting flora & fauna
Site surveys	Y			Y	Includes site investigations and line/cable routeing surveys
Temporary works	Y			Y	Such as temporary towers
Site clearance (e.g. removing decommissioned assets)	Y			Y	
<b>Non-unit 'Other (inc non-lead electrical assets)'</b>					
Changes to overhead line entries	Y			Y	New towers, etc, should not be captured under the new build overhead line category; these are atypical costs
<b>Transformers (and other wound plant)</b>					
<b>Engineering</b>					
Civil installation design	Y	Y			Includes site investigations and surveys
Electrical installation design	Y	Y			
<b>Plant (inc delivery, unloading and installation)</b>					
Transformers (all voltages)	Y		Y		Including tap changer, oil, conservator & breather equipment, all associated cooling equipment, etc, and excluding storage costs
Quadrature boosters, series reactors & shunt reactors	Y			Y	Further information on the delivery of these items should be included in the table narrative.
Earthing transformers and/or resistors	Y		Y		
Current Transformers (Primary, Secondary, Tertiary, Neutral, metering, protection)	Y		Y		Transformer-specific
Surge Arresters	Y		Y		Transformer-specific
General services not specific to a unit or non-unit	Y	Y			Including site set-up, security to protect works, temporary fencing, waste management, etc
<b>Control &amp; Protection</b>					
Tapchanger control schemes	Y			Y	
Cabling	Y			Y	
SCADA integration	Y			Y	
Protection specific to unit (e.g. Buchholz, condition monitoring, etc)	Y		Y		
<b>Testing &amp; Commissioning</b>					
Factory Acceptance Tests	Y		Y		
Transformer commissioning tests	Y		Y		Stage 1 commissioning by the installer
Protection, control & SCADA tests	Y			Y	Non-unit 'non-lead electrical assets'
Stage 2 commissioning	Y			Y	
<b>Unit-related civil works</b>					
Foundations	Y		Y		
Bund & pipe-work	Y		Y		
Cable trenches and/or ducts	Y		Y		Boundary of unit is defined to be the transformer marshalling kiosk
Dump tanks & oil containment	Y			Y	Not common to all units; site-specific civils
Noise enclosures	Y			Y	Not common to all units; site-specific civils

<b>Unit cost scopes</b>	<b>Within Total Gross Scheme Cost (Y/N)</b>	<b>Share over units &amp; non-unit (Y/N)</b>	<b>Allocate to unit (Y/N)</b>	<b>Allocate to non-unit (Y/N)</b>	<b>Commentary</b>
Deluge and/or sprinkler systems	Y			Y	Not common to all units; site-specific civils
Fire walls	Y			Y	Not common to all units; site-specific civils
<b>Connections</b>					
HV cabling to switchgear	Y			Y	Transformer tails
Busbar connections and busbar	Y			Y	
<b>Circuit Breakers</b>					
<b>Engineering</b>					
Civil installation design	Y	Y			Includes site investigations and surveys
Electrical installation design	Y	Y			
<b>Plant (inc delivery, unloading and installation)</b>					
Full Bay	Y		Y		
Partial Bay	Y		Y		Equipping a skeleton bay with a breaker. This will be an outlier and should be identified in table narrative.
Skeleton Bay	Y			Y	
Circuit Breaker	Y		Y		
Current Transformers	Y		Y		In the bay
Voltage Transformers	Y		Y		Where applicable
Earth switches & line disconnectors	Y		Y		
Surge arrester	Y		Y		
Marshalling kiosk	Y		Y		
Circuit breaker refurbishment	Y			Y	
General services not specific to a unit or non-unit	Y	Y			Including site set-up, security to protect works, temporary fencing, waste management, etc
<b>Control &amp; Protection</b>					
Cabling	Y		Y		Specific to bay
SCADA modification & commissioning	Y			Y	
Protection & control specific to bay	Y		Y		
Substation control systems	Y			Y	Protection schemes (below)
Busbar protection	Y			Y	Protection schemes (below)
<b>Testing &amp; Commissioning</b>					
Factory Acceptance Tests	Y		Y		
Local electro/mechanical testing	Y		Y		Stage 1 commissioning carried out by installer prior to energisation
Stage 2 commissioning	Y			Y	
<b>Unit-related civil works</b>					
Foundations	Y		Y		
Multi-core cable trenches and/or ducts	Y		Y		From circuit breaker to marshalling kiosk
<b>Connections</b>					
Busbar connections	Y		Y		
Busbar disconnectors (including associated foundations, etc)	Y		Y		
Support structures, post insulators, etc	Y		Y		
Through-wall bushings	Y		Y		

Unit cost scopes	Within Total Gross Scheme Cost (Y/N)	Share over units & non-unit (Y/N)	Allocate to unit (Y/N)	Allocate to non-unit (Y/N)	Commentary
<b>Protection Schemes / Panels</b>					
Procurement Related					category for these where they are not included with the prime asset (e.g. in specific asset replacement schemes)
Specification & Tendering					
Storage					
Financing costs for stored equipment					
Engineering					
Civil installation design					
Electrical installation design					
Relay Settings					
Related Equipment					
Panels, Links, relays, panel wiring, etc.					
SCADA interface, including load and voltage monitoring (where applicable)					
Inter-trip schemes (where applicable)					
Testing					
Factory Acceptance Tests					
Commissioning tests					
Balancing tests (where applicable)					
Civil works					
Panel Footing/s					
Secondary Cable Trenches and/or Ducts					
Cabinets, Panels, Tunnel Boards (as applicable)					
External weatherproof housings (where required)					
Delivery on Site					
Transport of equipment to site					
Unloading & Positioning					
Assembly					
Connections					
Wiring to primary equipment, instrument transformers, SCADA, etc.					
Integration with Transfer Tripping, busbar protection, etc.					
<b>Metering Schemes &amp; Substation Control Schemes</b>					
Procurement Related					
Specification & Tendering					
Storage					
Financing costs for stored equipment					
Engineering					
Civil installation design					
Electrical installation design					
Related Equipment					
Panels, Links, panel wiring, etc.					
SCADA &/or Communication interface					

<b>Unit cost scopes</b>	<b>Within Total Gross Scheme Cost (Y/N)</b>	<b>Share over units &amp; non-unit (Y/N)</b>	<b>Allocate to unit (Y/N)</b>	<b>Allocate to non-unit (Y/N)</b>	<b>Commentary</b>
<u>Testing</u>					
Factory Acceptance tests					
Commissioning tests					
<u>Civil works</u>					
Panel Footing/s					
Secondary Cable Trenches and/or Ducts					
Cabinets, Panels, Tunnel Boards (as applicable)					
External weatherproof housings (where required)					
<u>Delivery on Site</u>					
Transport of equipment to site					
Unloading & Positioning					
Assembly					
<u>Connections</u>					
Wiring to instrument transformers, SCADA, etc.					
<b>Generic breakdown for other substation items)</b>					
<u>Procurement Related</u>					
Specification & Tendering					
Storage					
Financing costs for stored equipment					
<u>Engineering</u>					
Civil installation design					
Electrical installation design					
<u>Related Equipment</u>					
Associated structures					
Communication interfaces					
<u>Testing</u>					
Factory Acceptance tests					
Commissioning tests					
<u>Civil works</u>					
Associated footings & Civil Works					
<u>Delivery on Site</u>					
Transport of equipment to site					
Unloading & Positioning					
Assembly					
<u>Connections</u>					
Wiring to AC & DC panels, communication panels, etc.					
Connection to other substation equipment					
<b>Underground Cables</b>					
<u>Engineering</u>					
Civil design	Y	Y			
Electrical & thermal design	Y	Y			

<b>Unit cost scopes</b>	<b>Within Total Gross Scheme Cost (Y/N)</b>	<b>Share over units &amp; non-unit (Y/N)</b>	<b>Allocate to unit (Y/N)</b>	<b>Allocate to non-unit (Y/N)</b>	<b>Commentary</b>
<u>Plant (inc delivery, unloading and installation)</u>					
Cable	Y		Y		
Joints & terminations (inc cable sealing ends)	Y		Y		
Accessories	Y		Y		
Protection & Communications Pilots	Y		Y		
Cable Monitoring	Y		Y		
Accesses	Y		Y		Including temporary roadway
General services not specific to a unit or non-unit	Y	Y			Including site set-up, security to protect works, temporary fencing, waste management, etc
<u>Testing &amp; Commissioning</u>					
Factory Acceptance Tests	Y		Y		Excluding type registration or approval tests
Commissioning tests	Y		Y		Stage 1 commissioning carried out by installer prior to energisation
Stage 2 commissioning	Y			Y	
<u>Unit-related civil works</u>					
Excavation of trenches	Y		Y		Inc roadway cutting, etc
Cable bridges, etc			Y		
Backfill, physical protection & reinstatement	Y		Y		Inc materials
<b><u>New-build overhead line on towers or poles (excluding minor diversions, line entry changes, etc)</u></b>					
<u>Engineering</u>					
Structural and civil design	Y		Y		
Electrical design (earth potential rise, insulation co-ordination, etc)	Y		Y		
<u>Plant (inc delivery, unloading and installation)</u>					
Tower steelwork or poles	Y		Y		Up to attachment point at end of cross-arm; inc insulating cross-arms
Earthing system	Y		Y		Where required
Anti-climbing devices, signage, etc	Y		Y		
Phase conductor & earthwire	Y		Y		
Insulator strings & fittings	Y		Y		
Vibration dampers, spacers, spacer dampers, etc	Y		Y		
Accesses	Y		Y		Including temporary roadway
General services not specific to a unit or non-unit	Y	Y			Including site set-up, security to protect works, temporary fencing, waste management, etc
<u>Testing &amp; Commissioning</u>					
Factory Acceptance Tests	Y		Y		
Commissioning inspections	Y		Y		
Stage 2 commissioning	Y			Y	
<u>Civil works</u>					
Installed foundations inc tower muffs	Y		Y		Use of special foundations (e.g. piled or river-crossing) to be discussed in narrative
<u>Land</u>					
Easement & wayleave acquisition costs	Y		Y		
Land reinstatement	Y		Y		

Unit cost scopes	Within Total Gross Scheme Cost (Y/N)	Share over units & non-unit (Y/N)	Allocate to unit (Y/N)	Allocate to non-unit (Y/N)	Commentary
<b>Full reconductoring of overhead lines (existing routes)</b>					
<u>Engineering</u>					
Line design	Y		Y		
Electrical design (earth potential rise, insulation co-ordination, etc)	Y		Y		
<u>Plant (inc delivery, unloading and installation)</u>					
Phase conductor & earthwire	Y		Y		
Insulator strings & fittings	Y		Y		
Vibration dampers, spacers, spacer dampers, etc	Y		Y		
Replacement steelwork	Y			Y	Includes bar replacement undertaken as part of full reconductoring; whole towers to be highlighted in narrative
Foundation & muff works	Y			Y	Includes foundation works undertaken as part of full reconductoring
Accesses	Y		Y		Including temporary roadway
General services not specific to a unit or non-unit	Y	Y			Including site set-up, security to protect works, temporary fencing, waste management, etc
<u>Testing &amp; Commissioning</u>					
Factory Acceptance Tests	Y		Y		
Commissioning inspections	Y		Y		
Stage 2 commissioning	Y			Y	
<u>Land</u>					
Easement & wayleave acquisition costs	Y		Y		Costs incurred as part of uprating projects to be identified in narrative
Land reinstatement	Y		Y		
<b>Fittings only or minor refurbishment of existing overhead lines (not as part of full reconductoring)</b>					
<u>Engineering</u>					
Electro/mechanical design	Y		Y		
<u>Plant (inc delivery, unloading and installation)</u>					
Insulator strings & fittings	Y		Y		
Vibration dampers, spacers, spacer dampers, etc	Y		Y		
Replacement steelwork	Y			Y	Includes bar replacement undertaken as part of minor refurbishment
Foundation & muff works	Y			Y	Includes foundation works undertaken as part of minor refurbishment
Accesses	Y		Y		Including temporary roadway
General services not specific to a unit or non-unit	Y	Y			Including site set-up, security to protect works, temporary fencing & accesses, waste management, etc
<u>Testing &amp; Commissioning</u>					
Factory Acceptance Tests	Y		Y		
Commissioning inspections	Y		Y		
Stage 2 commissioning	Y			Y	
<u>HVDC Systems</u>					
<u>Procurement Related</u>					
Specification & Tendering					



<b>Unit cost scopes</b>	<b>Within Total Gross Scheme Cost (Y/N)</b>	<b>Share over units &amp; non- unit (Y/N)</b>	<b>Allocate to unit (Y/N)</b>	<b>Allocate to non- unit (Y/N)</b>	<b>Commentary</b>
Storage					
Financing costs for stored equipment					
Engineering					
Civil installation design					
Electrical installation design					
Related Equipment					
Converter Stations					
Onshore cables					
Offshore cables					
HVDC OHL					
AC Substation works					
Control & Protection					
HVDC control schemes					
Cabling					
SCADA integration					
Testing					
Factory Acceptance Tests					
Equipment commissioning tests					
Protection, control & SCADA tests					
Civil works					
Footings/s					
Bund & Pipe-work					
Secondary Cable Trenches and/or Ducts					
Fire Systems					
Deluge and/or sprinkler Systems (where applicable)					
Delivery on Site					
Transport to site					
Unloading & Positioning					
Assembly					
Connections					
Primary terminal busbar Connections					
Secondary terminal busbar Connections					
Tertiary terminal busbar connections (where applicable)					
Primary and Secondary HV cabling to switchgear (where applicable)					
Busbar isolators (including associated footings etc).					