

Guidance

ED2 Price Control Financial Handbook

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This is the RIIO-ED2 Price Control Financial Handbook which forms part of Special Condition 8.1 (Governance of the RIIO-ED2 Price Control Financial Instruments) of the electricity distribution licence held by electricity distribution network operators.

This document consists of:

- a) requirements for how licensees must use the ED2 Price Control Financial Model to determine Allowed Revenue.
- b) an overview of the variable values used in the ED2 Price Control Financial Model
- c) details of how certain variable values are revised or calculated.

The procedures relating to modification of this handbook and the RIIO-ED2 PCFM are contained in Special Condition 8.1 and up to date versions of both can be accessed on the Ofgem website.

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1. Introduction

- 1.1 Special Condition 2.1 (Revenue restriction) determines the annual Allowed Revenue a licensee can recover in respect of Network Charges. The ED2 Price Control Financial Model (ED2 PCFM) is a Price Control Financial Instrument which provides for the calculation of Allowed Revenue. Certain inputs to the ED2 PCFM (the PCFM Variable values) are updated, resulting in updates to Allowed Revenue within the Price Control Period.
- 1.2 This handbook sets out how licensees must use the ED2 PCFM to determine Allowed Revenue.
- 1.3 This handbook provides:
 - a) a description of the ED2 PCFM
 - b) The process the licensee must follow in calculating Allowed Revenue
 - c) an overview of the PCFM Variable Values used in the ED2 PCFM; and
 - d) details of how certain PCFM Variable Values are revised or calculated.

Related documents

- 1.4 This handbook is one of several documents relevant to the calculation of Allowed Revenue. Other documents include:
 - a) Special Conditions
 - b) ED2 PCFM
 - c) Associated Documents
 - d) Regulatory Instructions and Guidance (The RIGs) including the PCFM Guidance
 - e) RIIO-ED2 Final Determinations
- 1.5 In any case of conflict of meaning between these documents, the following order of precedence applies:
 - a) the relevant licence conditions
 - b) the handbook
 - c) the ED2 PCFM
 - d) other licence instruments
 - e) Associated Documents including the PCFM Guidance

- f) RIIO-ED2 Final Determinations.

Document structure

- 1.6 The remainder of this handbook is structured as follows:
- a) Section 2 provides an overview of the ED2 PCFM
 - b) Section 3 lists the PCFM Variable Values used in the ED2 PCFM
 - c) subsequent sections provide details of how certain PCFM Variable Values are revised or calculated (along with further details on the ED2 PCFM).

Definitions

- 1.7 This handbook uses defined terms, which are capitalised throughout this handbook, with the meaning found in the following locations:
- a) the table given below
 - b) Special Condition 1.2 (Definitions and references to the Electricity Distributors); and
 - c) standard condition 1 (Definitions for the standard conditions).

Base Annual PSED Allowance	means the allowance relating to pensions set out in chapter 7, section 3 of this handbook.
CPIH	means the Consumer Prices Index Including Owner Occupiers' Housing Costs.
Defined Benefit Scheme	means a pension scheme where the benefits that accrue to members are normally based on a set formula taking into account the final salary and accrual of service in the scheme. It is also known as a final salary pension scheme.
ED2 PCFM	means the ED2 Price Control Financial Model.
PCFM Guidance	means the annex of that name to the RIGs.
Reasonableness Review	means the pensions review set out in para 7.30 of Chapter 7, section 2 of this handbook.
RIGs	means the document published by the Authority in accordance with Standard Condition 46 (Regulatory Instructions and Guidance).
RPI	means the Retail Prices Index.
Time Value of Money	means the interest rate used to apply to year-on-year true-ups and adjustments made during the ED2 Price Control and is based on the nominal WACC contained within the ED2 PCFM.
Triennial Valuation	An actuarial valuation of a pension scheme which has been carried out to meet the requirements of Section 224(2)(a) of the Pensions Act 2004 and which results in a written report on scheme assets and liabilities by the scheme actuary. Interim updates to triennial valuations may also be produced.

Updated Valuation	A report, prepared and signed by the Scheme Actuary, which updates a Triennial Valuation to a later date. This is further defined in the Energy Network Operators' Price Control Pension Costs - RIGs: triennial pension reporting pack supplement including pension deficit allocation methodology.
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2. The ED2 PCFM and Calculation of Allowed Revenue

The Price Control Financial Model

- 2.1 For each Regulatory Year, the ED2 PCFM provides for the calculation of Allowed Revenue in accordance with Special Condition 2.1 (Revenue restriction).
- 2.2 The ED2 PCFM contains both fixed values and a PCFM Variable Values table input area for the licensee. The Allowed Revenue figure for the licensee for each Regulatory Year of the Price Control Period is calculated using the fixed values, the PCFM Variable Values, and the formulae and functions embedded in the ED2 PCFM.
- 2.3 At the outset of the Price Control Period, Allowed Revenue is calculated by the ED2 PCFM, using PCFM Variable Values completed by the Authority in accordance with Final Determinations. From that point, PCFM Variable Values are updated by the licensee in accordance with the relevant licence condition, this handbook, and the PCFM Guidance.

Price base

- 2.4 The ED2 PCFM works in a constant 2020/21 price base, except in respect of some calculations internal to the model that use nominal prices, eg finance, tax and legacy calculations. The use of nominal prices in the ED2 PCFM tax calculations more accurately reflect the licensee's tax expenses profile in revenue allowance calculations. Where applicable, the row labels in the ED2 PCFM will specify the price base of the values in that row.
- 2.5 The price base is a hybrid between the RPI and CPIH measures of inflation, where the index grows by RPI until 1 April 2023, then switches to CPIH. The exact calculation is set out in Part E of Special Condition 2.1.

Forecasting the price index PI_t

- 2.6 The licensee will update outturn data for RPI_m and $CPIH_m$ until June of the prior year (e.g. in November 2023, the outturn data values would only be entered to June 2023).

- 2.7 The ED2 PCFM “Monthly Inflation” and “Annual Inflation” tabs contain a method for forecasting future price index values, given calendar year forecast assumptions. The calendar year forecasts are labelled “CYRPIF_t” and “CYCPIH_t”.
- 2.8 These forecasts will be the Office for Budget Responsibility’s (OBR) forecast of CPI and RPI from the “economic and fiscal outlook”. Ofgem will update the forecast assumptions from the most recent outlook available as at 30 November. The data will be sourced from the following files, ranked in preferential order and based on their availability:
- a) The OBR historical official forecasts database¹, tabs “CPI” and “RPI”
 - b) The charts and tables datafile published with the economic and fiscal outlook
 - c) The economic and fiscal outlook document
- 2.9 The forecast rates will be used to create a forecast of the monthly index. The OBR growth rate forecasts compare year over year index averages, so the rates are assumed to apply midpoint each year from July to June. The last outturn value of RPI and CPIH will be grown by a monthly rate in accordance with the following formula:

$$RPI_m = RPI_{m-1} \cdot (1 + CYRPIF_m)^{\frac{1}{12}}$$

where,

RPI_m is the Retail Prices Index value for a given year-month “m”.

CYRPIF_m means the OBR RPI forecast (annual rate) applicable to year-month m, where the OBR forecast for a calendar year is applicable from 6 months prior to the start of that calendar year, to six months after (eg the 2021 OBR forecast would be applicable from July 2020 to June 2021). If the forecast year-month falls after the range covered by OBR forecasts, the longest dated forecast year is used (eg if the November OBR forecast covered 2020-2024, then the forecast for year 2024 would be used for 2025 and 2026).

- 2.10 The forecast for CPIH_m is calculated in the same way as above, substituting in the Consumer Prices Index Including Owner Occupiers' Housing Costs.

¹ <https://obr.uk/data/>

Long term inflation assumption (LCPIHF_t)

2.11 The long term inflation assumption (labelled LCPIHF_t) will be equal to the average value of inflation obtained in paragraph 4.8 over the periods set out in Table 4.1 for the corresponding Regulatory Year, rounded to 1 percentage decimal place (e.g. 2.0%).

Provision of updated inflation variable values

2.12 Ofgem will perform the above updates to the PCFM Variable Values RPI_m, CPI_m, CYRPIF_t and CYCPIH_t and provide a copy of the updated PCFM to the licensee by no later than 30 November.

2.13 Where Ofgem does not make a copy of the ED2 PCFM with the inflation updates available to the licensee by this date, the licensee will perform the above updates itself.

Temporal convention

2.14 The following conventions apply throughout this handbook:

- a) Relative references: The AR_t term is licensee's Allowed Revenue for each Regulatory Year t during the Price Control Period. References in this handbook to Regulatory Years are made relative to that usage. For example, in the context of AR_t for Regulatory Year 2022/23, a reference in the same context to Regulatory Year t-1 would mean 2021/22 and so on
- b) Absolute references: A reference to, for example, 'the EDE value for 2022/23' means the EDE value in the 2022/23 column of the PCFM Variable Values table for the licensee contained in the ED2 PCFM.

Forecast PCFM Variable Values

2.15 In calculating Allowed Revenue, the ED2 PCFM uses some forecast PCFM Variable Values. For example, in the case of expenditure, there is a two-year lag before outturn values can be reflected in Allowed Revenue, and so forecasts are used.

2.16 The licensee must forecast PCFM Variable Values in accordance with the requirements of this handbook, the RIGs and PCFM Guidance. These updates can apply to all Regulatory Years.

2.17 For the avoidance of doubt, while a licence condition may refer to actual costs, revenues and outputs, for future periods, the equivalent data should be forecast.

Time value of money

- 2.18 The ED2 PCFM uses a 'time value of money' adjustment to incorporate the financial impact of the timing of cash flows, eg from switching revenues between Regulatory Years as a result of changes to previous Regulatory Years' Allowed Revenue or to correct charging error for any over or under-recovery.
- 2.19 The time value of money rate used in the ED2 PCFM is based on the licensee's nominal WACC, which is calculated on row 67 of AR sheet in the ED2 PCFM and is derived in accordance with the formula in paragraph 2.1.13 of Special Condition 2.1.

Changing the ED2 PCFM

- 2.20 The ED2 PCFM exists as an ED2 Price Control Financial Instrument and, therefore, as a constituent part of Special Condition 8.1. It can be changed under section 11A of the Act or certain modifications can be made under Special Condition 8.1 in accordance with that condition.

Error in the functionality of the ED2 PCFM

- 2.21 If an error of functionality is discovered in the ED2 PCFM, the following procedure will be followed:
- a) the issue will be considered at the earliest opportunity by the PCFM Working Group (see next section) and a corrective modification will be proposed by Ofgem
 - b) the procedure in Special Condition 8.1 for modifications to the ED2 Price Control Financial Instruments will be followed.

Calculation of Allowed Revenue

- 2.22 In determining the value of Allowed Revenue, the licensee must use the latest version of the ED2 PCFM published on the Authority's Website.
- 2.23 The licensee must update the PCFM Variable Values table at least annually, in accordance with the PCFM Guidance.
- 2.24 The licensee must not make any other modifications to the ED2 PCFM beyond the removal of those input sheets which are not relevant to the licensee, the completion or updating of the PCFM Variable Values table and updating the "UserInterface" tab of the ED2 PCFM.
- 2.25 Where a PCFM Variable Value is not known at the time of calculating Allowed Revenue, the licensee must determine that value in accordance with the ED2

- Price Control Financial Handbook or the PCFM Guidance as applicable, and otherwise provide its best estimate using the information available to it at the time.
- 2.26 The licensee must, if it is uncertain of the correct way to calculate a PCFM Variable Value, seek advice from the Ofgem.
- 2.27 Where any PCFM Variable Value relies on a third-party publication that ceases to be published or no longer contains the value or data required for that value, Ofgem will consult on an alternative approach. If the consultation is not completed in time to determine a revised value for the publication of the ED2 PCFM on the licensee's website in accordance with paragraph 2.1.5 of Special Condition 2.1, Ofgem will agree an interim approach with licensees (e.g. using the value from the most recently available publication or an alternate input agreed to by Ofgem) to ensure a timely PCFM publication. Any such interim approach for a given Regulatory Year will be revised in the subsequent Regulatory Year.
- 2.28 No less than 14 days prior to the publication of the ED2 PCFM on the licensee's website in accordance with paragraph 2.1.5 of Special Condition 2.1 (Revenue restriction), the licensee must provide the Authority with:
- a) a copy of the ED2 PCFM which the licensee intends to publish on its website; and
 - b) a commentary describing any changes since the last submission of the ED2 PCFM to the Authority.
 - c) In the event that the Authority requires the licensee to change the ED2 PCFM following the provision of the ED2 PCFM to the Authority in accordance with this paragraph, the licensee shall not be required to provide the Authority with a further copy with a 14-day notice period.
- 2.29 Prior to publication on the licensee's website in accordance with paragraph 2.1.5 of Special Condition 2.1 (Revenue restriction), the licensee must reduce the ED2 PCFM made available under Part D of Special Condition 8.1 (Governance of the ED2 Price Control Financial Model), in accordance with instructions provided by the Authority, so that it is specific to each licensee.
- 2.30 The licensee must update the "publication date" label on the "Cover" tab of the ED2 PCFM with the date the model was made public on the licensee's website.
- 2.31 The licensee must use the following file naming convention:
- ED2 PCFM Licensee YYYYMMDD
-

where:

YYYYMMDD means the year, month, and day the ED2 PCFM was published.

Licensee means one of ENWL, NPgN, NPgY, WMID, EMID, SWALES, SWEST, LPN, SPN, EPN, SPD, SPMW, SSEH, SSES as applicable.

2.32 The ED2 PCFM will be used for the purpose of determining the value of Allowed Revenue up to and including Regulatory Year 2027/28.

The ED2 Price Control Financial Model Working Group

2.33 Ofgem will facilitate an industry expert working group to review issues arising with respect to the form or usage of the ED2 PCFM. The terms of reference for The PCFM Working Group ('the working group') are set out below.

Terms of reference

Purposes of the working group

- 2.34 The purposes of the working group are:
- a) to review the ongoing effectiveness of the ED2 PCFM in producing a value for Allowed Revenue and capturing financial performance data for each Regulatory Year,
 - b) to provide, when requested by the Authority, its views to the Authority on the impact of any proposed modifications on the ED2 PCFM; and
 - c) to provide such views or recommendations to the Authority with regard to the ED2 PCFM (including as to proposals to modify the ED2 PCFM) as it sees fit.

Composition

- 2.35 The composition of the working group will be:
- a) Ofgem (chair)
 - b) Ofgem (secretary); and
 - c) one representative per licensee.

Timing and duration of the working group's work

- 2.36 The working group's incumbency will run from 01 April 2023 to 31 March 2028.
- 2.37 The working group will meet at least once between 01 January and 01 April during each calendar year, but may meet more frequently if required, in particular in relation to the provision of views on the impact of proposed ED2 PCFM modifications (see paragraph 2.34b).

- 2.38 In convening any meeting of the working group, Ofgem will give at least 10 working days' notice of the proposed meeting date to the licensee.
- 2.39 Representatives may attend meetings in person or through video or telephone conferencing facilities.
- 2.40 A meeting of the working group will be quorate, for the purpose of expressing a view or recommendation in respect of the ED2 PCFM, when at least one representative from Ofgem, and at least four licensee representatives (each from a different ownership group) are present.

Resources

- 2.41 Meeting facilities will be provided or coordinated by Ofgem. Ofgem will keep notes of key points of discussion and views expressed at meetings, and of any recommendations made by the working group with respect to the ED2 PCFM. A copy of the record of each meeting will be provided to the licensee as soon as is reasonably practicable and to representatives who attended the meeting, and Ofgem will take account of any comments received in finalising the record.

3. The PCFM Variable Values

- 3.1 This section lists all the variable values (including the relevant Special Condition and Associated Documents, where relevant, for each).
- 3.2 The variable values that can be revised are set out in Table 3.1 below.
- 3.3 For each variable value, the table provides a description, cross-references to the relevant Special Condition(s) (where appropriate), and details of Associated Documents (where relevant). It also identifies the variable values for which further details are provided in subsequent sections of this handbook. This includes the approaches to variable values calculated by Ofgem (eg cost of debt and Real Price Effects) and details for some variable values in addition to that provided in Special Conditions (SpC) and other Associated Documents (eg taxation and pensions).

Types of PCFM Variable Values

- 3.4 Table 3.1 presents the variable values according to the different types, which reflect the components of revenue to which they relate. This section summarises the different types of PCFM Variable Values.

Totex allowance

- 3.5 The following types of variable values contribute to the calculation of the totex allowance², through the Totex Incentive Mechanism:
- a) Non-variant allowances
 - b) Variant allowances (adjustments to totex allowances); and
 - c) Actual totex
- 3.6 These types of variable values are used in the Totex Incentive Mechanism to determine the amounts that should, subject to the Totex Capitalisation Rate for the licensee, be processed as:
- a) Fast money (FM_t) – flowing directly into the Calculated Revenue (R_t) figure for the Regulatory Year to which the amount relates
 - b) Slow money – addition to the licensee’s RAV in the Regulatory Year to which the amount relates, contributing indirectly to Calculated Revenue (R_t) through the return (RTN_t) on RAV and depreciation (DPN_t) over multiple Regulatory Years.

Actual Totex

- 3.7 Actual Totex consists of all expenditure by the licensee except for:
- a) costs relating to De Minimis Business activities as defined in Standard
 - b) Condition 29 (Restriction of activity and financial ring-fencing of the Distribution Business) of the licence;
 - c) costs relating to Directly Remunerated Services;
 - d) pension deficit repair payments relating to the Pension Scheme Established Deficit and all post 1 April 2004 unfunded early retirement deficiency costs (ERDC);
 - e) the non-cash element of current service pension costs charged to the income statement in accordance with accounting standards;
 - f) statutory or regulatory depreciation and amortisation;
 - g) profit margins from related parties (except where permitted);

² Subject to “Capitalisation rate 1” and “Capitalisation rate 2” which relates to “Ex-ante Baseline totex + PCDs” and “Uncertainty Mechanisms only” respectively.

- h) costs relating to rebranding a company's assets or vehicles following a change of trading name or logo;
- i) fines and penalties incurred by the licensee (including all tax penalties, fines and interest) except if Traffic Management Act penalty costs can be shown to be efficient;
- j) compensation payments made in relation to standards of performance;
- k) bad debt costs and recoveries (which are subject to separate review);
- l) costs relating to the network innovation allowance and network innovation competition;
- m) costs reported other than on a normal accruals basis;
- n) costs relating to pass-through items; and
- o) interest, other financing and corporation tax costs

3.8 Actual Totex is separated into the applicable PCFM Variable Values in accordance with the Regulatory Instructions and Guidance.

Pass-through expenditure

3.9 This type of variable value is allowed expenditure, comprising certain costs that can be passed through to consumers, and flows directly into Calculated Revenue (R_t). It is not used in the Totex Incentive Mechanism and does not have a slow money component.

Incentive Revenue

3.10 This type of variable value penalises or rewards licensees for incentive performance and flows directly into Calculated Revenue (R_t).

Other Revenue Allowances

3.11 This type of variable value comprises expenditure incurred on innovation projects (by means of Network Innovation Allowance) and any other similar allowances that can be processed as Fast Money (FM_t), which flow directly into Calculated Revenue (R_t).

Directly Attributable Revenue Terms (Directly Remunerated Services)

3.12 This type of variable value is used to derive the DRS adjustment term that feeds directly into Calculated Revenue (R_t). It is not used in the Totex Incentive Mechanism and does not have a slow money component.

Finance Inputs

3.13 This category comprises:

- a) Cost of capital percentage ($iBTA_t$ and RFR_t)³: This type of variable value affects the allowance provided to the licensee for financing their capital needs and contributes to Calculated Revenue (R_t) indirectly.
- b) Tax allowance⁴: This type of variable value relates to taxation of the licensee and contributes indirectly to Calculated Revenue (R_t) or, in the case of $TAXA_t$, flows directly into Calculated Revenue (R_t).
- c) Real Price Effects (RPE_t)⁵: This is the annual growth rate used for the derivation of the RPE indexation values. These in turn are applied to the relevant allowed totex spend, to derive the related RPE totex allowance.

Legacy Adjustments

3.14 This type of variable value relates to adjustments for previous price controls and comprises:

- a) Legacy Revenue adjustments (LAR_t): These types of adjustments flow directly into Allowed Revenue (AR_t).
- b) Legacy RAV Additions Adjustment ($LRAV_t$): These variable values contribute indirectly to Calculated Revenue (R_t).

Forecasting Penalty inputs

3.15 This type of variable value is used in the calculation of the Forecasting Penalty (FP_t) and comprises the Base Revenue Forecasting Penalty ($BRFP_t$), Recovered Revenue Forecasting Penalty ($RRFP_t$), Base Revenue (BR_t) and Allowed Revenue as published (AR^*t).

Inflation Inputs

3.16 The ED2 PCFM contains the following PCFM Variable Values relating to the price index:

- a) RPI_m
- b) $CPIH_m$

³ See Section 4 of this handbook.

⁴ See Section 6 of this handbook.

⁵ See Section 5 of this handbook.

c) $CYRPIF_t$

d) $CYCPIH_t$

e) $LCPIHF_t$

3.17 These inputs provide for the model to be able to calculate PI_t as well as a forecast in accordance with the methodology below.

List of PCFM Variable Values

Table 3.1: List of PCFM Variable Values

Variant Totex Allowances

VV	Description	SpC	Cross-reference / Associated Document
$PSUP_t$	Physical Security Re-opener	SpC 3.1	
SWR_t	Specified Street Works Costs Re-opener	SpC 3.1	
REC_t	Rail Electrification Costs Re-opener	SpC 3.1	
NZ_t	Net Zero Re-opener	SpC 3.6	
CAM_t	Coordinated Adjustment Mechanism Re-opener	SpC 3.7	
ESR_t	Electricity System Restoration Re-opener	SpC 3.1	
EVR_t	Environmental Re-opener	SpC 3.1	
$NARM_t$	Network Asset Risk Metric Expenditure	SpC 3.1	
$SRVD_t$	Load Related Expenditure: Secondary Reinforcement	SpC 3.9	
$LVSVD_t$	Load Related Expenditure: Low Voltage Services	SpC 3.9	
LRE_t	Load Related Expenditure Re-opener	SpC 3.1	
$DIGI_t$	Digitalisation Re-opener	SpC 3.1	
PCB_t	PCB Interventions	SpC 3.5	
VAP_t	Visual Amenity Projects	SpC 3.4	
$CROT_t$	Cyber Resilience OT baseline	SpC 3.3	
$CROTRE_t$	Cyber Resilience OT Re-opener	SpC 3.2	
$CRITRE_t$	Cyber Resilience IT Re-opener	SpC 3.2	
OGG_t	Off-gas Grid Mechanistic Price Control Deliverable	SpC 3.14	
$SLKC_t$	Shetland Link Contribution (SSEH only)	SpC 3.16	
WCC_t	West Coast of Cumbria Re-opener (ENWL only)	SpC 3.1	
$SEFEC_t$	Shetland Extension Fixed Energy Costs Re-opener (SSEN only)	SpC 3.1	

VV	Description	SpC	Cross-reference / Associated Document
HO _t	Hebrides and Orkney Re-opener (SSEN only)	SpC 3.1	
SSMP _t	Smart Street Mechanistic Price Control Deliverable (ENWL only)	SpC 3.13	
WSC _t	Worst Served Customers	SpC 3.4	
EOP _t	EV Optioneering Projects	SpC 3.4	
CRIT _t	Cyber Resilience IT baseline	SpC 3.3	
WDV _t	Wayleaves and Diversions Re-opener	SpC 3.1	
IS _t	Indirects Scaler	SpC 3.12	
LMP _t	LineSIGHT Mechanistic Price Control Deliverable (ENWL only)	SpC 3.15	
NEWD _t	Depot Refurbishment (Plymouth, Torquay & Exeter)	SpC 3.3	
CTRL _t	New Control Room (SSEN only)	SpC 3.3	
SAR _t	Storm Arwen Re-opener	SpC 3.1	
HVP _t	High Value Projects Re-opener	SpC 3.1	
SINV _t	Strategic Investment	SpC 3.3	
CGRS _t	Carry-over Green Recovery Scheme	SpC 3.8	
OTSW _t	1-in-20 Severe Weather Event	SpC 3.10	
NGLRE _t	Net to Gross Load Related Expenditure	SpC 3.11	

Actual Totex (capitalisation rate 1)

VV	Description	SpC	Cross-reference / Associated Document
ALC	Actual load related capex		
ANCA	Actual non-load related capex - asset replacement		
ANCO	Actual non-load related capex - other		
AFA	Actual faults		
ATC	Actual tree cutting		
ARP	Actual 100% 'revenue pool' expenditure		
ACO	Actual controllable opex		

Actual Totex (capitalisation rate 2)

VV	Description	SpC	Cross-reference / Associated Document
ALCU	Actual load related capex		
ANCAU	Actual non-load related capex - asset replacement		
ANCOU	Actual non-load related capex - other		
AFAU	Actual faults		
ATCU	Actual tree cutting		
ARPU	Actual controllable opex		
ACOU	Actual load related capex		

Pass-through costs

VV	Description	SpC	Cross-reference / Associated Document
LF _t	Licence Fee Payments	SpC 6.1	
RB _t	Prescribed Rates	SpC 6.1	
TB _t	Pass-through Transmission Connection Point Charges	SpC 6.1	
SMC _t	Smart Meter Communication Licensee Costs	SpC 6.1	
SMIT _t	Smart Meter Information Technology Costs	SpC 6.1	
RF _t	Ring Fence Costs	SpC 6.1	
SLR _t	Supplier of Last Resort Net Costs	SpC 6.1	
IBDA _t	Valid Bad Debt Claims	SpC 6.1	
EDE _t	Pension Scheme Established Deficit repair expenditure	SpC 6.1	
SCR _t	Failed Supplier Recovered Costs	SpC 6.1	
SEC _t	Shetland Variable Energy Costs incurred (SSEH ONLY)	SpC 6.1	
HB _t	Assistance for high-cost distributors adjustment (SSEH ONLY)	SpC 6.1	

Incentive Revenue

VV	Description	SpC	Cross-reference / Associated Document
TTC _t	Time to connect	SpC 4.2	
BMCS _t	Broad Measure of Customer Service	SpC 4.3	
IQ _t	Interruptions incentive scheme	SpC 4.4	
MC _t	Major connections	SpC 4.5	

CVI _t	Vulnerability incentive	SpC 4.6	
DSOI _t	Distribution System Operator	SpC 4.8	
DFG _t	Dig, Fix and Go (ENWL only)	SpC 4.9	
CSW _t	Collaborative Streetworks (UKPN only)	SpC 4.10	
BPI _t	BPI reward/penalty	SpC 4.7	

Other revenue allowances

VV	Description	SpC	Cross-reference / Associated Document
NIA _t	Network Innovation Allowance	SpC 5.2	
CNIA _t	Carry-over Network Innovation Allowance	SpC 5.3	
CGSRA _t	Revenue adjustments in respect of connection performance failures	SpC 5.3	
AUM _t	Aggregate Amount	SpC 9.10	

Directly Remunerated Services

VV	Description	SpC	Cross-reference / Associated Document
DRS1R _t	DRS1. Connection services revenue	SpC 9.7	
DRS1C _t	DRS1. Connection services costs	SpC 9.7	
DRS2R _t	DRS2. Diversionary works under obligation revenue	SpC 9.7	
DRS2C _t	DRS2. Diversionary works under obligation costs	SpC 9.7	
DRS3R _t	DRS3. Works required by any alteration of premises revenue	SpC 9.7	
DRS3C _t	DRS3. Works required by any alteration of premises costs	SpC 9.7	
DRS10C _t	DRS10. Value Added Services costs	SpC 9.7	
DRS11R _t	DRS11. Top-up, standby and enhanced system security revenue	SpC 9.7	
DRS11C _t	DRS11. Top-up, standby and enhanced system security costs	SpC 9.7	
DRS12R _t	DRS12. Revenue protection services revenue	SpC 9.7	
DRS12C _t	DRS12. Revenue protection services costs	SpC 9.7	
DRS13R _t	DRS13. Metering Services revenue	SpC 9.7	
DRS13C _t	DRS13. Metering Services costs	SpC 9.7	
DRS14R _t	DRS14. Smart Meter Roll-out rechargeable services revenue	SpC 9.7	

VV	Description	SpC	Cross-reference / Associated Document
DRS14C _t	DRS14. Smart Meter Roll-out rechargeable services costs	SpC 9.7	
DRS15R _t	DRS15. Miscellaneous revenue	SpC 9.7	
DRS15C _t	DRS15. Miscellaneous costs	SpC 9.7	
DRS16C _t	DRS16. Distribution Network Voltage Control Services costs	SpC 9.7	

Legacy values

VV	Description	SpC	Cross-reference / Associated Document
LMOD	RIIO-1 MOD	SpC 7.2	
LRAV	Legacy RAV	SpC 7.3	
OGP _t	General pool RIIO-2 opening balance brought forward	SpC 7.1	
OSRP _t	Special rates pool RIIO-2 opening balance brought forward	SpC 7.1	
ODRP _t	Deferred revenue expenditure pool RIIO-2 opening balance brought forward	SpC 7.1	
LODRP _t	Deferred revenue expenditure pool capex additions pre-RIIO-2	SpC 7.1	
OSBP _t	Structures and buildings pool RIIO-2 opening balance brought forward	SpC 7.1	
OTL _t	Tax losses brought forwards	SpC 7.1	
REV	Relevant revenue adjustments	SpC 7.7	
RPIF	ED1 Price index adjustment factor	SpC 7.7	
LK	Legacy correction factor	SpC 7.7	
RD	Regulated Distribution Network Revenue		
AR	Allowed Distribution Network Revenue		
I _t	Average Specified Rate		
PR _t	Value of PR _t (interest rate adjustment) set in a direction	SpC 7.6	
LCGSRA	Connections GS Failure Payments Adjustment	SpC 7.1	
LCGSPM	Connection Guaranteed Standards Payments made	SpC 7.1	
LTCGSR	Total connection guaranteed standards revenue exposure	SpC 7.1	
BM _t	Broader Measure of Customer Service (£m real 2012/13 prices)	SpC 7.4	
CS	Customer Satisfaction Survey term	SpC 7.4	
CM	Complaints metric term	SpC 7.4	

VV	Description	SpC	Cross-reference / Associated Document
SE	Stakeholder engagement reward term	SpC 7.4	
IQ _t	Interruptions-Related Quality of Service (£m real 2012/13 prices)	SpC 7.4	
QZ	Performance on the number of supply interruptions and the duration of supply interruptions	SpC 7.4	
QC	Performance on severe weather supply restoration	SpC 7.4	
QD	Performance on normal weather supply restoration	SpC 7.4	
ICE _t	Incentive on Connections Engagement (£m real 2012/13 prices)	SpC 7.4	
ICEO	Incentive on Connections Engagement negative performance adjustment	SpC 7.4	
TTC _t	Time To Connect (£m real 2012/13 prices)	SpC 7.4	
TQA	LVSSA Time to Quote term	SpC 7.4	
TQB	LVSSB Time to Quote term	SpC 7.4	
TCA	LVSSA Time to Connect term	SpC 7.4	
TCB	LVSSB Time to Connect term	SpC 7.4	
LFA	Licence fee payments	SpC 7.5	
LFE	Licence fee allowance	SpC 7.5	
RBA	Business rates payments	SpC 7.5	
RBE	Business rates allowance	SpC 7.5	
PTPA	Pass-through Transmission Connection Point Charges incurred	SpC 7.5	
PTPE	Pass-through Transmission Connection Point Charges allowance	SpC 7.5	
SMCA	Smart Meter Communication Licensee Costs incurred	SpC 7.5	
SMCE	Smart Meter Communication Licensee Costs allowance	SpC 7.5	
SMIA	Smart Meter Information Technology Costs incurred	SpC 7.5	
SMIE	Smart Meter Information Technology Costs allowance	SpC 7.5	
RFA	Ring Fence Costs incurred	SpC 7.5	
RFE	Ring Fence Costs allowance	SpC 7.5	
SECA	Shetland variable Energy Costs Actual incurred (SSEH only)	SpC 7.5	
SECE	Shetland variable Energy Costs allowance (SSEH only)	SpC 7.5	

VV	Description	SpC	Cross-reference / Associated Document
SEVECA	Shetland Extension Variable Energy Costs incurred (SSEH only)	SpC 7.5	
SEVECE	Shetland Extension Variable Energy Costs allowance (SSEH only)	SpC 7.5	
SNESRCA	Shetland New Energy Solution Residual Costs incurred (SSEH only)	SpC 7.5	
SNESRCE	Shetland New Energy Solution Residual Costs allowance (SSEH only)	SpC 7.5	
SLRA	Supplier of Last Resort Net Costs incurred	SpC 7.5	
ESA	Excess specified amount		
EBDA	Eligible Use of System Bad Debt Costs incurred	SpC 7.5	
RBD	Recovered Bad Debt	SpC 7.5	
IBDA	Valid Bad Debt Claim		
PCBD	Aggregate value of provisional COVID-19 Bad Debt incurred	SpC 7.5	
RCBD	Credited Amount by the Administrator or Liquidator	SpC 7.5	
CBDA	Aggregate value of COVID-19 Bad Debt incurred	SpC 7.5	
LCN _t	Low Carbon Networks Fund	SpC 7.8	

Finance inputs

VV	Description	SpC	Cross-reference / Associated Document
RFR	Risk-free rate		
iBTAt	iBoxx trailing average		
RPEI _t	RPEs index		
AND _t	Adjusted net debt		
TDNI _t	Tax deductible net interest cost		
TAXA _t	Tax allowance adjustment	SpC 2.2	
TTE _t	Tax liability allowance adjustments - driven by tax trigger events		
CT _t	Corporation tax rate		
GCA _t	General pool capital allowance rate		
SRCA _t	Special Rates capital allowance rate		
SBCA _t	Structures and buildings capital allowance rate		
DRCA _t	Deferred Revenue Expenditure capital allowance rate		

VV	Description	SpC	Cross-reference / Associated Document
TPA _t	Variant and non-variant allowances: tax pool allocations		

Calculation of forecasting penalty

VV	Description	SpC	Cross-reference / Associated Document
AR* _t	Allowed Revenue (as published)	SpC 2.1	
BR _t	Base Revenue (as published)	SpC 2.1	
BDA _t	Bad Debt	SpC 2.1	
RBD _t	Recovered Bad Debt	SpC 2.1	
BRFPA _t	Base Revenue Forecasting Penalty adjustment	SpC 2.1	
RRFPA _t	Recovered Revenue Forecasting Penalty adjustment	SpC 2.1	

Inflation inputs

VV	Description	SpC	Cross-reference / Associated Document
RPI _m	Outturn RPI monthly data		PCFH, Chapter 2
CPIH _m	Outturn CPI monthly data		PCFH, Chapter 2
CYRPIF _t	Annual RPI forecast data		PCFH, Chapter 2
CYCPIH _t	Annual CPI forecast data		PCFH, Chapter 2
LCPIHF _t	Long term CPIH inflation forecast		PCFH, Chapter 2

4. Calculation of vanilla WACC, cost of debt and equity indexation

- 4.1 The licensee’s Calculated Revenue (R_t) includes amounts which cover the efficient cost of raising finance for the Distribution Business from external sources, commonly referred to as the ‘cost of capital’. These amounts are calculated as a percentage return on the licensee’s RAV. The allowed return on capital is Ofgem’s estimate of the vanilla weighted average cost of capital (vanilla WACC). This is calculated on a real basis determined using a pre-tax real allowed return on debt percentage, a post-tax real allowed return on equity percentage and a notional gearing percentage weighting.
- 4.2 Under the ED2 price control, the notional gearing percentage is fixed for the Price Control Period. However, there are annual revisions to:

- a) the allowed return on debt; and
 - b) the allowed return on equity annually through changes to the real (CPIH based) risk-free rate (RFR).
- 4.3 The updates are given effect by updating the PCFM Variable Values in accordance with the methodologies which follow.

Cost of debt

- 4.4 The licensee will use the following methodology to update the Variable Value $iBTA_t$.
- 4.5 The values of $iBTA_t$ will be updated annually.

Step 1 – obtain or forecast nominal bond yields

- 4.6 For each day from 01 November 2005 to 31 October 2026, obtain a nominal bond yield as follows:
- a) for days up to and including 31 October in the year in which the update is being made, obtain from the Markit data service the nominal yield in % for the iBoxx Utilities 10yr+ index (ISIN reference DE0005996532); and
 - b) For days without outturn values, forecast a nominal bond yield as the sum of:
 - c) the 3-year trailing average spread between the yield on iBoxx Utilities 10yr+ index and the yield for British government securities⁶, 20-year nominal zero coupon (series reference IUDMNZC),⁷ using data up to and including 31 October, and
 - d) a forecast of the yield for British government securities, 20-year nominal zero coupon. The forecast is derived from the Bank of England’s estimated nominal yield curves for British government securities (using data up to and including 31 October in the year in which the update is being conducted) by a no arbitrage condition, where a 20-year rate x years in the future can be derived from the x year rate and $20+x$ year rate.⁸ The forecast is made for dates on half-yearly intervals.
- 4.7 Starting from the last outturn day, a daily forecast will be derived using a linear interpolation.

⁶ <https://www.bankofengland.co.uk/statistics/yield-curves>

⁷ Sourced from the statistics page of the Bank of England’s website: <https://www.bankofengland.co.uk/>

⁸ For example, if A is the current $20+x$ year spot rate and B is the current x year rate, the 20year rate x years into the future is given by $[A*(20+x) - B*x]/20$

Step 2 – obtain long-term inflation forecast

- 4.8 For each day from 01 November 2005 to 31 October 2026, obtain an inflation value from the OBR’s Historical official forecasts database⁹, as follows:
- a) For days prior to 01 July 2010, the inflation forecasts used will be 2% for CPIH.
 - b) For days on or after 01 July 2010 and up to and including 31 October in the year in which the update is being made, the inflation value is the latest Office for Budget Responsibility (OBR) year 5 forecast¹⁰ of CPI that was available on that given day, subject to the assumption that the OBR forecast is available from the first day of the month following the month of publication; and
 - c) For all other days, the inflation value is the latest OBR year 5 forecast of CPI available on 31 October in the year in which the update is being conducted, in each case using the year 4 forecast for the year if the year 5 forecast is not available.¹¹

Step 3 – calculate real Daily Utilities Index (DUI_t) for each trading day

- 4.9 This step converts the nominal bond yields to a real value, incorporating additional adjustments. For each day in the period from 01 November 2005 to 31 October 2026, add to the daily yield figures obtained under Step 1:
- a) 25 basis points for additional costs of borrowing;
 - b) 55 basis points calibration adjustment; and
 - c) 6 basis points for infrequent issuer premium excluding the licensees SSSES, EMID, and EPN.
- 4.10 Then, deflate using the inflation figure obtained under Step 2, using the following formula:

$$DUI_d = \frac{1 + iBoxx_d + ADJ}{1 + \pi_d} - 1$$

⁹ Sourced from the data page of the OBR website: <https://obr.uk/download/historical-official-forecasts-database/>

¹⁰ The longest horizon available from this database is currently the inflation forecast for 5 years' time. However, if a longer horizon is published then the longest horizon available will be used in all instances where a year 5 forecast is mentioned in this chapter for the purposes of return allowance calculations.

¹¹ Currently as per Historical Official forecasts database on OBR website, there are generally two publications in a year. Publication in October in a given year for the period 'November to March' shows a year 5 forecast and publication in March for the period 'April to October' shows a year 4 forecast. For example, the inflation values for 01 November 2018, are the OBR year 5 forecasts of CPI (for 2023) published in October 2018 and the inflation values for 31 October 2018 are the OBR year 4 forecasts of CPI (for 2022) published in March 2018.

where:

subscript "d" refers to a given day;

$iBoxx_d$ is the daily yield figure obtained under Step 1 expressed as a decimal percentage;

ADJ is the applicable addition listed in paragraph 4.9; and

π_d is the inflation figure obtained under Step 2.

Step 4 – calculate iBoxx Trailing Average (iBTAt) and average allowed return on debt (CDE) for trailing period

4.11 For each Regulatory Year, calculate the arithmetic average value of the DUI_t using the periods shown in Table 4.1.

Table 4.1– time periods for calculation of iBoxx Trailing Average (iBTAt) by Regulatory Year

Regulatory Year	Time period for calculation
2023/24	01 November 2005 to 31 October 2022
2024/25	01 November 2006 to 31 October 2023
2025/26	01 November 2007 to 31 October 2024
2026/27	01 November 2008 to 31 October 2025
2027/28	01 November 2009 to 31 October 2026

4.12 The iBTAt percentages derived above are rounded to two decimal places.

4.13 The resulting averages, expressed as a percentage, constitute the revised PCFM Variable Value for iBTAt for each Regulatory Year.

Non-availability or changes to basis of data for cost of debt

4.14 If, for any reason, the iBoxx or OBR series identified above ceases to be published (or data is missing for a period considered material by Ofgem), or if Ofgem believes there is a material change in their basis, Ofgem will consult on alternatives, as well as on any reconciliation that may need to be undertaken between the above series and any replacements. To facilitate licensees using the ED2 PCFM prior to the completion of the consultation, Ofgem may direct the use

of an interim approach.¹² Any such interim approach for a given Regulatory Year will be revised following a decision on the alternative data.

- 4.15 If, for reasons other than stated in paragraph 4.14, iBoxx data (paragraph 4.6) are unavailable for a period of time such that an update cannot include days up to and including 31 October in the year in which the update is being made, then a forecast will be used with the same methodology described above with outturn data available at the time. If the data concerned is subsequently published, revised variable values for the affected Regulatory Years will be calculated at the next update.

Cost of equity

- 4.16 The licensee will use the following methodology to update the PCFM Variable Value RFR_t .
- 4.17 The values of RFR_t will be updated annually.

Step 1 – obtain real government bond yields

- 4.18 For each Regulatory Year, obtain a real government bond yield for the days shown in Table 4.2, as follows:
- a) for days up to and including 31 October in the year in which the update is being conducted, obtain the yield (these figures being percentages) for British government securities, 20-year real zero coupon (series reference IUDLRZC)¹³; and
 - b) for all other days, forecast a yield (percentages) for British government securities, 20-year real zero coupon. The forecast is derived from the Bank of England's estimated real yield curves for British government securities¹⁴ (using data up to and including 31 October in the year in which the update is being conducted) by a no arbitrage condition, where a 20-year rate x years in the future can be derived from the x year rate and 20+ x year rate.¹⁵ The forecast is made for dates on half-yearly intervals.
- 4.19 Starting from the last outturn day, a daily forecast will be derived using a linear interpolation.

¹² This interim approach would only be used if the index or series ceased to be published but is not restricted to using the value from the most recent publication that did contain the value (as required of the licensee under Special Condition 8.2.9(b)).

¹³ Sourced from the statistics page of the Bank of England's website: <https://www.bankofengland.co.uk/>

¹⁴ <https://www.bankofengland.co.uk/statistics/yield-curves>

¹⁵ For example, if A is the current 20+ x year spot rate and B is the current x year rate, the 20-year rate x years into the future is given by $[A*(20+x) - B*x]/20$

Table 4.2 – time periods for calculation of risk-free rate by Regulatory Year

Regulatory Year	Time period for calculation
2023/24	01 October 2022 to 31 October 2022
2024/25	01 October 2023 to 31 October 2023
2025/26	01 October 2024 to 31 October 2024
2026/27	01 October 2025 to 31 October 2025
2027/28	01 October 2026 to 31 October 2026

Step 2 – obtain RPI and CPI inflation forecasts

4.20 For each Regulatory Year, obtain inflation forecasts of CPI and RPI for the days shown in Table 4.2 from the OBR’s Historical official forecasts database¹⁶, as follows:

- a) for days prior to 01 July 2010, the inflation forecasts used will be 2% for CPIH and 3% for RPI.
- b) for days up to and including 31 October in the year in which the update is being conducted, the inflation forecasts are the latest OBR year 5 forecast of CPI and year 5 forecast of RPI available on that given day, subject to the assumption that the OBR forecast is available from the first day of the month following the month of publication; and
- c) for all other days, the inflation forecasts are the latest OBR year 5 forecast of CPI and year 5 forecast of RPI available on 31 October in the year in which the update is being conducted, subject to the assumption that the OBR forecast is available from the first day of the month following the month of publication,

in each case using the year 4 forecast for the year if the year 5 forecast is not available.

Step 3 – derive an RPI-CPIH inflation wedge

4.21 For each day in the periods shown in Table 4.2, calculate an RPI-CPIH wedge using inflation values from Step 2 and applying the following formula:

$$Wedge = \frac{1 + RPI \text{ year 5 forecast}}{1 + CPI \text{ year 5 forecast}} - 1$$

¹⁶ Sourced from the data page of the OBR website: <https://obr.uk/download/historical-Official-forecasts-database/>

Step 4 – calculate real risk-free rate (RFR) for each day

4.22 This step converts each of the daily real (RPI) 20-year gilt yields collected in Step 1 to daily real (CPIH) RFR by using the RPI-CPIH wedge calculated in Step 3 according to the following formula:

$$\text{Real (CPIH) RFR} = (\text{real 20yr gilt yields} + 1) * (1 + \text{wedge}) - 1$$

Step 5 – calculate average real (CPIH) RFR

4.23 The RFR_t percentages derived above are rounded to two decimal places.

4.24 The resulting averages, expressed as a percentage, constitute the revised PCFM Variable Value for RFR_t for each Regulatory Year.

Non-availability or changes to basis of data for cost of equity – risk-free rate

4.25 If, for any reason, the Bank of England or OBR series identified above ceases to be published (or data is missing for a period considered material by Ofgem), or if Ofgem believes there is a material change in their basis, Ofgem will consult on alternatives, as well as on any reconciliation that may need to be undertaken between the above series and any replacements. To facilitate licensees using the ED2 PCFM prior to the completion of the consultation, Ofgem may direct the use of an interim approach. Any such interim approach for a given Regulatory Year will be revised following a decision on the alternative data.

4.26 If, for reasons other than stated in paragraph 4.25, Bank of England data (20-year real zero coupon, para 4.18) are unavailable for a period of time such that an update cannot include days up to and including 31 October in the year in which the update is being made, then a forecast will be used with the same methodology described above with outturn data available at the time. If the data concerned is subsequently published, revised variable values for the affected Regulatory Years will be calculated at the next update.

Vanilla WACC

4.27 The ED2 PCFM will use the value of RFR_t to calculate the allowed return on equity in accordance with the following formula¹⁷:

$$ARoE_t = RFR_t + 0.75861 \times (6.5\% - RFR_t)$$

¹⁷ The PCFM also contains the capability to calculate the allowed return on equity based on a notional gearing different from 60%. Because all licensees have 60% notional gearing in ED2, we've presented the simplified calculation here.

4.28 The Vanilla WACC will then be derived in accordance with the following formula:

$$WACC_t = iBTA_t \times g + ARoE_t(1 - g)$$

where g is the notional gearing of the licensee, equal to 60%.

Provision and publication of the WACC allowance model

4.29 Ofgem will provide licensees a model containing the methodology to derive (and forecast) the PCFM Variable Values RFR_t and $iBTA_t$ ("the WACC Allowance Model").

4.30 Ofgem will update the WACC and provide a copy of the updated model containing the values to the licensee by no later than 30 November in each Regulatory Year.

4.31 Where Ofgem has not provided an updated copy of the WACC allowance model by 30 November, the licensee will perform the above updates itself.

4.32 The data and spreadsheet used to calculate the revised RFR_t and $iBTA_t$ values will be published on the Authority's Website, subsequent to the publication of the ED2 PCFM in accordance with paragraph 2.15

5. Real price effects

5.1 The RIIO-ED2 price control includes an allowance for differences between the Price Index applied to R_t and certain input price indices. We refer to these differences as Real Price Effects.

5.2 The Variable Value RPE_t , expressed as a percentage to two decimal places, identifies annual differences between the price control inflation and input price indices inflation.

5.3 The Variable Value RPE_t is used in the RIIO-2 PCFM to derive the RPE Index ($RPEI_t$) applied to certain totex allowances (in 2020/21 price terms) to allow for Real Price Effects. The totex allowances to which $RPEI_t$ applies are identified in the ED2 PCFM and the calculation of the allowance for Real Price Effects is done within the ED2 PCFM.

5.4 In updating the values of RPE_t , the licensee must follow the process set out under the heading "Use of outturn or forecast values" in this chapter.

Formula for calculating the Real Price Effects (RPE_t) term

5.5 The value of RPE_t is derived in accordance with the following formula:

$$RPE_t = \sum_{j=1}^9 W_j \left(\left(\frac{IP_{j,t}}{IP_{j,t-1}} \right) / \left(\frac{PI_t}{PI_{t-1}} \right) - 1 \right)$$

where,

- W_j means the weight applied to the input price index j , which is fixed for the price control period and takes the value in Table 5.1
- $IP_{j,t}$ means the arithmetic average of the input price index j between each of the monthly periods from 1 April to 31 March in Regulatory Year t (if applicable, noting index 1 is available as annual value only)
- PI_t means the Price Index derived in accordance with Part F of Special Condition 2.1 (Revenue Restriction) and the forecasting methodology set out in Chapter 3 of this handbook.

5.6 The input price indices (IP_j), their weightings (W_j) in the calculation of RPE_t , and the sources of out-turn values are set out in Table 5.1 below.

Table 5.1 - Input prices indices and weightings

j	Identifier	Index Description	Source	(A) Index weight within cost category	(B) Cost category weight	(A)x(B) Index weight (W_j)
		General labour				
1	Table 1.5a	ASHE Median Hourly Earnings for all employees (gross annual)		1/2	24.67%	12.34%
2	K54V	AWE: Private Sector Index: Seasonally Adjusted Total Pay Excluding Arrears	ONS	1/2	24.67%	12.34%
		Specialist Labour				
3	4/CE/01	4/CE/01 Civil Engineering Labour	PAFI published by BCIS	1/3	38.35%	12.78%
4	BEL	BEL Electrical Engineering Labour		1/3	38.35%	12.78%
5	4/CE/EL/01	BCIS Electrical Engineering Labour	PAFI published by BCIS	1/3	38.35%	12.78%
		Materials				
6	3/59	BCIS PAFI Pipes and Accessories: aluminium	PAFI published by BCIS	1/4	24.88%	6.22%

7	3/58	BCIS PAFI Pipes and Accessories: copper	PAFI published by BCIS	1/4	24.88%	6.22%
8	3/S3	3/S3 Structural Steelwork - Materials: Civil Engineering Work	PAFI published by BCIS	1/4	24.88%	6.22%
9	FOCOS	FOCOS Resource Cost Index of Infrastructure: Materials FOCOS	BCIS	1/4	24.88%	6.22%

*values are rounded, unrounded values are in the corresponding workbook

Formulae for calculating the Real Price Effects Index (RPEI_t) and RPE totex allowance (RPEA_t)

5.7 The RPE_t values are used in the ED2 PCFM to derive the RPE indexation term RPEI_t as follows:

$$RPEI_t = \prod_{i=2020/21}^t (1 + RPE_i)$$

The total RPE totex allowance (RPEA_t) is determined applying RPEI_t to the applicable totex allowance:

$$RPEA_t = (RPEI_t - 1) \cdot Tx_t$$

where,

Txt means the Totex allowance for the Regulatory Year t to which RPE indexation applies. The applicable totex is identified in the ED2 PCFM.

5.8 The ED2 PCFM will allocate the RPEA values to appropriate capitalisation rate buckets based on the capitalisation rate of the totex allowance the RPE was applied to.

Restatement of outturn values

5.9 The providers of the indices listed in Table 5.1 may, from time to time, restate or re-estimate the outturn historical values. These restated values will be used to recalculate RPE_t.

Methodology for forecast values

5.10 The values of RPE_t will be updated annually.

5.11 In calculating input price indices $IP_{j,t}$ outturn data will be updated as available no later than 30 November. This will include updating values in Regulatory Years

where a forecast was previously used. For the years where outturn values are not available then a forecast will be derived in accordance with the following sections.

General labour

5.12 For forecasting general labour indices (index 1 and 2 in Table 5.1) an annual growth rate calculated using the OBR forecast average earnings:

$$\frac{IP_{j,t}}{IP_{j,t-1}} - 1 = 0.75 \times OBREF_{t-1} + 0.25 \times OBREF_t$$

where:

OBREF_t means the OBR average earnings forecast (annual rate) published for *calendar* year t (as opposed to the financial year which is referred to in IP_t).

5.13 If a value for OBREF_t is not available, then the forecast is given by

$$\frac{IP_{j,t}}{IP_{j,t-1}} - 1 = LTAG_j$$

where:

LTAG_j is equal to 2.93% for index j=1 and 3.03% for index j=2.

Specialist labour and materials

5.14 The forecast growth rate for specialist labour and materials indices (j=3 to j=9) are based on a fixed wedge to forecast growth in the price index contained in the ED2 PCFM ($PI_t/PI_{t-1} - 1$).

5.15 The growth rate for Regulatory Year commencing on 1 April 2022 is derived in accordance with the following formula:

$$\frac{IP_{j,t}}{IP_{j,t-1}} - 1 = \frac{PI_t}{PI_{t-1}} \times (1 + LTAW_j^{RPI}) - 1$$

where $LTAW_j^{RPI}$ has the value for index j in Table 5.2.

5.16 The growth rate for the Regulatory Year commencing on 1 April 2023 is derived in accordance with the following formula:

$$\frac{IP_{j,t}}{IP_{j,t-1}} - 1 = \frac{PI_t}{PI_{t-1}} \times (1 + LTAW_j^{splice}) - 1$$

where $LTAW_j^{splice}$ has the value for index j in Table 5.2.

5.17 The growth rate for the Regulatory Years commencing on or after 1 April 2024 is derived in accordance with the following formula:

$$\frac{IP_{j,t}}{IP_{j,t-1}} - 1 = \frac{PI_t}{PI_{t-1}} \times (1 + LTAW_j^{CPIH}) - 1$$

where $LTAW_j^{CPIH}$ has the value for index j in Table 5.2.

Table 5.2 – Input price forecasting assumptions

j	Reference	RPI Wedge (LTAWRPI)	Splice Wedge (LTAWsplice)	CPIH wedge (LTAWCPIH)
3	4/CE/01	-0.20%	0.22%	0.63%
4	BEL	0.44%	0.85%	1.25%
5	4/CE/EL/01	-0.46%	-0.05%	0.37%
6	3/59	0.20%	0.60%	1.00%
7	3/58	1.93%	2.35%	2.77%
8	3/S3	1.80%	2.22%	2.64%
9	FOCOS	1.52%	1.93%	2.33%

Obligation to ensure alignment of the price index PI_t

5.18 The licensee will ensure that the values of PI_t contained in the model which the licensee publishes under paragraph 2.1.5 of Special Condition 2.1 are used to derive the value of RPE_t in the same model.

Provision of RPE_t values

5.19 Ofgem will perform the above updates to the spreadsheet used to calculate the RPE_t values and will provide the licensee with a copy of that spreadsheet no later than 30 November. Licensees will use the values distributed by Ofgem.

5.20 Where Ofgem has not provided an updated copy of the spreadsheet used to update the RPE_t values by 30 November, the licensee will perform the above updates itself.

Non-availability of data

5.21 If, for any reason, the price indices used in calculating RPE_t cease to be published, or if Ofgem believes there is a material change in their basis, Ofgem will consult on alternatives, as well as on any reconciliation that may need to be undertaken between the above series and any replacements. To facilitate licensees using the ED2 PCFM prior to the completion of the consultation, Ofgem may direct the use of an interim approach. Any such interim approach for a given Regulatory Year will be revised following a decision on the alternative data.

6. Tax liability allowances

- 6.1 The ED2 PCFM calculates a licensee's tax liability allowance on a notional basis (i.e. as a stand-alone entity) using, among other inputs, corporation tax rates and capital allowance writing down rates. Where rate changes are announced, these can be reflected in the ED2 PCFM by updating the PCFM Variable Values for these rates (CT_t , GCA_t , $SRCA_t$, $SBCA_t$ and $DRCA_t$) ahead of each tariff-setting.
- 6.2 The ED2 PCFM also calculates a tax clawback adjustment¹⁸. Where a licensee's gearing (calculated using the Adjusted Net Debt Variable Value (AND_t) and the closing RAV position uplifted to Regulatory Year-end nominal prices in the ED2 PCFM) is greater than the notional gearing level and where its tax deductible net interest costs ($TDNI_t$) exceed the notional modelled interest costs, the tax benefit derived from its higher tax-deductible interest costs is clawed back and shared with Customers through the ED2 PCFM.¹⁹
- 6.3 Tax liability allowances are also dependent on other PCFM Variable Values including:
- a) Tax trigger events (TTE) - a licensee's notional tax liability²⁰ is subject to changes in existing legislation, case law, accounting standards and HM Revenue & Customs (HMRC) policy. Changes to these can trigger a change to tax liability allowances;
 - b) Tax allowance adjustment mechanism ($TAXA_t$) – this mechanism enables the Authority to direct an adjustment to the Calculated Tax Allowance following a tax review and having consulted with the licensee;
 - c) Regulatory Capital allowances: Opening pool balances (legacy) – opening balances of capital allowance pools can be revised, through PCFM Variable Values (OGP_t , $OSRP_t$, $OSBP_t$, $LODRP_t$ and $ODRP_t$). These balances will be rolled forward from the closing position in the RIIO-ED1 PCFM following the close-out of the RIIO-ED1 Period. See paragraph 8.3 for further information;
 - d) Capital allowances: allocation rates – the ED2 PCFM contains the rates that are used to allocate totex to each of the modelled capital allowance pools. These can be revised through PCFM Variable Values labelled as Variant and non-variant allowances: tax pool allocations (TPA_t).

¹⁸ The tax clawback policy for ED2 is to allow networks some headroom as regards the notional gearing level to be used for tax clawback purposes.

¹⁹ The tax clawback is calculated after the impact of any changes in corporation tax is taken into account.

²⁰ The tax liability which would be modelled if the event was taken into account.

- e) Tax loss brought forward (OTL_t) – this represents the opening tax loss balance, which will be rolled forward from the closing position in the RIIO-ED1 PCFM following the close-out of the RIIO-ED1 Period.
- 6.4 All of these tax-related PCFM Variable Values (with the exception of the Tax Allowance adjustment term, $TAXA_t$) feed into the Tax Allowance term (TAX_t). Both the TAX_t and $TAXA_t$ terms feed into Calculated Revenue (R_t) as set out in Special Condition 2.1 (Revenue restriction).
- 6.5 The approach to determining or revising the PCFM Variable Values in paragraph 6.3 and/or the calculation in the ED2 PCFM are described further below.
- 6.6 It should be noted that underlying tax liability allowances for the licensee within the ED2 PCFM may also change because of other PCFM Variable Values, such as changes in allowed totex. However, these changes are distinct from the specific adjustments to tax liability allowances discussed in this chapter.
- 6.7 Any recalculation of the licensee's tax liability allowances necessarily includes an iterative modelling aspect because an increased allowance gives rise to an increased liability which requires an increased allowance and so on. The effect can be either positive or negative. This 'tax allowance on tax allowance' issue is dealt with by the functionality within the ED2 PCFM and is factored into Calculated Revenue (R_t).

Regulatory tax losses

- 6.8 In some instances, the approach to calculating tax liability allowances could imply that the licensee could receive a negative allowance. In such cases, the price control treatment is to model a zero allowance and to record the tax loss arising as a 'regulatory tax loss' balance, to be deducted from the total taxable profits before the tax is calculated for any tax liability allowances that would otherwise be allocated to the Regulatory Year concerned or later Regulatory Years. The regulatory tax loss balance attributable to each Regulatory Year (together with a running total) is held within the ED2 PCFM.
- 6.9 For the avoidance of doubt, regulatory tax losses are not carried back and offset against tax liability allowances for Regulatory Years earlier than the Regulatory Year to which the regulatory tax loss concerned is attributable.

6.10 Any surrender by a licensee of losses to a group company will not be reflected within the regulatory loss balance and similarly for consortium relief.²¹

Group tax arrangements

6.11 For the purposes of the approach set out in the tax trigger event and tax review sections of this chapter, tax liabilities, allowances and trigger events are considered on a notional 'licensee business' basis. Consequently, the following are disregarded in the assessment of tax liabilities and allowances for price control purposes:

- a) the claim or surrender of group tax relief (including consortium relief);
- b) interest payments (including any coupons on debt instruments or preference share dividends) and receipts that are not tax deductible or chargeable under HMRC rules for the purposes of computing the licensee's taxable profits, including but not limited to adjustments for transfer pricing and the 'Corporate Interest Restriction Rules'; and
- c) any other adjustments required in appendix 1 to Ofgem's open letter dated 31 July 2009 (Claw-back of tax benefit due to excess gearing).²²

6.12 For the purposes of the approach set out in the tax clawback section of this chapter, levels of debt, interest and gearing are considered at licensee level, as opposed to any other level with respect to the corporate or ownership group of which the licensee is a member.

Accounting framework

6.13 For the purposes of the approach set out in the tax trigger event and tax review sections of this chapter, the accounting framework to be applied by the licensee for the purpose of computing tax liabilities is either:

- a) EU-IFRS, if adopted for use by the licensee;²³
- b) Financial Reporting Standard 101, EU adopted IFRS with reduced disclosures;
or
- c) UK GAAP under Financial Reporting Standard 102.

Tax trigger events

²¹ <https://www.gov.uk/hmrc-internal-manuals/company-taxation-manual/ctm80530>

²² <https://www.gov.uk/hmrc-internal-manuals/company-taxation-manual/ctm80530>

²³ <https://www.gov.uk/hmrc-internal-manuals/company-taxation-manual/ctm80530>

- 6.14 The ED2 PCFM allows for changes to a licensee’s tax liability allowance, through TTE, for factors exogenous to the licensee, its owners or controllers that cause a change in its notional tax liabilities²⁴ for one or more Regulatory Years. These factors exclude changes to the corporation tax rate and writing down allowance rates, which are accounted for with the PCFM Variable Values (CT_t , GCA_t , $SRCA_t$, $SBCA_t$ and $DRCA_t$), but include:
- a) changes to applicable legislation;
 - b) the setting of legal precedents through case law;
 - c) changes to HMRC interpretation of legislation; and
 - d) changes in accounting standards.

Notification of tax trigger events

- 6.15 The licensee must notify Ofgem on or before 30 September in each Regulatory Year $t-1$ of all the tax trigger events that it has become aware of by that time, except those that have been previously notified. This requirement applies equally to events that could be expected to increase or reduce the licensee’s tax liability allowances. For the purposes of complying with this requirement, the licensee must seek to ensure that it identifies and records tax trigger events.
- 6.16 If the licensee fails to notify Ofgem of any tax trigger events of which it becomes aware, or should be aware, then subject to the licensee demonstrating that it uses reasonable endeavours to identify all tax trigger events, this may not be considered a breach of the licence conditions. We will consider each tax trigger event on its merits on a case-by-case basis.
- 6.17 The notification in respect of each tax trigger event should include:
- a) a description of the tax trigger event;
 - b) the changes in tax liability allowances that the tax trigger event is considered to have caused and the Regulatory Years to which they relate;
 - c) the calculations (including all relevant parameters and values) that the licensee used to arrive at the amounts referred to in subparagraph (b) – in performing these calculations the licensee should include a ‘tax allowance on tax allowance’ factor as explained in paragraph 6.7 but should ignore the tax trigger deadband;

²⁴ The tax liability, which would be modelled if the event were taken into account.

- d) any relevant information provided by HMRC in relation to the tax trigger event;
 - e) evidence of mitigating measures that the licensee has taken to minimise any additional liabilities arising from the tax trigger event; and
 - f) comments from the licensee on:
 - g) the relevance of the tax trigger event to its tax position,
 - h) whether grounds exist to contest the applicability of the tax trigger event to the licensee, and
 - i) the reporting treatment the licensee expects to apply in its tax submissions to HMRC and in its Regulatory Accounts or statutory accounts where Regulatory Accounts are not prepared.
- 6.18 The licensee’s notification should also state whether it considers that the materiality threshold (see paragraph 6.26) has been exceeded for the Regulatory Year(s) concerned, taking into account the total net amount of tax liability changes (upward and downward) included in the current notification and any previous notifications.
- 6.19 Ofgem will review any notifications by the licensee under paragraph 6.15 and may ask the licensee:
- a) for additional information in respect of one or more of the notified events; and/or
 - b) to submit the results of agreed upon audit procedures specified by Ofgem and carried out by the licensee’s Appropriate Auditor, to assist in confirming the appropriateness and accuracy of the licensee’s calculations.
- 6.20 Ofgem will by 31 October in the same Regulatory Year t-1 inform the licensee whether, in respect of each tax trigger event, it has:
- a) agreed (on a provisional or confirmed basis) the change in tax liabilities figure calculated by the licensee;
 - b) determined (on a provisional or confirmed basis) a different change in the tax liabilities figure from that calculated by the licensee; or
 - c) decided that consideration of any change in tax liabilities should be deferred until further/better information is available.
- 6.21 In deciding which of the actions set out in paragraph 6.20 should be taken, Ofgem will consider whether the licensee has conclusively agreed its tax liabilities

for the Regulatory Year concerned with HMRC. Where there has been a provisional agreement/determination or a deferral of consideration, the TTE values concerned will be subject to further revision in a later Regulatory Year.

- 6.22 Where Ofgem decides to use a different change in the tax liabilities figure from that calculated by the licensee or decides that consideration of any change in tax liabilities should be deferred, it will set out its reasons and/or calculations. The licensee has the right to reply setting out its objections, which Ofgem will consider.
- 6.23 Ofgem will also by 31 October in each Regulatory Year t-1 notify the licensee of any tax trigger events that it proposes to take into account that have not been included in a notification sent to Ofgem by the licensee. The licensee has the right to reply setting out its objections, which Ofgem will consider.
- 6.24 If Ofgem has not finished considering any matters raised by the licensee under paragraph 6.22 or paragraph 6.23 before notifying the licensee of tax trigger events that it proposed to take into account, the Authority will through business correspondence, apprise the licensee of any provisionality it has applied in determining the revised TTE values that it proposes to apply, that might entail a further revision to those values in the next Regulatory Year.
- 6.25 Where a tax trigger event changes the allocation of allowable expenditure into different statutory capital allowance pools, the applicable allocation and allowance rates will be adjusted to take into account the new expected allocation basis from the effective date of the new requirement. Ofgem will work with licensees to agree the financial effect of revised tax pool allocation requirements where these are not straightforward.

Materiality threshold and 'deadband'

- 6.26 A materiality threshold is applied to tax trigger events during the Price Control Period and a £m threshold amount for each Regulatory Year is included among the tax trigger deadband values on the 'Finance & tax' worksheet (Tax trigger calculations section) for the licensee in the ED2 PCFM.
- 6.27 A change to the licensee's notional tax liability allowance for a particular Regulatory Year is only applied where one or more trigger events would result in a tax liability allowance change for that Regulatory Year whose absolute value is greater than the threshold amount. Furthermore, any change to the tax liability allowance (upward or downward) is limited to the amount that is in excess of the threshold amount for the Regulatory Year concerned. Additionally, tax trigger

events will only be taken into account for the purposes of increasing the licensee's tax liability allowances where the licensee has demonstrably used its reasonable endeavours to minimise any increase in its tax liabilities.

- 6.28 Where the change to the licensee's tax liability allowance for a particular Regulatory Year is below the threshold, subsequent tax trigger events, relating back to that Regulatory Year, could cause the threshold amount to be exceeded. In that case, a change to the licensee's tax liability allowance for the Regulatory Year concerned (a revised TTE value) would be determined once the threshold had been exceeded.
- 6.29 For the avoidance of doubt, a regulatory tax loss figure attributable to a particular Regulatory Year is not taken into account for the purposes of deciding whether the threshold amount has been exceeded for that Regulatory Year.

Logging of trigger events

- 6.30 Ofgem will keep a log of tax trigger events that have been subject to notifications by it or by the licensee showing for each tax trigger event:
- a) a description of the event;
 - b) the name of the party who notified the event (Ofgem or licensee);
 - c) the date of notification;
 - d) the amount of any change in the licensee's tax liabilities that has been determined; and
 - e) details of any tax trigger events for which a determination is in abeyance and a description of the outstanding actions to be taken.

Tax review

- 6.31 At the outset of the Price Control Period on 1 April 2023, the value of $TAXA_t$ is set at zero for the duration of the Price Control Period. Under Part A of Special Condition 2.2, the licensee's Calculated Tax Allowance can be updated for any periods on or after 1 April 2023 following a tax review. The Authority may consider initiating a tax review if one or more of the events described below occurs.

Potential tax review trigger events

- 6.32 The Authority may consider triggering a tax review in the following scenarios:

- a) if there are material, unexplained differences between the Calculated Tax Allowance and Actual Corporation Tax Liability, which have not been adequately explained in the supporting commentary to the reconciliation²⁵;
- b) if Ofgem is notified in writing by a licensee or stakeholder of any event that the licensee or stakeholder considers will have an impact on the licensee's Actual Corporation Tax Liability,; or
- c) if a licensee undergoes a material change in circumstances, e.g. a change in ownership, that is likely to affect its actual tax liability.

Materiality

- 6.33 Under paragraph 6.32, an unexplained difference between the Calculated Tax Allowance and Actual Corporation Tax Liability will be subject to the same materiality threshold that is applied to tax trigger events during the Price Control Period as described in paragraph 6.27 of this handbook. For the avoidance of doubt, an unexplained difference is considered material if it exceeds the threshold described.
- 6.34 Where there are numerous unexplained differences in the submitted Tax Reconciliation which are individually immaterial but when taken in aggregate are greater than the materiality threshold amount, the licensee is required to provide supporting explanation(s) in the commentary to the Tax Reconciliation.

Notifying the Authority

- 6.35 Any notification by the licensee under paragraph 6.32(b) must be made in writing to the Authority on or before 31 July in respect of the Regulatory Year two years prior and include statements setting out:
- a) the reason for the notification including a description of the specific event(s) that the licensee considers will have an impact on its Actual Corporation Tax Liability;
 - b) the impact of the specific event(s) on the licensee's Actual Corporation Tax Liability and whether it is considered material;
 - c) the Regulatory Year(s) that the licensee considers will be affected by the tax review trigger event;

²⁵ The reconciliation referred to is the Tax Reconciliation template reconciling the notional tax allowance per the ED2 PCFM and actual tax liability per their latest CT600 forms. This template forms part of the licensee's annual ED2 PCFM submissions.

- d) a calculation and the basis of the calculation for any proposed adjustments to the value of the TAXA_t term; and
 - e) supporting evidence including any relevant information or correspondence received from HMRC and any other information that the licensee considers is relevant.
- 6.36 Any notification by other stakeholders under paragraph 6.32(b) must be made in writing to the Authority on or before 31 July in respect of the Regulatory Year two years prior and must include as much information as is available to the stakeholder in line with the criteria set out in paragraph 6.35. Where there are gaps in the information provided by the relevant stakeholder, Ofgem will engage with the applicable licensee to ascertain whether the licensee itself should submit a notification under paragraph 6.32(b).
- 6.37 Where Ofgem receives a notification from any stakeholder after 31 July in any Regulatory Year and an adjustment is made following the process outlined in paragraphs 6.39 to 6.47, that adjustment will be made in the subsequent Regulatory Year following the direction of the TAXA_t term. In such a case, the functionality of the PCFM means that a Time Value of Money Adjustment will be applied.
- 6.38 If an adjustment is made to the TAXA_t term for a period prior to the Regulatory Year in which the tax review is triggered, any resultant changes to Allowed Revenue will, subject to a Time Value of Money Adjustment, be brought forward. For the avoidance of doubt, such an adjustment will not have any retrospective effect on a previously published value of Allowed Revenue.

Preliminary assessment

- 6.39 Where one or more of the tax trigger events set out in paragraph 6.32 occur, Ofgem will perform a preliminary assessment before deciding whether to undertake a tax review.
- 6.40 This preliminary assessment may involve the Authority requesting further information from the affected licensee(s) and from the stakeholder who submitted the notification under 6.32(b) and explaining that it is considering undertaking a tax review.

Review process

- 6.41 If the preliminary information requested does not suitably address the concerns raised, Ofgem may undertake a formal tax review, for which it will procure, at the licensee's expense, a review by an Appropriately Qualified Independent Examiner.

- 6.42 Ofgem will notify the licensee or licensees affected in accordance with Part A of Special Condition 2.2 (Tax allowance adjustment) that it intends to commence the review.
- 6.43 Throughout the course of the tax review, the licensee will have opportunities to comment on the examiner's findings and engage with both the Appropriately Qualified Independent Examiner and Ofgem before the final report is submitted by the examiner to Ofgem.

After the review

- 6.44 Following the tax review, the Authority will consider the findings of the Appropriately Qualified Independent Examiner's report. Where the examiner's report confirms that a material, unexplained difference exists between the licensee's Calculated Tax Allowance and its Actual Corporation Tax Liability, the Authority will direct that an adjustment be made to correct for the effect of the confirmed material, unexplained difference. The Authority will make a direction adjusting the tax allowance through the PCFM Variable Value $TAXA_t$ in accordance with Part B of Special Condition 2.2 (Tax allowance adjustment).
- 6.45 Before making a direction, the Authority will consult on the proposed adjustment to $TAXA_t$ for no less than 28 days.
- 6.46 Where the Appropriately Qualified Independent Examiner's report contains information that is considered confidential or market sensitive, the licensee may request that this information be redacted from any publication. Information agreed in writing as being confidential by the Authority will be excluded from any publications.
- 6.47 The adjusted value will be reflected in the ED2 PCFM and will be published on the Authority's Website by 30 November in each Regulatory Year.
- 6.48 For the avoidance of doubt, there will be no duplication or double-counting of adjustments between the $TAXA_t$ term and the other tax mechanisms that feed into the TAX_t term.

Capital allowances

Opening pool balances (legacy)

- 6.49 Tax liability allowance calculations make use of regulatory tax pool balance figures held within the PCFM. The opening balances (as at 1 April 2023 for these tax pools may be subject to legacy price control adjustments through revisions to (OGP_t , $OSRP_t$, $OSBP_t$, $LODRP_t$ and $ODRP_t$) PCFM Variable Values.

7. Pensions

Financial Adjustments - Pensions

7.1 The PCFM contains a PCFM Variable Value (EDE) allowance for Pension Scheme Established Deficit (PSED) repair expenditure for each Regulatory Year of the Price Control Period. Opening values for EDE are based on the outcome of a pension reasonableness review concluded in November 2020. EDE (or the pensions allowance value) will be updated during the Price Control Period, according to the provisions of this chapter.

Expected timing of pensions allowance revisions

7.2 The intention is that pensions allowance values will only be revised periodically in light of a Triennial Valuation of the relevant pension schemes. Two pension scheme valuations are expected in the RIIO-ED2 Price Control Period, as set out in Table 7.1, with both of these expected to result in publication of revised allowances within the period.

Table 7.1 – Expected timetable for pensions scheme valuations

Pension scheme valuation date	Completion of Reasonableness Review	Publication of revised pension allowance value
31 March 2022	31 October 2023 (rr = 2023/24)	30 November 2023
31 March 2025	31 October 2026 (rr = 2026/27)	30 November 2026
31 March 2028	31 October 2029 (rr = 2029/2030)	30 November 2029

7.3 Although the intention is to revise pensions allowance values according to the timetable in Table 7.1, it may be necessary to revise them at different times if, for example, the outcome following any detailed review of an established surplus (see 7.12), or a scheme valuation or completion of a Reasonableness Review (see from paragraph 7.30) is delayed. In those circumstances, pensions allowance values would still be determined in a way that is consistent with the procedures set out in this chapter. The revision of pensions allowance values at a different time because of the delayed completion of a Reasonableness Review will not affect the timetable for subsequent reviews of pensions allowance referred to in Table 7.1.

7.4 Licensees whose scheme Triennial Valuation dates differ to those shown in the first column of Table 7.1 will be required to provide either a full valuation or an

Updated Valuation on these dates. The approach that should be used by the licensee to produce an Updated Valuation is set out in the Authority's Pension Deficit Allocation Methodology²⁶, published in the triennial pension reporting pack as part of the RIGs.

7.5 The remainder of this chapter sets out:

Section 1: general provisions

Section 2: the timetable and process for revising pension allowance values, including details of the Reasonableness Review

Section 3: the calculation of revised pensions allowance values

Section 1 – General provisions

Price control pension principles

7.6 The Authority's price control pension principles are set out in Ofgem's guidance note on price control pension principles under RIIO issued as Appendix 3 to the decision letter, 'Decision on the Authority's policy for funding Pension Scheme Established Deficits' dated 7 April 2017.²⁷

Pension Scheme Established Deficit

7.7 For the purposes of this chapter:

- a) the term cut-off date refers to the date of 31 March 2010
- b) the term Pension Scheme Established Deficit (PSED), or "established deficit", means an amount derived as the value of the liabilities within a Defined Benefit Scheme (or schemes) sponsored (or co-sponsored, eg if part of a group scheme) by the licensee expressed as a positive number, less the corresponding assets, where those assets and liabilities are:
 - i. attributable to the licensee's Distribution Business, and
 - ii. attributable to pensionable service up to and including the cut-off date.²⁸

7.8 The licensee's PSED will be calculated using:

²⁶https://www.ofgem.gov.uk/sites/default/files/docs/2020/04/pension_regulatory_instruction_and_guidance_v_ersion_2.1_clean_0.pdf

²⁷ https://www.ofgem.gov.uk/system/files/docs/2017/04/decision_on_policy_for_funding_pseeds.pdf

²⁸ This definition applies even if the value derived is a negative amount (a surplus position) and may be described as an "established surplus".

- a) the Triennial Valuation of the pension scheme or schemes that contain the PSED described in paragraph 7.7
- b) the allocation of assets and liabilities in the scheme(s) referred to in subparagraph a) to the PSED using the Pension Deficit Allocation Methodology;
- c) the effective date for revised allocations at each Triennial Valuation that take effect in the year rr (see Table 7.1); and
- d) the Reasonableness Review with respect to the price control pension principles which could, exceptionally, result in adjustments to the PSED figure on account of errors in methodology or data.

7.9 While the Price Control Period ends on 31 March 2028, pensions allowance values will be determined having regard to further PSED repair periods determined under the methodology set out in this chapter (and the associated Price Control Financial Instrument licence condition).

Established surpluses

7.10 The existence of an established surplus indicates that consumers have funded the relevant pension scheme more than it would now appear was necessary. One of the objectives behind our policy is to protect the consumer interest by encouraging strategies that ensure any over-funding can be returned to consumers, where appropriate, and that minimise the risk of a surplus being unrecoverable for consumers or being used, for example to de-risk the scheme, in a way that would not otherwise be in the consumer interest. Strategies may include careful management of deficit funding, the use of asset backed funding arrangements as described from paragraph 7.14, and the use of pension contribution holidays, especially when a scheme still has a significant number of active members. The existence of a surplus does not necessarily mean consumers have overpaid, for example, an efficiently incurred surplus can be effectively used to de-risk scheme funding in a way that reduces the likelihood of consumers needing to fund future deficits.

7.11 In the event that an established surplus arises, it may be appropriate for a licensee and the pension scheme trustees to agree a programme of pension contributions below the level that would otherwise be necessary to fund the accruals of benefits for active members and any deficit relating to post cut-off service. These reduced contributions can be called a contribution holiday. It is

important that a pension contribution holiday, to the extent that it is attributable to an established surplus, is returned to consumers.

- 7.12 As part of the Reasonableness Review (see paragraph 7.30) we will conduct an initial review of any established surplus to identify whether a more detailed review is required. This more detailed review would occur as part of the close out of RIIO-2, using the latest information available at that time. The review would take into account the mitigating actions a company has put in place to manage an unnecessary surplus, prevailing and forecast market conditions, the impact of any pension payment holidays (including the timing of those holidays) and the materiality of the surplus. If the review concludes an adjustment is required, it would be applied as part of RIIO-2 close-out.

Pension costs outside the scope of this chapter

- 7.13 The following costs are dealt with as totex in the relevant price control and therefore fall outside the scope of this chapter:
- a) pension costs associated with employee service after the cut-off date
 - b) accrued liability costs associated with employee service after the cut-off date (Pension Scheme Incremental Deficit costs), and
 - c) pension scheme administration costs and Pension Protection Fund levy costs.

Asset-backed funding arrangements

- 7.14 The licensee may choose to enter into asset-backed funding arrangements with pension scheme trustees, either directly or indirectly through related parties. Such arrangements might include a range of alternative funding arrangements, for example, mechanisms involving contingent assets or loan notes benefitting relevant pension schemes.
- 7.15 Any asset-backed funding arrangements must be fully compliant with all conditions, for example relating to the ring fence, in the licensee's licence (except where appropriate consent has been granted under the terms of a condition).
- 7.16 Notwithstanding that an arrangement may be fully compliant with licence conditions, the licensee is encouraged to provide information on any such mechanism or prospective mechanism to the Authority at the earliest opportunity. In general, the Authority would encourage asset-backed funding arrangements that would facilitate the return of funds to consumers in the event that a pension scheme deficit turns out to be smaller than anticipated.

7.17 Asset-backed funding arrangements would in general be disregarded in the determination of revised pensions allowance values because allowances are provided for PSED repair and not for ancillary arrangements (such as asset-backed funding) per se. However, such arrangements would be relevant in any proposal by the licensee for pensions allowance values under the methodology set out in this chapter.

Section 2 – Timetable and process for triennial revision of pensions allowance values

Reasons for updating pensions allowance values

7.18 The licensee’s pensions allowance values may be revised during the Price Control Period to reflect:

- a) information contained in pension scheme actuarial valuation reports provided by the licensee to the Authority
- b) the licensee’s updated PSED
- c) information on the history of actual amounts received by the relevant pension scheme(s) in respect of PSED repair payments, attributable to the licensee, submitted to the Authority
- d) proposals made by the licensee for Base Annual PSED Allowances and payment history allowances
- e) asset-backed funding arrangements associated with proposals referred to in subparagraph d)
- f) the outcomes of Reasonableness Reviews (see from paragraph 7.30), and
- g) any pension contribution holiday attributable in whole or in part to the existence of an established surplus.

Process steps in a year in which a reasonableness review is being conducted²⁹

Step 1: by 31 July

7.19 The Authority will be in receipt of price control review information from the licensee for Regulatory Years up to and including the last complete Regulatory Year.

²⁹ Although the intention is to conduct the steps of the reasonableness review according to the dates specified in this section, it may be necessary to change these dates (eg as occurred with the review in 2020, when dates were changed as a consequence of the impacts Covid-19) whilst following the same steps.

- 7.20 The Authority will obtain the licensee’s Scheme Valuation Data Set for the relevant valuation of the licensee’s Defined Benefit Schemes by 31 July and commence a Reasonableness Review.
- 7.21 The Scheme Valuation Data Set should comprise:
- a) the actuarial valuation of each Defined Benefit Scheme in respect of which the licensee is a sponsoring employer, being either a full valuation or an update of the last preceding full Triennial Valuation, with the asset and liability values projected forward to the full valuation date on the basis set out in the Pension Deficit Allocation Methodology³⁰
 - b) each scheme’s statement of funding principles
 - c) each scheme’s statement of investment principles; and
 - d) any other information reasonably required.

Step 2: by 31 August

- 7.22 The licensee will submit:
- a) Explanations and supporting evidence where appropriate for how it has interpreted the interests of consumers to inform its participation in the governance of pension schemes, including setting investment and risk strategies
 - b) Explanation of how it has responded to any recommendations set out by the Authority in preceding Reasonableness Reviews.
- 7.23 The licensee will also submit Pension Deficit Allocation Methodology information and its PSED figure as at the relevant valuation date indicated in Table 7.1 showing the movements from the previous valuation date.

Step 3: by 14 September

- 7.24 The licensee will submit:
- a) its proposals with supporting explanation for
 - b) Base Annual PSED Allowances (PBAPAy), under paragraph 7.46
 - c) payment history allowances (PPHy), under paragraph 7.52

³⁰ <https://ofgem.gov.uk/publications-and-updates/notice-modify-regulatory-instructions-and-guidance-held-network-operators>

- d) any proposed prospective discounting basis for payment history variances, reflected in PhDRy, under paragraph 7.52.
- e) explanation of how it has engaged with pension scheme trustees and managers to advocate for the interest of consumers with respect to the PSED.

7.25 In its explanations under paragraphs 7.24 7.24e), the licensee should set out why it considers its proposals appropriately protect the interests of consumers. The licensee's explanations should, in each case, where appropriate, refer to the prevailing level of Base Annual PSED Allowances, the profile of repair payments that can be agreed with the scheme trustees, how it has sought to maintain confidence of scheme trustees in the covenant with the licensee in support of such agreement, how it has sought to minimise the risk of stranded surplus, how it has sought to balance the interests of existing and future consumers, how it has sought to manage the volatility of revenues and financial ratios and any asset-backed arrangements that are intended to protect the consumer interest. The licensee's explanations should, where appropriate, refer to or be consistent with information it submitted in accordance with paragraph 7.22.

Step 4: by 30 September

- 7.26 The Authority will provisionally decide whether:
- a) any change should be made to the licensee's proposals for Base Annual PSED Allowances and payment history allowances for reasons anticipated in paragraph 7.32a) and 7.32b), and 7.33
 - b) to apply an existing adjustment factor, introduce a new adjustment factor or extend the scope or effect of an existing adjustment factor for reasons anticipated in paragraph 7.34. Adjustment factor can be either upwards or downwards
 - c) to set out any recommendation to the licensee to adopt good practice before the next reasonableness review under paragraph 7.38.
- 7.27 The Authority will give notice of any such provisional decisions to the licensee, allowing 14 days for representations to be made.

Step 5: by 31 October

- 7.28 The Authority will complete its Reasonableness Review:
- a) determine the values BAPAy, representing the Base Annual PSED Allowances, for each of the three years following the Reasonableness Review, giving reasons for any departure from those proposed in paragraph 7.46

- b) determine the values PH_y , representing the payment history allowances, for each of the three years following the Reasonableness Review, giving reasons for any departure from those proposed in paragraph 7.52
- c) determine the values AF_y , representing any adjustment factors, for each of the three years following the Reasonableness Review
- d) calculate the pensions allowance values for each of the three years following the Reasonableness Review, such that:
- e) $EDE_y = BAPA_y + PH_y + AF_y$
- f) set out any recommendation to the licensee to adopt good practice before the next Reasonableness Review
- g) determine the discount rates for payment history allowances, hDR_y , or an unambiguous basis for determining them, for each of the three years following the Reasonableness Review, giving reasons for any departure from those proposed in paragraph 7.52
- h) confirm whether a more detailed review of any established surplus is required (see paragraph 7.12).

Step 6: by 30 November

7.29 The Authority will direct revised pensions allowance values and will publish a report on the Reasonableness Review.

Reasonableness Reviews and adjustment factors

7.30 After receiving the whole (or substantially the whole) of the licensee's Scheme Valuation Data Set (see paragraph 7.21) and its proposals for Base Annual PSED Allowances and payment history allowances (see paragraph 7.24) in respect of each defined benefit pension scheme, the Authority will review the way in which the licensee has:

- a) formulated and justified its proposals for Base Annual PSED Allowances and payment history allowances
- b) engaged with pension scheme trustees and managers to advocate for the interest of consumers with respect to the PSED, recognising the responsibilities of trustees and the regulatory framework they are subject to, recognising the uncertainties that exist in the PSED valuation and recognising the strength of the employer's covenant

- c) responded to any recommendations set out by the Authority in preceding Reasonableness Reviews
 - d) otherwise followed good practice, informed by practice in the regulated and broader private sectors, taking into account statutory and regulatory factors affecting the relevant pension schemes and the specific circumstances of each scheme, in promoting consumer interests with respect to the PSED.
- 7.31 The review referred to in paragraph 7.30 is termed the Reasonableness Review for the purposes of this methodology.
- 7.32 Having completed the review, the Authority will consider whether there is any case for:
- a) making corrections to the licensee’s calculations in respect of its proposals for Base Annual PSED Allowances and payment history allowances due to data or methodological errors
 - b) determining Base Annual PSED Allowances and payment history allowances with different profiles (while maintaining the same overall prospective values) compared with those proposed by the licensee under paragraphs 7.46 and 7.52
 - c) continuing to apply, modifying the scope or modifying the effect of any existing adjustment factors affecting pensions allowance values that were put in place following a prior Reasonableness Review
 - d) applying any new adjustment factor under paragraph 7.34, and
 - e) conducting a more detailed review of any established surplus (see paragraph 7.12).
- 7.33 The Authority will only make a determination in respect of paragraph 7.32 7.32b) if it considers the licensee’s proposals under paragraphs 7.46 and 7.52 do not appropriately protect the interests of consumers, taking into account statutory and regulatory factors affecting the relevant pension schemes, which may relate to levels of uncertainty in the assumptions adopted in the valuation of the PSED.
- 7.34 Consistent with its price control pensions Principle 3,³¹32 the Authority will only apply adjustment factors referred to in paragraph 7.32 7.32c) and 7.32 7.32d) to the extent necessary to disallow any excess costs arising from a material failure

³¹ See Appendix 3, of https://www.ofgem.gov.uk/system/files/docs/2017/04/decision_on_policy_for_funding_psed.pdf

in the licensee's responsibility for taking good care of entrusted pension scheme resources on behalf of consumers. New adjustment factors will only arise in the following limited circumstances:

- a) where the Authority has established the licensee's recklessness, negligence, fraud or breach of fiduciary duty towards consumers, such as failures in its participation in the governance of a pension scheme to correct for poor governance or management of the scheme's resources, including any undue risk of a stranded surplus
- b) inequitable charges for consumers arising from using the WACC in ascertaining the cumulative payment history variance under paragraph 7.49 for any materially accelerated PSED payments that would otherwise have been determined with reference to the discount rate specified in the licensee's Scheme Valuation Data Set
- c) the licensee's failure to respond adequately to any recommendations set out by the Authority in preceding Reasonableness Reviews.

7.35 Any modification to the effect of existing adjustment factors affecting pensions allowance values that were put in place following a prior Reasonableness Review will be made after taking equitable account of the time value of money involved, in general with reference to hDRy.

7.36 Before deciding to make determinations referred to in paragraphs 7.32 7.32b), 7.32 7.32c) and 7.32 7.32d), the Authority will consult with the licensee (see paragraph 7.27), giving its reasons with reference to paragraphs 7.33 and 7.34 and to the Pensions Principles referred to in paragraph 7.6.

7.37 After, considering any representations made by the licensee, the Authority will:

- a) notify the licensee of its decision
- b) set out the matters, referred to in paragraphs 7.33 and 7.34, that have led to its decision, and
- c) Set out the basis on which it considers any adjustment factors referred to in 7.32 7.32c) or 7.32 7.32d) might be discontinued at the next Reasonableness Review.

7.38 Where, after consulting with the licensee (paragraph 7.27) and giving due weight to the licensee's representations, the Authority considers the licensee is not following good practice which would have the effect of promoting consumer interests with respect to the PSED, the Authority will set out recommendations to the licensee for it to adopt before the next Reasonableness Review where:

- a) the Authority can reasonably establish that adopting the recommendations would not conflict with statutory and regulatory factors affecting the relevant pension schemes
- b) the Authority has taken into account the relative duties of the licensee and the pension scheme trustees and the extent to which the licensee is only able to influence trustee decisions
- c) the Authority can reasonably establish that adopting the recommendations would be in the interests of consumers and would not disproportionately impact the licensee
- d) the Authority reasonably believes it is practical for the licensee to adopt the recommendations.

Section 3 – Proposals for revised pensions allowance values

7.39 This section describes what the licensee must take into account in making its proposals for:

- a) Base Annual PSED Allowances
- b) payment history allowances.

Base Annual PSED Allowances

7.40 Base Annual PSED Allowances represent how consumers will fund the established deficit as evaluated at the last triennial review. The licensee must set out its proposal for Base Annual PSED Allowances after taking account of the following paragraphs.

7.41 The licensee must set out its calculations of:

- a) the indicative further PSED repair period, see from paragraph 7.42
- b) the indicative base annual PSED allowance, see from paragraph 7.44 and
- c) its proposal for Base Annual PSED Allowances, see from paragraph 7.46.

Indicative further PSED repair period

7.42 The indicative further PSED repair period represents a number of years (not necessarily a whole number) from the valuation date specified in Table 7.1 and is ascertained by taking the number of years that is the lower of:

- a) the value irp , where irp is calculated using the following formula:

$$irp = \frac{-LN \left(1 - LN(1 + DR) \times \frac{PSED}{EBAPA} \right)}{LN(1 + DR)}$$

where:

PSED is defined in paragraph 7.7 7.7b), expressed in 2020/21 price terms

LN returns the natural logarithm of the value to which it is applied

DR is an annual real (inflation-adjusted) discount rate specified in or justified with reference to the licensee’s Scheme Valuation Data Set (established in accordance with Principle 4 - see paragraph 7.6), and

EBAPA is an average of the Base Annual PSED Allowance expressed in 2020/21 price terms for years rr-1 and rr, where the year rr is the Regulatory Year specified in Table 7.1 for the relevant Reasonableness Review.

and

b) 15.

In the event that the PSED is negative, irp is set to zero.

7.43 For example, if the discount rate was 2%, the PSED was £1m and the EBAPA value was £100k, then the Indicative further PSED repair period would be 11.14 years, being the lower of:

a) 11.14, calculated under the formula at paragraph 7.42 7.42a), and

b) 15.

Indicative Base Annual PSED Allowance

7.44 The indicative amount for the Base Annual PSED Allowance, IBAPA, is zero if PSED is negative but is otherwise ascertained using the following formula:

$$IBAPA = PSED \frac{LN(1 + DR)}{1 - (1 + DR)^{-irp}}$$

where:

irp is the indicative further PSED repair period ascertained under paragraph 7.42.

7.45 For example, if the PSED was £1m in 2020/21 prices, the Indicative further PSED repair period was 11.14 years, and the discount rate was 2%, the indicative Base Annual PSED Allowance would be £100k. IBAPA will equal EBAPA unless irp is limited to 15.

Proposal for Base Annual PSED Allowances

7.46 Subject to its consideration of the factors set out in subparagraphs (a) to (d) below, the licensee may propose allowances in line with the Indicative Base

Annual PSED Allowance calculated under paragraph 7.44. The licensee may propose, with its supporting rationale, an alternative profile of Base Annual PSED Allowances over a repair period that may be shorter or longer than the period determined by paragraph 7.42 if it considers that the indicative Base Annual PSED Allowance calculated by paragraph 7.44 above either:

- a) does not fairly represent a profile of repair payments that can be agreed with the scheme trustees,
- b) following consultation with the Authority, does not appropriately protect the interests of consumers,
- c) derives from an indicative further PSED repair period ascertained under paragraph 7.42 which is less than 5 years, or
- d) is otherwise inappropriate or inequitable.

7.47 The alternative proposal under paragraph 7.46 must represent a profile of Base Annual PSED Allowances, $PBAPA_y$ for each year y subsequent to the valuation date specified in Table 7.1, such that

$$\sum_{y \geq rr-1} \frac{PBAPA_y(1 + f \times DR)}{(1 + DR)^{y+2-rr}} \leq PSED + LO - ABV$$

where:

$$f = \frac{1}{LN(1 + DR)} - \frac{1}{DR}$$

LO means the value of any assets included in the PSED valuation that represent an obligation from the licensee for future payments (or other consideration) to the relevant scheme(s) under an arrangement agreed between the licensee and the scheme(s)

ABV means the value of assets as at the PSED valuation date held under asset-backed arrangements that is fairly attributable to funding by the licensee out of negative cumulative payment history variances (see paragraph 7.49) up to the valuation date and where those assets are available under an agreement with pension scheme trustees only for future funding of an established deficit or for recovery on behalf of consumers, for example in the event that pension surpluses arise. Where relevant, the value should be determined using a methodology for the evaluation of ABV and ABC (see paragraph 7.52) agreed in writing by the Authority at or close to the inception of an arrangement, the Authority giving its reasons why it considers the methodology

further the interests of consumers. In the absence of any such agreement, the licensee may make its own estimate of the value of ABV, which would have a symmetrical effect on the calculations in paragraph 7.52.

PBAPA_y for years rr-1 and rr are the Base Annual PSED Allowances determined by the Authority for those years.

Payment history allowances

7.48 The determination of revisions to pensions allowance values for the licensee will include payment history allowances, which may be positive or negative, relating to the cumulative variance between the licensee’s PSED repair payments and its historical allowances for PSED repair prior to the PSED valuation date. The payment history prior to a Triennial Valuation will affect that valuation, and thus the Base Annual PSED Allowances needed to fund it as described in paragraph 7.40. Payment history allowances ensure that customers are properly compensated if the licensee has, prior to the Triennial Valuation, paid less in funding the PSED than it has received from consumers, and that companies do not lose out if they have paid more.

7.49 The cumulative pre-valuation payment history variance value at the end of the Reasonableness Review year, V_{rr}, is ascertained using a method permitted by paragraph 7.51 or using the following formula:

$$V_{rr} = LTU + \sum_{y=pco1}^{rr-2} \left(\frac{(D_y - E_y)(1 - CT_y)}{(1 + g_y \cdot hDR_y)(1 - CT_{rr+1})} \prod_{t=y}^{rr} (1 + hDR_t) \right) - \sum_{y=rr-1}^{rr} \left(\frac{PH_y(1 - CT_y)}{(1 + g_y \cdot hDR_y)(1 - CT_{rr+1})} \prod_{t=y}^{rr} (1 + hDR_t) \right)$$

where:

LTU is the legacy true-up value specified in paragraph 7.50, where relevant

pco1 means the first Regulatory Year subsequent to the cut-off date

rr is the Regulatory Year specified in Table 7.1 for the relevant Reasonableness Review

D_y means the net sum of the following, which may be positive or negative, expressed in 2020/21 price terms:

- amounts received by the relevant pension scheme(s) in respect of PSED repair during the course of year y, including amounts

received in respect of an obligation accounted for in the LO term in paragraph 7.47

- less any amounts directly or indirectly returned to the licensee or a related undertaking by the relevant pension scheme(s) during the course of year y under an arrangement agreed between the licensee and the scheme(s),
- less the amount by which ongoing pension contributions (for active members) have been reduced on account of an established surplus as described in paragraph 7.11.
- plus any amounts determined by the Authority as advisory fees or other costs relating to the development or implementation of a pensions initiative, eg a contingent asset arrangement, following a review of evidence submitted by the licensee.

PH_y is the payment history allowance determined by the Authority at a preceding Reasonableness Review or price control review, in accordance with paragraph 7.28 or otherwise, and included in the licensee’s revenue allowances for year y.

E_y means the licensee’s Base Annual PSED Allowances plus payment history allowances, PH_y (which may be positive or negative), included in revenue allowances for the year y expressed in 2020/21 prices in accordance with paragraph 7.48. E_y excludes any adjustment factor value AF but includes any prior period history allowances included in revenue allowances in the period since pco1 relating to any true-up value in LTU and any other relevant allowances, including contingent asset allowances. With the written agreement of the Authority, the licensee may adjust prior period history allowances to exclude those attributable to legacy true-up values excluded from the LTU term in accordance with paragraph 7.50.

CT_y means the actual or, in the case of CT_{rr+1}, prospective rate of Corporation Tax applicable to the licensee in year y

∏ means the product of the series in the brackets for the specified range for example:

$$\prod_{t=rr-2}^{rr} (1 + hDR_t) = (1 + hDR_{rr-2})(1 + hDR_{rr-1})(1 + hDR_{rr})$$

hDR_y means the discount rate values under any alternative discounting basis determined by the Authority in the relevant reasonableness review for year y (see 7.28 7.28f)) or, where no alternative discounting basis has been specified, the Vanilla Weighted Average Cost of Capital applicable to the licensee during year y .

$$g_y = \frac{1}{2 + hDR_y}$$

7.50 Where relevant,

- a) Subject to subparagraph b), the legacy true-up value, LTU, represents the present value as at the end of the Reasonableness Review year of any arrangement or arrangements previously agreed or determined by the Authority for the post cut-off true-up of the licensee’s pension deficit payment history or true-up of other pension-related costs prior to the cut-off date.
- b) With the Authority’s written agreement, the licensee may attribute payment history allowances to legacy true-up values identified in subparagraph a) on a present value neutral basis and exclude both attributable payment history allowances from the calculation of E_y in paragraph 7.49 and the attributable LTU value from the LTU term applied in paragraph 7.49.

7.51 The licensee may choose to present a truncated calculation of the term V_{rr} specified in paragraph 7.49, on a basis that is demonstrably consistent with the formula specified in paragraph 7.49. Such a truncated calculation would include cumulative pre-valuation payment history variance values calculated for a previous reasonableness review and rolled forward for payment history variances arising since the valuation date relevant to that earlier review, discount rates and, where relevant, changes in corporation tax rates.

7.52 The licensee should propose payment history allowances for future years y , PPH_y , such that:

$$\sum_{y \geq rr+1} \left(PPH_y (1 + h_y \cdot PhDR_y) \prod_{t=rr+1}^y \left(\frac{1}{1 + PhDR_t} \right) \right) \leq V_{rr} + ABC$$

$PhDR_y$ means the discount rate for payment history allowances for year y proposed by the licensee, or the rate forecast for year y according to the licensee’s proposed basis of determining discount rates, in either case framed in accordance with paragraph 7.25. Such a proposal may relate $PhDR_y$ to the value of DR , the WACC or rates of return on asset-

backed arrangements. In the absence of any proposal, $PhDR_y$ is the $WACC_{rr+1}$ in period $rr+1$.

ABC means the deemed present value as at the end of the Reasonableness Review year of the cumulative funding of asset-backed arrangements through negative cumulative payment history variances up to the valuation date and where those assets are available under an agreement with pension scheme trustees only for future funding of an established deficit or for recovery on behalf of consumers, for example in the event that pension surpluses arise. Where relevant, the value should be determined using a methodology for the evaluation of ABV (see paragraph 7.47) and ABC agreed in writing by the Authority at or close to the inception of an arrangement, the Authority giving its reasons why it considers the methodology furthers the interests of consumers. In the absence of any such agreement, ABC should be set at the present value of ABV specified in paragraph 7.47 as at the end of the reasonableness review year, after applying appropriate discount rates (generally hDR_y); and

$$h_y = \frac{1}{2 + PhDR_y}$$

8. Legacy adjustments

Overview

8.1 Financial adjustments relating to Regulatory Years falling in RIIO-ED1 fall into two broad categories:

- a) *Legacy inputs from the licensee*: adjustments relating to Special Conditions of this licence as in force on 31 March 2023 that required extending into ED2 to account for a lag in the mechanism. These values were previously part of regulatory reporting, but are now calculated in the ED2 PCFM in accordance with Special Conditions 7.4, 7.5, 7.6 and 7.7.
- b) *Legacy inputs directed by the Authority*: adjustments relating to ED1 Variable Value methodologies and ED1 closeout methodologies, which are implemented in the ED1 Legacy PCFM. The Authority will direct the values of LMOD, LRAV, and tax pools to be carried over into the ED2 PCFM in accordance with the procedure set out in Special Conditions 7.2 and 7.3 and in accordance with the General Financial Adjustment Methodology set out in this chapter.

Legacy inputs from the licensee

8.2 The licensee must populate the ED2 PCFM with the inputs required to calculate the legacy adjustments relating to lagged ED1 mechanisms, listed in Table 8.1 below.

Table 8.1: PCFM Legacy Inputs (part a)

Broad measure of Customer Service

Licence Terms	Special Condition
CS	SpC 7.4 Part B
CM	SpC 7.4 Part B
SE	SpC 7.4 Part B

Interruptions-related quality of service incentive revenue adjustment

Licence Terms	Special Condition
QZ	SpC 7.4 Part C
QC	SpC 7.4 Part C
QD	SpC 7.4 Part C

Incentive on Connections Engagement

Licence Terms	Special Condition
ICEO	SpC 7.4 Part D

Time To Connect

Licence Terms	Special Condition
TQA	SpC 7.4 Part E
TQB	SpC 7.4 Part E
TCA	SpC 7.4 Part E
TCB	SpC 7.4 Part E

Licence fee adjustment

Licence Terms	Special Condition
LFA	SpC 7.5 Part B
LFE	SpC 7.5 Part B

Business Rates adjustment

Licence Terms	Special Condition
RBA	SpC 7.5 Part C
RBE	SpC 7.5 Part C

Transmission Connection Point Charges adjustment

Licence Terms	Special Condition
PTPA	SpC 7.5 Part D
PTPE	SpC 7.5 Part D

Smart Meter Communication Licensee Costs adjustment

Licence Terms	Special Condition
SMCA	SpC 7.5 Part E
SMCE	SpC 7.5 Part E

Smart Meter Information Technology Costs adjustment

Licence Terms	Special Condition
SMIA	SpC 7.5 Part F
SMIE	SpC 7.5 Part F

Ring Fence Costs adjustment

Licence Terms	Special Condition
RFA	SpC 7.5 Part G
RFE	SpC 7.5 Part G

Supplier of Last Resort adjustment

Licence Terms	Special Condition
SLRA	SpC 7.5 Part H

Eligible Bad Debt adjustment

Licence Terms	Special Condition
EBDA	SpC 7.5 Part I
RBD	SpC 7.5 Part I

Legacy COVID-19 Bad Debt adjustment

Licence Terms	Special Condition
PCBD	SpC 7.5 Part J
RCBD	SpC 7.5 Part J
CBDA	SpC 7.5 Part J

Shetland Variable Energy Costs adjustment (SSEH only)

Licence Terms	Special Condition
SECA	SpC 7.5 Part K
SECE	SpC 7.5 Part K

Shetland New Energy Solution Residual Costs adjustment (SSEH only)

Licence Terms	Special Condition
SEVECA	SpC 7.5 Part L
SEVECE	SpC 7.5 Part L

Shetland New Energy Solution Residual Costs adjustment (SSEH only)

Licence Terms	Special Condition
SNESRCA	SpC 7.5 Part M
SNESRCE	SpC 7.5 Part M

Legacy K correction

Licence Terms	Special Condition
LK	SpC 7.6 Part A

Legacy TRU term

Licence Terms	Special Condition
REV	SpC 7.7 Part A

Legacy inputs directed by the Authority

General Financial Adjustment Methodology³³

- 8.3 The Authority will determine adjustments following the end of the ED1 Price Control Period in accordance with this chapter, and a direction will specify the adjustments the licensee must make in the ED1 Legacy PCFM inputs. The direction will specify an ED1 Variable Value named in the version of this licence as in force on 31 March 2023, or otherwise specify row and column references.
- 8.4 After the Authority has directed values in accordance with paragraph 8.3, and the licensee has provided RIIO-ED1 Variable Value updates from paragraph 8.7, the Authority will take the following steps:
- Ensure the ED1 Legacy PCFM is adjusted in accordance with the methodologies set out in this chapter
 - Ensure "31 Mar 2024" is selected on the "UserInterface tab" of the ED1 Legacy PCFM.
 - Select the relevant licensee "UserInterface tab" of the ED1 Legacy PCFM.
 - Run the "TaxTrigger" macro on the TaxTrigger tab and manually update the TTE Variable Value, Special rate and General rate tax pool balances using the offline super-deduction PCFM.
 - Direct the values on the "Legacy Summary" tab as the corresponding inputs to the ED2 PCFM, set out in Table 8.2.

³³ This methodology has been altered from the Decision on the Closeout Methodologies for RIIO-ED1 (though has the same overall effect), to standardise the calculation of legacy adjustments in the ED2 Legacy PCFM, per ED2 Final Determinations.

- 8.5 The licensee must then populate the ED2 PCFM with the inputs directed by the Authority and listed in Table 8.2.
- 8.6 The Authority will not direct the final values for the inputs listed in Table 8.2 until the conclusion of the component methodologies, set out in Table 8.3. Until that time, the licensee must use its best estimates.

Table 8.2: ED2 PCFM Inputs for legacy inputs directed by the Authority

Legacy MOD

Licence Terms	Special Condition
MOD	SpC 7.2 Part A

Legacy RAV

Licence Terms	Special Condition
LRAV	SpC 7.3 Part A

Legacy Tax Pools

Licence Terms	Special Condition
OGP	SpC 7.3 Part B
OSRP	SpC 7.3 Part B
OSBP	SpC 7.3 Part B
ODRP	SpC 7.3 Part B
LODRP	SpC 7.3 Part B
OTL	SpC 7.3 Part B

RIIO-ED1 Variable Value Methodologies

Revision of ED1 Variable Values

- 8.7 The licensee must use the version of this licence as in force on 31 March 2023 to determine the ED1 Variable Values for the Regulatory Years commencing on 1 April 2021 and 1 April 2022.
- 8.8 The licensee must populate the relevant fields in the ED1 Legacy PCFM.
- 8.9 The ED1 Variable Values may be further adjusted by the closeout methodologies below.

RIIO-ED1 Closeout Methodologies

- 8.10 The following seven sections set out how adjustments to the ED1 Legacy PCFM will be determined. The licensee must then adjust the ED1 Legacy PCFM input as directed in accordance with Table 8.3 below.

- 8.11 Table 8.3 lists the adjustments to the ED1 Legacy PCFM that the licensee must make for closeout methodologies, following the General Financial Adjustment Methodology in paragraph 8.3.
- 8.12 Where a Charge Restriction Condition (CRC) is cited in a methodology, it refers to the provisions of this licence as in force on 31 March 2023; however, where the CRC sets out a process for making revenue and RAV adjustments, the licensee will use the process set out in this handbook instead. These conditions may also refer to definitions within the ED1 Price Control Financial Handbook as in force on 31 March 2023.

Table 8.3: Closeout adjustments in the ED1 Legacy PCFM

Closeout methodology	Relevant ED1 licence reference	ED1 Legacy PCFM input adjusted	Basis for profiling adjustments	Direction Timing
Section 1: Load related expenditure	CRC 3G.20	LRRC	Timing profile of LRRC values	Between 1 September 2023 and 30 September 2023
Section 2: Net to gross adjustment	CRC 5G.14	LRRC	Timing profile of LRRC values	Between 30 November 2023 and 30 November 2024
Section 3: Network asset secondary deliverables	CRC 5D.9 or CRC 5D.11	Non-variant allowed non-load related capex - asset replacement	Timing profile of incurred expenditure	Between 1 December 2023 and 31 December 2023
Section 4: High value projects	CRC 3F.20	UCHVP	Timing profile of Aggregate Baseline Expenditure Allowances	By 30 November 2024
Section 5: Link boxes (SPN and SPMW only)	CRC 3F.20	UCLB	Timing profile of allowances	by 30 November 2024
Section 6: Shetland Extension Fixed Energy Costs (SSEH only)	CRC 3F.26	UCSEFEC	Timing profile of adjustments set out in the determination	by 30 November 2024

Section 6: Shetland Extension Battery Costs (SSEH only)	CRC 3F.26	UCSEBC	Timing profile of adjustments set out in the determination	by 30 November 2024
Section 7: ED1 Shetland Enduring Solution Process Costs adjustments (SSEH only)	CRC 3F.26	UCSESPC	Timing profile of adjustments set out in the determination	by 30 November 2024

8.13 Except where otherwise stated, all calculations under this section of the financial handbook are to be made with reference to 2012/13 prices using the ED1 Price Control Period price base.

Section 1: ED1 Load Related Re-opener - adjustment resulting from revised allowance levels upon Authority trigger

Calculation of ED1 Price Control Period Load Related Re-opener adjustment

- 8.14 CRC 3G.7 and 3G.10 require the Authority to evaluate an efficient value of TLRRCF for the regulatory years 2015/16 to 2022/23 (which is defined in CRC 3G.6(a) and CRC 3G.7). Under CRC 3G.7, the value of TLRRCF is used for comparison with the opening level of allowed expenditure (TLRRCov) which is defined in CRC 3G.3.
- 8.15 The methodology that will be followed in evaluating TLRRCF is set out in the Decision on the Closeout Methodologies for RIIO-ED1 Document Annex A: ED1 Load Related Re-opener Closeout Methodology.
- 8.16 If the Authority makes a determination under CRC 3G.20, that determination must be in accordance with CRC 3G.24.
- 8.17 The Authority will consult the licensee on its provisional determination and will allow the licensee at least 28 days from the date of that provisional determination in which to respond.

Section 2: Net to gross adjustment for Price Control Period Load Related Expenditure

- 8.18 CRC 5G sets out a mechanism for revising the licensee’s allowed Load Related Expenditure for the regulatory years 2015/16 to 2022/23, in circumstances where

the Authority has not given the licensee notice of proposed relevant adjustments under CRC 3G.13 which, under CRC 5G.7, would preclude the Authority from making an adjustment under CRC 5G.

Calculation of ED1 Net to Gross adjustment

- 8.19 If, under CRC 5G.8, the licensee reports that its "Relevant Expenditure has fallen outside a Specific Customer Funded Reinforcement Percentage Band", CRC 5G.11 requires the Authority to evaluate whether the licensee has provided adequate justification for why the Relevant Expenditure has fallen outside a Specific Customer Funded Reinforcement Percentage Band. If the Authority determines the licensee has not provided such adequate justification, the Authority will determine the value of relevant adjustments. In carrying out that evaluation, the Authority will follow the methodology set out at Annex B: ED1 Net to gross assessment methodology.
- 8.20 If the Authority makes a determination under CRC 5G.14, having followed the procedure set out in CRC 5G Part C, the Authority will follow the General Financial Adjustment Methodology in this chapter.

Section 3: ED1 Price Control Period Network Asset Secondary Deliverables (NASD) adjustments

- 8.21 This section sets out the methodology the Authority will follow in determining revisions under CRC 5D in respect of the licensee's delivery of Network Asset Secondary Deliverables (NASD) in the ED1 Price Control Period.
- 8.22 The Authority will follow the methodology for assessing delivery of NASD in the ED1 Price Control Period set out in Annex C: ED1 Network Asset Secondary Deliverables (NASD) Closeout Methodology.
- 8.23 If the Authority makes a determination under CRC 5D.9 or CRC 5D.11, that determination must (i) specify an adjustment to the licensee's "Non-variant allowed non-load related capex - asset replacement" in the ED1 Legacy PCFM, and (ii) set out, in accordance with CRC 5D.13, the substance of the determination, specifying the date from which it will have effect (or a mechanism or method that will determine that date). The Authority will then follow the General Financial Adjustment Methodology in this chapter.
- 8.24 If under Annex C: ED1 Network Asset Secondary Deliverables (NASD) Closeout Methodology, the Authority determines that a penalty or a reward is required, the Authority will take the following steps:

- a) Determine the NASD Allowance Adjustment Value for the ED1 Price Control Period in accordance with stage 7 as set out in Annex C: ED1 Network Asset Secondary Deliverables (NASD) Closeout Methodology;
 - b) Multiply the value obtained in step 8.24(a) by 2.5 and divide by 100 to determine the reward or penalty value.
 - c) Divide the value obtained in 8.24(b) by eight and add it to the adjustment determined in paragraph 8.23.
- 8.25 The Authority will give Notice to the licensee (and any other interested parties) of the proposed determination in accordance with CRC 5D.14 and will allow the licensee to make representations about the proposed determination which the Authority will consider.
- 8.26 The Authority will not determine a NASD adjustment for the ED1 Price Control Period before 30 November 2023.
- 8.27 The Authority will use the methodology set out in Section 3 to determine any NASD Adjustment in respect of the ED1 Price Control Period for the licensee by 30 November 2024.
- 8.28 The Authority will not determine any further NASD adjustments in respect of the ED1 Price Control Period for the licensee after 30 November 2024.

Section 4: Price Control Period High Value Project Costs (HVP) adjustments

- 8.29 CRC 3F sets out the mechanism for the proposal and determination of relevant adjustments to the licensee’s opening level of High Value Project Costs upwards or downwards for the ED1 Price Control Period.
- 8.30 This section sets out the financial methodology the Authority will follow in determining a relevant adjustment to the licensee’s allowed expenditure for High Value Project Costs following any proposal it makes under CRC 3F.8³⁴, after the end of the 2022/23 regulatory year.

HVP Re-opener adjustment

- 8.31 Paragraph 3F.11 of CRC 3F specifies the window for the Authority to give Notice of its proposal to make a relevant adjustment in respect of High Value Project Costs.³⁵ Appendix 1 of CRC 3F sets out the tests to be applied to any relevant

³⁴ For licensees EPN, LPN and SPN. Equivalent CRC 3F paragraph for SSEH is 3F.23

³⁵ EPN, LPN, SPN: 3F.12. SSEH: 3F.24

adjustment the Authority proposes in relation to High Value Project Costs, as well as the relevant material amount for the licensee.

Calculation of RIIO-ED1 HVP Re-opener adjustment

- 8.32 CRC 3F.8, CRC 3F.9, and Appendix 1 of CRC 3F allow the Authority to determine an adjustment to the allowed level of High Value Project Costs.³⁶ Under Appendix 1 of CRC 3F, the value of TUCHVPF is used for comparison with the total opening level of allowed expenditure (TUCHVPov), which are both defined under Appendix 1 of CRC 3F. The Authority will follow the methodology for evaluating TUCHVPF set out in Annex D: High Value Projects Closeout Methodology.
- 8.33 If the Authority makes a determination under CRC 3F, that determination must specify the revised total level of allowed High Value Project Costs.³⁷ The Authority will follow the General Financial Adjustment Methodology in this chapter.

Determination of ED1 Price Control Period HVP Re-opener adjustment value

- 8.34 The Authority will give Notice to the licensee (and any other interested parties) of the proposed determination in accordance with CRC 3F.23, and will allow the licensee to make representations about the proposed determination, which the Authority will consider.
- 8.35 The Authority will use the revised expenditure allowance amounts by 30 November 2024, following the General Financial Adjustment Methodology in this chapter.
- 8.36 The Authority will not determine any further revisions to the High Value Project Costs Re-opener adjustment values in respect of the ED1 Price Control Period for the licensee after 30 November 2024 for the purpose of determining revised PCFM values for the Next Price Control Period, but this shall be without prejudice to any requirement for the licensee to restate the values referred to in paragraph 8.33 for any other purpose.

Section 5: ED1 Link Box Replacement adjustments (SPN and SPMW only)

- 8.37 The link box-related uncertainty mechanism in CRC 3F provides for relevant adjustments in respect of the difference between Actual RIIO-ED1 Link Box Replacement Volumes and Allowed RIIO-ED1 Link Box Replacement Volumes. This mechanism applies to SPN and SPMW only.

³⁶ EPN, LPN, SPN: 3F.8 AND 3F.10. SSEH: 3F.31 and 3F.32

³⁷ EPN, LPN, SPN: 3F.21. SSEH: 3F.29

The uncertainty mechanism for RIIO-ED1 Link Box Costs

- 8.38 By 31 July 2023, the licensee must provide the Authority with a Performance Assessment Submission outlining the approach that it has adopted to manage the asset risk associated with Link Boxes and confirming its Actual RIIO-ED1 Link Box Replacement Volumes as compared to its Allowed RIIO-ED1 Link Box Replacement Volumes, and its associated costs.
- 8.39 The Authority will, by 30 November 2023, take the steps set out below to determine whether an adjustment to the costs associated with delivering its Allowed RIIO-ED1 Link Box Replacement Volumes should be made:
- a) The Authority will check whether it requires any further information, analysis or reformatting from the licensee in order to make a determination and, if it decides that further information is required it will give Notice of that requirement to the licensee within 10 working days of receipt of confirmation of the licensee’s Actual RIIO-ED1 Link Box Replacement Volumes. It should be noted that the issuing of a Notice as described above does not preclude the Authority from making further requests for information, analysis and reformatting. The licensee will have a minimum of 5 working days to reply to all requests for further information, analysis or reformatting.
 - b) The Authority will compare the information provided by the licensee on Actual RIIO-ED1 Link Box Replacement Volumes with the Allowed RIIO-ED1 Link Box Replacement Volumes outlined in Table 8.4.

Table 8.4: Allowed RIIO-ED1 Link Box Replacement Volumes

Licensee	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	RIIO-ED1
SPMW	242	242	449	812	971	1074	1074	1209	6073
SPN	307	1186	625	625	625	625	625	625	5243

- c) Having carried out steps (a) and (b) above and having considered the licensee’s response to any requests by the Authority for further information, analysis or reformatting, the Authority will determine whether the licensee has or has not delivered its Allowed RIIO-ED1 Link Box Replacement volumes.
- d) If Actual RIIO-ED1 Link Box Replacement Volumes - Allowed RIIO-ED1 Link Box Replacement Volumes is <0, so that the Licensee has not delivered its Allowed RIIO-ED1 Link Box Replacement Volumes, the Authority will, subject to paragraph 8.43, make a provisional determination as to whether an adjustment to allowed expenditure should be made.

e) If Actual RIIO-ED1 Link Box Replacement Volumes – Allowed RIIO-ED1 Link Box Replacement Volumes ≥ 0 , so that the Licensee has delivered its Allowed RIIOED1 Link Box Replacement Volumes, no adjustment to allowed expenditure will be made.

8.40 If the Authority determines the RIIO-ED1 Link Box Replacement Volumes have not been delivered it will provisionally determine the adjustments to the licensee’s allowed expenditure that should be made and the Regulatory Years to which those adjustments should be applied. The Authority will calculate the amount of any proposed adjustment using the volume not delivered multiplied by the unit cost values specified in Table 8.5. The Authority will determine the revisions to the UCLB values, then follow the General Financial Adjustment Methodology in this chapter.

Table 8.5: Unit costs for determining relevant adjustments in respect of RIIO-ED1 Link Box Replacement Volumes (12/13 prices)

Licensee	Unit cost (12/13 prices)
SPN	£4,537
SPMW	£5,700

8.41 If the Authority decides the licensee has delivered its Allowed RIIO-ED1 Link Box Replacement Volumes, no adjustments will be made.

8.42 The Authority will check whether the Link Box Closeout materiality threshold has been passed in accordance with paragraph 8.43. If it has not, it will not make a relevant adjustment.

Link Box Closeout materiality threshold

8.43 A Link Box Closeout Materiality Threshold applies to any proposed adjustment. The materiality threshold for the licensee, in 2012/13 prices, is specified in Table 8.6 of this subsection. If the proposed adjustment does not exceed this threshold, then no adjustment will be made.

Table 8.6: Materiality Threshold for RIIO-ED1 Link Box Replacement Volumes (£m, in 2012/13 prices)

Materiality threshold
0.2

Determination of a relevant adjustment

- 8.44 The Authority will consult the licensee on its provisional determination, allowing the licensee at least 28 days in which to respond. A determination by the Authority will specify:
- a) the Regulatory Years to which the determination applies; and
 - b) the revised total amounts of allowed Totex expenditure (in 2012/13 prices) for each of the Regulatory Years.
- 8.45 If the Authority does not make a relevant adjustment determination within four months of receiving confirmation of the licensee's Actual RIIO-ED1 Link Box Replacement Volumes, then no adjustment will be made to the licensee's allowances.
- 8.46 The Authority will factor any adjustments into its determination of the UCLB values for the licensee by 30 November 2023, for the purpose of determining the value of revised PCFM values.
- 8.47 Subject to paragraph 8.45, no further revisions to the UCLB values for the licensee will be determined after 30 November 2023.

Section 6: ED1 Shetland Extension Fixed Energy Costs and Shetland Extension Battery Costs Adjustments (SSEH only)

- 8.48 CRC 3F sets out a mechanism for revising SSEH's allowed level of Shetland Extension Fixed Energy Costs (UCSEFEC) and Shetland Extension Battery Costs (UCSEBC) expenditure at the end of the ED1 Price Control Period. CRC 3F.12 and CRC 3F.13 provide the application windows for the licensee to propose adjustments in respect of UCSEFEC and UCSEBC respectively. CRC 3F.25 provides a window for the Authority to give the licensee Notice of its intention to make an adjustment to UCSEFEC and/or UCSEBC.
- 8.49 The term UCSEFEC means costs incurred, or expected to be incurred by SSEH in managing an extension of services to meet electricity demand on Shetland to 2023, to the extent that those costs are not otherwise recoverable under the Charge Restriction Conditions of the ED1 licence. The term UCSEBC means a sub-component of those costs specifically in relation to the costs associated with providing a battery as part of the interim solution. These definitions are set out in CRC 3F.38.

- 8.50 The uncertainty mechanisms provide for relevant adjustments to levels of allowed expenditure for both cost terms for Regulatory Year 2019/20 to Regulatory Year 2022/23 in respect of:
- a) efficient costs that were not included in the calculation of Opening Base Revenue Allowances for SSEH;
 - b) efficient costs that are not subject to pass-through provisions in CRC 2B; and
 - c) Shetland Extension Fixed Energy Costs that are materially lower or higher than expected levels of actual expenditure (with respect to proposals made by the Authority or SSEH); or
 - d) Shetland Extension Battery Costs where these costs are materially higher (with respect to proposals made by SSEH) or materially lower (with respect to proposals made by the Authority) than expected levels of actual expenditure. Where costs are lower, there is no material amount required to trigger an adjustment (the material amount is zero).

The uncertainty mechanism for Shetland Extension Fixed Energy Costs

Determination of a relevant adjustment for Shetland Extension Fixed Energy Costs proposed by the licensee.

- 8.51 If the Authority receives Notice of a proposed relevant adjustment from the licensee, in respect of Shetland Extension Fixed Energy Costs it will take the steps set out below to determine whether the proposed adjustment should be confirmed, rejected or amended:
- a) The Authority will check whether the Notice has been received during the window referred to in paragraph 8.48. If the Notice has been received before 1 September 2023, the Authority will notify the licensee that the Notice has been submitted too early and should be resubmitted during September 2023. If the Notice has been received after 30 September 2023, the Authority will notify the licensee that the Notice has been received too late and that a relevant adjustment will not be determined.
 - b) The Authority will check whether:
 - c) each of the requirements set out in paragraphs 3F.31 and 3F.32 of CRC 3F has been met (except for the requirement in respect of a material amount – see step (d)); and
 - d) costs that have been incurred represent a necessary and efficient level of expenditure.

- e) The Authority will decide whether it requires any further information from the licensee in order to make a determination and, if it decides that further information is required it will give Notice of that requirement to the licensee as specified in paragraph 3F.16 of CRC 3F, within 10 working days of receipt of a proposal under paragraph CRC 3F.12 of CRC 3F.

It should be noted that the issuing of a Notice as described above does not preclude the Authority from making further information, analysis and reformatting requests in respect of the proposal.

- f) The Authority will check whether the overall materiality threshold has been passed in accordance with paragraphs 8.63, 8.65 and 8.66. If it has not been passed, then no relevant adjustment will be made.
- g) Having carried out steps (a) to (d) above, in the case of a proposal from the licensee, the Authority will provisionally determine whether to:
 - h) reject the relevant adjustment proposed by the licensee;
 - i) confirm the relevant adjustment proposed by the licensee; or
 - j) amend the relevant adjustment proposed by the licensee.

8.52 If the Authority decides to confirm or amend the licensee's proposal it will provisionally determine the adjustments to allowed expenditure that should be made and the Regulatory Years to which those adjustments should be applied, having regard to paragraph 8.50.

8.53 If the Authority decides to reject the licensee's proposal it will provisionally determine that no adjustments to allowed expenditure should be made. The Authority will consult the licensee on its provisional determination, allowing the licensee at least 28 days in which to respond. The Authority will consider any consultation responses from the licensee and will then make a relevant adjustment determination.

Determination of a relevant adjustment for the Shetland Extension Fixed Energy Costs proposed by the Authority

8.54 The Authority will assess the licensee's level of Shetland Extension Fixed Energy Costs prior to the window set out in paragraph CRC 3F.25, and will use this assessment to inform its decision on whether or not to give Notice under CRC 3F.23. In undertaking this assessment, the Authority will consider whether the licensee's Actual Shetland Extension Fixed Energy Costs are materially different (as per the materiality threshold specified in 8.63) from the total Shetland Extension Fixed Energy Costs allowance value, based on the information available

to the Authority at the time. This information will include, but not be limited to, ED1 RIGs submissions and any other relevant submissions made by the licensee during or after the ED1 Price Control Period.

- 8.55 Any proposal made by the Authority must comply with the requirements of CRC 3F.31 and CRC 3F.32. The Authority will apportion any proposed adjustment to Regulatory Years 2019/20 to 2022/23 in line with the timing profile of the licensee's UCSEFEC values.
- 8.56 On giving Notice of a proposed relevant adjustment, the Authority will follow the steps set out in CRC 3F.28, and will then make a relevant adjustment determination.

The uncertainty mechanism for the Shetland Extension Battery Costs

Determination of a relevant adjustment for the Shetland Extension Battery Costs proposed by the licensee

- 8.57 Once the Authority receives Notice of a proposed relevant adjustment by the licensee and a complete record of the licensee's Shetland Extension Battery Costs, it will take the steps set out below to determine whether the proposed adjustment should be made:
- a) The Authority will check whether the Notice has been received during the window referred to in paragraph 8.48. If the Notice has been received before 1 July 2023, the Authority will notify the licensee that the Notice has been submitted too early and should be resubmitted during July 2023. If the Notice has been received after 31 July 2023, the Authority will notify the licensee that the Notice has been received too late and that a relevant adjustment will not be determined.
 - b) The Authority will check whether: i. each of the requirements set out in paragraphs 3F.31 and 3F.32 of CRC 3F has been met (except for the requirement in respect of a material amount – see step (d)); and ii. costs that have been incurred represent a necessary and efficient level of expenditure.
 - c) The Authority will check whether it requires any further information from the licensee in order to make a determination and, if it decides that further information is required it will give Notice of that requirement to the licensee as specified under paragraph 3F.16 of CRC 3F, within 10 working days of a receipt of a proposal under paragraph CRC 3F.13.

It should be noted that the issuing of a Notice as described above does not preclude the Authority from making further information, analysis and reformatting requests in respect of the proposal.

- d) The Authority will check whether the overall materiality threshold has been passed in accordance with paragraphs 8.64 to 8.66 for the proposed relevant adjustments for Shetland Extension Battery Costs. If it has not, then no relevant adjustment will be made.
- e) Having carried out steps (a) to (d) above, the Authority will provisionally determine whether:
 - f) the licensee has not spent its Shetland Extension Battery Costs, or whether the licensee has spent its Shetland Extension Battery Costs and the materiality threshold has been passed, and whether to reject, confirm or amend the relevant adjustment proposed by the licensee, and an adjustment to allowed expenditure should be made; or
 - g) the licensee has spent its Shetland Extension Battery Costs and the materiality threshold has not been passed and thus that no adjustment to allowed expenditure should be made.

8.58 If the Authority determines the Shetland Extension Battery Costs have not been spent, or that the licensee has spent its Shetland Extension Battery costs and the materiality threshold has been passed, and it decides to confirm or amend the licensee's proposal, it will provisionally determine the adjustments to the licensee's allowed expenditure that should be made and the Regulatory Years to which those adjustments should be applied, having regard to paragraph 8.50.

8.59 The Authority will consult the licensee on its provisional determination, allowing the licensee at least 28 days in which to respond. The Authority will consider any consultation responses from the licensee and other respondents and will then make a relevant adjustment determination.

Determination of a relevant adjustment for the Shetland Extension Battery Costs proposed by the Authority

8.60 The Authority will assess the licensee's level of Shetland Extension Battery Costs prior to the window set out in paragraph CRC 3F.23, and will use this assessment to inform its decision on whether or not to give Notice under CRC 3F.25. In undertaking this assessment, the Authority will consider whether the licensee's Actual Shetland Extension Battery Costs are lower than the total Shetland Extension Battery Costs allowance value for the Regulatory Years 2019/20 to

2022/23, based on the information available to the Authority at the time. This information will include, but not be limited to, ED1 RIGs submissions, the complete record of Shetland Extension Battery Costs, and any other relevant submissions made by the licensee during or after the ED1 Price Control Period.

- 8.61 Any proposal made by the Authority must comply with the requirements of CRC 3F.31 and CRC 3F.32. The Authority will apportion any proposed adjustment to Regulatory Years 2019/20 to 2022/23 in line with the timing profile of the licensee's UCSEBC values.
- 8.62 On giving Notice of a proposed relevant adjustment, the Authority will follow the steps set out in CRC 3F.28, and will then make a relevant adjustment determination.

Overall materiality threshold

Determination of a relevant adjustment for the Shetland Extension Battery Costs and Shetland Extension Fixed Energy Costs

- 8.63 An overall materiality threshold applies in respect of relevant adjustments for the Shetland Extension Fixed Energy Costs, whether proposed by the licensee or the Authority. The materiality threshold for the licensee, in 2012/13 prices, is specified in Appendix 9 to CRC 3F.
- 8.64 An overall materiality threshold applies in respect of relevant adjustments for the Shetland Extension Battery Costs, where proposed by the licensee but only where the expenditure is materially higher than expected levels of actual expenditure. The materiality threshold for the licensee, in 2012/13 prices, is specified in Appendix 11 to CRC 3F. For UCSEBC, the materiality threshold for any downward adjustment is zero.
- 8.65 If the proposed relevant adjustment (in 2012/13 prices) is, in total, more than the materiality threshold amount, the materiality threshold is not further taken into account in the determination of relevant adjustments to allowed expenditure levels. This applies to the respective proposed adjustment and materiality threshold for both UCSEFEC and UCSEBC.
- 8.66 If the proposed relevant adjustment (in 2012/13 prices) is, in total, less than the materiality threshold amount, then no adjustment will be made. However, in that case, the costs will be subject to the Totex Incentive Mechanism. This applies to the respective proposed adjustment and materiality threshold for both UCSEFEC and UCSEBC. For UCSEBC, the materiality threshold for any downward adjustment is zero.

Determination of a relevant adjustment

- 8.67 A determination by the Authority that makes a relevant adjustment in respect of Shetland Extension Fixed Energy Costs and/or Shetland Extension Battery Costs will specify:
- a) the Regulatory Years to which the determination applies; and
 - b) the revised total amounts of allowed Totex expenditure (in 2012/13 prices) for each of those Regulatory Years.
- 8.68 If the Authority does not make a relevant adjustment determination within four months of the close of the application window, then paragraph 3F.22 of CRC 3F stipulates that the adjustment will be deemed to have been made.
- 8.69 The Authority will follow the General Financial Methodology in this chapter after having determined adjustments determined or deemed to have been made to UCSEFEC and / or UCSEBC values.

Section 7: ED1 Shetland Enduring Solution Process Costs adjustments (SSEH only)

Overview

- 8.70 CRC 3F sets out a mechanism for revising SSEH's allowed level of Shetland Enduring Solution Process Costs (UCSESPC) expenditure at the end of the ED1 Price Control Period. CRC 3F.12 provides the application window for the licensee to propose adjustments in respect of UCSESPC. CRC 3F.25 provides a window for the Authority to give the licensee Notice of its intention to make an adjustment to UCSESPC.
- 8.71 The term UCSESPC means costs incurred, or expected to be incurred by SSEH for identifying and procuring an enduring solution for Shetland, in implementing its obligations under CRC 2Q and further to the competitive process referred to in the Authority's open letter entitled "Ofgem's determination of Scottish Hydro Electric Power Distribution plc's (SHEPD) submission required under Charge Restriction Condition (CRC) 18A" dated 22 April 2014, to the extent that those costs are not otherwise recoverable under the Charge Restriction Conditions of the ED1 licence. This definition is set out in CRC 3F.38.
- 8.72 This uncertainty mechanism provides for relevant adjustments to levels of allowed expenditure for Regulatory Year 2019/20 to Regulatory Year 2022/23 in respect of:

- a) efficient costs that were not included in the calculation of Opening Base Revenue Allowances for SSEH (with respect to proposals made by SSEH); and
- b) materially lower than expected levels of actual expenditure (with respect to proposals made by the Authority).

The uncertainty mechanism for Shetland Enduring Solution Process Costs

Determination of a relevant adjustment proposed by the licensee

8.73 If the Authority receives Notice of a proposed relevant adjustment from the licensee, in respect of Shetland Enduring Solution Process Costs it will take the steps set out below to determine whether the proposed adjustment should be confirmed, rejected or amended:

- a) In the case of a proposal from the licensee, the Authority will check whether the Notice has been received during the window referred to in CRC 3F.25. If the Notice has been received before 1 September 2023 the Authority will notify the licensee that the Notice has been submitted too early and should be resubmitted during September 2023. If the Notice has been received after 30 September 2023 the Authority will notify the licensee that the Notice has been received too late and that a relevant adjustment will not be determined.
- b) The Authority will check whether:
- c) each of the requirements set out in paragraphs 3F.27 and 3F.28 of CRC 3F has been met (except for the requirement in respect of a material amount – see step (d)); and
- d) costs that have been incurred, represent a necessary and efficient level of expenditure.
- e) The Authority will decide whether it requires any further information from the licensee in order to make a determination and, if it decides that further information is required it will give Notice of that requirement to the licensee as specified in paragraph CRC 3F.16, within 10 working days of receipt of a proposal under paragraph CRC 3F.12.

It should be noted that the issuing of a Notice as described above does not preclude the Authority from making further information, analysis and reformatting requests in respect of the proposal.

- f) The Authority will check whether the overall materiality threshold has been passed in accordance with paragraphs 8.79 to 8.81. If it has not been passed, then no relevant adjustment will be made.

- g) Having carried out steps (a) to (c) above, the Authority will provisionally determine whether to:
- h) reject the relevant adjustment proposed by the licensee;
- i) confirm the relevant adjustment proposed by the licensee; or iii. amend the relevant adjustment proposed by the licensee.

8.74 If the Authority decides to amend or confirm the licensee’s proposal it will provisionally determine the adjustments to allowed expenditure that should be made and the Regulatory Years to which those adjustments should be applied, having regard to paragraph 8.72.

8.75 If the Authority decides to reject the licensee’s proposal it will provisionally determine that no adjustments to allowed expenditure should be made. The Authority will consult the licensee on its provisional determination, allowing the licensee at least 28 days in which to respond. The Authority will consider any consultation responses from the licensee and will then make a relevant adjustment determination.

Determination of a relevant adjustment proposed by the Authority

8.76 The Authority will assess the licensee’s level of Shetland Enduring Solution Process Costs prior to the window set out in CRC 3F.25, and will use this assessment to inform its decision on whether or not to give Notice under CRC 3F.23. This notice must be given during September 2023. In undertaking this assessment, the Authority will consider whether the licensee’s actual Shetland Enduring Solution Process Costs are materially different (as per the materiality threshold specified in paragraph 8.79) from the total Shetland Enduring Solution Process Costs allowance value, based on the information available to the Authority at the time. This information will include, but not be limited to, ED1 RIGs submissions and any other relevant submissions made by the licensee during or after the ED1 Price Control Period.

8.77 Any proposal made by the Authority must comply with the requirements of CRC 3F.31 and CRC 3F.32. The Authority will apportion any proposed adjustment to Regulatory Years 2019/20 to 2022/23 in line with the timing profile of the licensee’s UCSESPC values.

8.78 On giving Notice of a proposed relevant adjustment, the Authority will follow the steps set out in CRC 3F.28, and will then make a relevant adjustment determination.

Overall materiality threshold

- 8.79 An overall materiality threshold applies in respect of relevant adjustments for Shetland Enduring Solution Process Costs, whether proposed by the licensee or the Authority. The materiality threshold for the licensee, in 2012/13 prices, is specified in the table in Appendix 10 to CRC 3F.
- 8.80 If the proposed relevant adjustment (in 2012/13 prices) is, in total, more than the materiality threshold amount, the materiality threshold is not further taken into account in the determination of relevant adjustments to allowed expenditure levels.
- 8.81 If the proposed relevant adjustment (in 2012/13 prices) is, in total, less than the materiality threshold amount, then no adjustment will be made. However, in that case, the costs will be subject to the Totex Incentive Mechanism.

Determination of a relevant adjustment proposed by the licensee

- 8.82 A determination by the Authority that confirms or amends a relevant adjustment proposed by the licensee in respect of Shetland Enduring Solution Process Costs will specify:
- a) the Regulatory Years to which the determination applies; and
 - b) the revised total amounts of allowed Totex expenditure (in 2012/13 prices) for each of those Regulatory Years.
- 8.83 If the Authority receives Notice of a proposed relevant adjustment from the licensee in respect of Shetland Enduring Solution Process Costs and does not make a relevant adjustment determination within four months of the close of the application window, and the proposal has not been withdrawn, then paragraph 3F.22 of CRC 3F stipulates that the adjustment will be deemed to have been made.
- 8.84 The Authority will follow the General Financial Methodology in this chapter after having determined adjustments determined or deemed to have been made to UCSESPC values.