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Guidance

ESO Price Control Financial Handbook			
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This is the ESO Price Control Financial Handbook which forms part of Special Condition 5.1 (Governance of the ESO Price Control Financial Instruments) of the Electricity Transmission licence held by the Electricity System Operator (ESO).

This document consists of:

a) a description of the ESO Price Control Financial Model (PCFM) and the Annual Iteration Process (AIP) for it, used to calculate the licensee's Internal Allowed Revenue associated with its internal costs during the course of the ESO RIIO-2 Price Control Period.

b) an overview of the variable values used in the ESO PCFM during the AIP, in accordance with the Special Conditions of the licence; and

c) details of how certain variable values are revised or calculated.

The procedures relating to modification of this handbook and the ESO PCFM are contained in Special Condition 5.1 and up to date versions of both can be accessed on the Ofgem website.

Contents

1. Introduction

1.1.   Under ESO, Special Condition 4.2~~1~~ (System Operator Internal Allowed Revenue ~~Restriction~~) determines the annual Allowed Revenue[1] the licensee can recover in respect of its internal costs in relation to Balancing Services Activity.[2] The calculation of annual Allowed Revenue is performed using the ESO Price Control Financial Model (PCFM).

1.2.   Each year, certain inputs to the ESO PCFM (the variable values) are updated through the Annual Iteration Process (AIP), resulting in updates to Allowed Revenue within the RIIO-2 Price Control Period. These inputs reflect a range of factors including past and forecast performance and activity levels, and changes in the cost of capital.

1.3.   We have chosen to have a ESO PCFM with an AIP because it:
   a) incorporates 'real time' adjustments to financial allowances;
   b) uses a financial model for the purpose of computing interactions between financial adjustments where the relevant algebra would be excessively complicated to set out on the face of Special Conditions;
   c) provides transparency on adjustments to Allowed Revenue, since the licence, this handbook, the ESO PCFM and variable values are published; and
   d) allows stakeholders to keep abreast of Allowed Revenue levels and to carry out business sensitivity analysis.

1.4.   This document is the ESO Price Control Financial Handbook (PCFH, or handbook) and, along with the ESO PCFM, is a Price Control Financial Instrument, which forms part of Special Condition 4.2~~1~~. The PCFH and ESO PCFM are subject to a formal change control process set out in Special Condition 5.1.

1.5.   This handbook supports the annual determination of Allowed Revenue by providing:
   a) a description of the ESO PCFM and the AIP;

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[1] In this Handbook, Allowed Revenue refers to SO Internal Allowed Revenue, unless otherwise stated
[2] The ESO's Electricity transmission license has two other revenue restriction conditions: Special Condition 3.1, which determines the Maximum Revenue the licensee may recover through Transmission Network Charges; and Special Condition 4.3~~2~~ which determines the allowed revenue the licensee may recover, associated with its external balancing costs. Unless otherwise stated, references in this handbook to allowed revenue means allowed revenue under Special Condition 4.2~~1~~ only. See paragraphs 2.18 and 2.19.

b) an overview of the variable values used in the ESO PCFM during the AIP; and

c) details of how certain variable values are revised or calculated.

Related documents

1.6. This handbook is one of several documents relevant to the calculation of Allowed Revenue. Other key documents include:

a) Final Determinations[3]

b) Special Conditions

c) ESO PCFM

d) Associated Documents including PCFM Guidance (see Table 3.1).

1.7. In any case of conflict of meaning between these documents, the following order of precedence applies:

a) the relevant licence condition(s)

b) the handbook

c) the ESO PCFM

d) Associated Documents including PCFM Guidance

e) Final Determinations.[4]

Document structure

1.8. The remainder of this handbook is structured as follows:

a) Section 2 provides an overview of the ESO PCFM and details of the AIP;

b) Section 3 lists the variable values used in the ESO PCFM and updated through the AIP; and

c) subsequent sections provide details of how certain variable values are revised or calculated (along with further details on the ESO PCFM).

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[3] https://www.ofgem.gov.uk/publications-and-updates/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

[4] Final Determinations do not form part of the licence and have legal effect only insofar as they are specifically referenced in the other documents listed at paragraph 1.7 a-d.

2. The ESO PCFM and the Annual Iteration Process

2.1.   This section provides an overview of the ESO PCFM, the terms of reference for the PCFM Working Group (which reviews issues arising with respect to the form or usage of the ESO PCFM), and details on the AIP through which the variable values and Allowed Revenue are updated annually.

The Price Control Financial Model

2.2.   For each Regulatory Year, the ESO PCFM provides for the calculation of:

- 'Live' Calculated Revenue (R_t), which is updated at least annually to reflect new information
- The value of Adjusted Revenue, a nominal revenue allowance reflecting true-ups for retroactive updates to the PCFM Variable Values in the RIIO-2 Price Control Period
- System Operator Internal Allowed Revenue, which is the sum of Adjusted Revenue and a true-up for changes prior to the RIIO-2 Price Control Period ($SOLAR_t$).

2.3.   The ESO PCFM contains both fixed values and a 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 as per Special Condition 4.2~~1~~, using the fixed values, the variable values, and the formulae and functions embedded in the ESO PCFM.

2.4.   At the outset of the Price Control Period, Allowed Revenue is calculated by the ESO PCFM, using the variable values at that time. Each year, through the AIP, (Special Condition 5.2), the variable values must be updated, resulting in updated Calculated Revenues, and consequently updated Adjusted Revenue, flowing through to Allowed Revenue. To understand the factors that can change Allowed Revenue, it is helpful to discuss its three components:

$$SOIAR_t = ADJR_t^* + SOLAR_t$$

Adjusted Revenue (ADJR$_t$)

2.5. $ADJR_t^*$ is a value published by Ofgem as part of the AIP based on the PCFM inputs available at the time. These values are recorded by the ESO PCFM at the time of publication (the Saved Results tab). The published value for the Regulatory Year t is the sum of the

current view of Calculated Revenue in nominal prices ($R_t \frac{PI_t}{PI_{2018/19}}$) , plus an adjustment for revisions to years that have already passed (ADJ_t):

$$ADJR_t = R_t \frac{PI_t}{PI_{2018/19}} + ADJ_t$$

2.6. When time value of money adjustments are made for retroactive changes, it is with reference to these previously published values of $ADJR_t$*. Revisions to Calculated Revenue and the inflation forecast are trued up at vanilla WACC via the ADJ term, as defined in the ESO PCFM (see the time value of money section).

Calculated Revenue (R_t)

2.7. Calculated Revenue (R_t) is the 'live' calculation of real revenue allowances (in 2018/19 price terms). It is a live calculation in that Calculated Revenue for a given Regulatory Year will be different at different points in time if the inputs are changed.

2.8. Chapter 3 of this handbook details the variable values that can change through the AIP.

Legacy Adjustments ($SOLAR_t$)

2.9. The $SOLAR_t$ term is an adjustment in nominal prices reflecting true-ups from the RIIO-1 Price Control Period. It is described in Chapter 7.

Price base

2.10. When ascertaining Calculated Revenue, the ESO PCFM works in a constant 2018/19 price base, except in respect of some calculations internal to the ESO PCFM that use nominal prices, eg tax, various pass-through costs and legacy calculations. The use of nominal prices in the ESO PCFM tax calculations is meant to more accurately reflect the licensee's tax expenses profile in Allowed Revenue calculations.

2.11. Where variable values need to be deflated from a nominal price base to the 2018/19 price base used in the ESO PCFM, the following formula will be used:

$$value_{2018/19\ prices} = value_{nominal} \cdot \frac{PI_{2018/2019}}{PI_t}$$

Where:

value$_{2018/19\ prices}$ means the deflated/restated value in 2018/19 prices

value$_{nominal}$ means the value in a nominal price base or in prices of a Regulatory Year other than 2018/19

PI$_t$ is the arithmetic average value of each of the twelve monthly values of PI$_m$ from 1 April to 31 March within Regulatory Year t derived in accordance with the following formula:

$$PI_m = \begin{cases} RPI_m, & \text{if } m < April\ 2021 \\ PI_{m-1}\left(0.5\frac{CPIH_m}{CPIH_{m-1}} + 0.5\frac{RPI_m}{RPI_{m-1}}\right), & \text{if } m = April\ 2021 \\ PI_{m-1} \cdot \frac{CPIH_m}{CPIH_{m-1}}, & \text{if } m > April\ 2021 \end{cases}$$

where:

m refers to a year and month;

RPI$_m$ means the Retail Prices Index (all items) (series: CHAW) published by the Office for National Statistics (ONS) for the year and month m.[5]

CPIH$_m$ means the "Consumer Price inflation including owner-occupiers' housing costs" (series L522) published by the ONS for the year and month m.[6]

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[5] https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/chaw/mm23
[6] Historical data - https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l522/mm23

Forecasting the price index PI$_t$

2.12. At each AIP, outturn data for RPI$_m$ and CPIH$_m$ will be updated by Ofgem, for the period to June of the prior year (e.g. for AIP in November 2021, for Regulatory Year 22/23, the outturn data values will be entered to June 2021).

2.13. The 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$_t$".

2.14. 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 31 October at each AIP. The data will be sourced from following files based on their availability with preference being given to them in accordance with the order they are listed below:

1. The OBR historical official forecasts database[7], tabs "CPI" and "RPI"
2. The charts and tables datafile published with the economic and fiscal outlook
3. The economic and fiscal outlook document

2.15. 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 RPI price 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

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[7] https://obr.uk/data/

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).

2.16. The forecast for CPIH$_m$ is calculated in the same way as above, substituting in the CPIH values.

Long term inflation assumption (LTCPIH$_t$)

2.17. To correspond to the long-term assumption used in the WACC allowance model, the long term inflation assumption (labelled LTCPIH$_t$) will be updated for the upcoming Regulatory Year from the OBR forecast published prior to October in the Regulatory Year t-1. For example, the assumption for 2021/22 will be from the March 2020 outlook. The percentage will be rounded to 1 decimal place (e.g. 2.0%)

ESO revenue restrictions

2.18. Under ESO price control, there are three revenue restriction conditions, as noted in the introduction:

   a) Special Condition 3.1 Transmission Network Revenue Restriction, which determines the Maximum Revenue (TO) that may be recovered by the licensee through Transmission Network Charges
   b) Special Condition 4.2~~1~~ System Operator Internal <u>Allowed </u>Revenue ~~Restriction~~, which determines the maximum revenue (SOIAR) that may be recovered by the licensee, associated with its internal costs in relation to system operator functions activity
   c) Special Condition 4.3~~2~~ Balancing Services ~~Activity Revenue Restriction on ~~<u>e</u>External <u>c</u>~~C~~osts, which determines the Allowed Revenue (BXext) that may be recovered by the licensee, associated with its external balancing costs.

2.19. The AIP (Special Condition 5.2) relates to SOIAR, ie para 2.18 b) above. Accordingly, the variable values table in the ESO PCFM are inputs that affect the calculation of Allowed

Revenue, and not necessarily TO or BXext.[8] References in the handbook to Allowed Revenue are to SOIAR, unless otherwise stated.

Temporal convention

2.20.   The following conventions apply throughout this handbook:

   a) *Relative references*: Some references in this handbook are made relative to Regulatory Year t. For example, in the context of 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 variable values table for the licensee contained in the ESO PCFM.

Forecast variable values

2.21.   In calculating the Allowed Revenue for Regulatory Year t, the ESO PCFM uses some forecast variable values both for Regulatory Year t and preceding Regulatory Years. For example, in the case of expenditure, there is a two-year lag before outturn values can be reflected in SOIAR, hence forecasts are used.

2.22.   The licensee must submit updates to forecast variable values annually, through the AIP, in accordance with the requirements of the PCFM Guidance. These updates can apply to all Regulatory Years.

2.23.   For the avoidance of doubt, while a licence condition may refer to actual delivered outputs, for future years this relates to forecasts of delivered outputs.

Time value of money (TVOM)

2.24.   The ESO PCFM uses a 'time value of money' adjustment to incorporate the financial impact of the timing of cash flows, e.g. from switching revenues between years as a result of

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[8] Note: Under the proposal for the ESO PCFM to replace the Revenue RRPs, reporting of TO and BXext will be via a modified ESO PCFM but not necessarily through the variable values table.

changes to previous years' Allowed Revenue. Ofgem will use the following TVOM approach in ESO RIIO-2 Price Control Period as follows:

- nominal Vanilla Weighted Average Cost of Capital (WACC) for revisions to allowances, including but not limited to totex and pass-through costs as reflected in the AIP adjustment term (ADJ).

Changing the ESO PCFM

2.25.   The ESO PCFM exists as a constituent part of Special Condition 5.1 and will be maintained by Ofgem on its website as well as internally. The ESO PCFM can be changed in two ways:
   a) an Annual Iteration Process - which will change the variable values and recalculated values which are directly or indirectly dependent upon them under the process set out in Special Condition 5.2; or
   b) a modification of the ESO PCFM under the procedures set out in Special Condition 5.1 (Governance of ESO Price Control Financial Instruments) or section 11A of the Electricity Act.

2.26.   A copy of the ESO PCFM in its latest state will be maintained on the Ofgem website, and Ofgem will upload an updated copy by 30 November[9] each year (after each AIP). This will allow the licensee and other stakeholders to make copies of the ESO PCFM so that they can:
   a) use their own forecasts of variable value revisions to forecast Allowed Revenue and conduct sensitivity analysis; and
   b) reproduce the calculation of Allowed Revenue.

2.27.   Ofgem will keep a log of modifications to the ESO PCFM and publish this log on its website.

Error in the functionality of the ESO PCFM

2.28.   In the event that an error of functionality is discovered in the ESO PCFM, the following procedure will be followed:

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[9] Except when the AIP is not completed by 30th November, as stated in Special Condition 5.2, Part C.

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) if the functional error has distorted the calculation of a previously published value of Allowed Revenue, the determined modification will include any time value of money adjustments necessary to correct for that distortion in the next calculation of Allowed Revenue

c) the procedure in Special Condition 5.1 for modifications to the ESO PCFM will be followed.

The ESO Price Control Financial Model Working Group

2.29. Ofgem will facilitate an industry expert working group to review issues arising with respect to the form or usage of the ESO 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

2.30. The purposes of the working group are:
   a) to review the ongoing effectiveness of the ESO 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 ESO PCFM; and
   c) to provide such views or recommendations to the Authority with regard to the ESO PCFM (including as to proposals to modify the ESO PCFM) as it sees fit.

Composition

2.31. The composition of the group will be:
   a) Ofgem (chair)
   b) Ofgem (secretary)
   c) one or two representatives of the licensee
   d) Energy Networks Association representative (optional).

Timing and duration of the group's work

2.32.   The working group's incumbency will run from 1 April 2021 to 31 March 2026.

2.33.   The group will meet at least once between 1 January and 1 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 ESO PCFM modifications (see paragraph 2.30 b)).

2.34.   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.

2.35.   Representatives may attend meetings in person or through video or telephone conferencing facilities.

2.36.   A meeting of the working group will be quorate, for the purpose of expressing a view or recommendation in respect of the ESO PCFM, when at least one representative from Ofgem, and at least one representative of the licensee are present (in person or virtually).

Resources

2.37.   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 ESO PCFM. A copy of the record of each meeting will be provided to the licensee and to representatives who attended the meeting, and Ofgem will take account of any comments received in finalising the record.

The Annual Iteration Process (AIP)

2.38.   The AIP is the process carried out by the licensee and Authority each year[10] in order to calculate Allowed Revenue ($SOIAR_t$ for Regulatory Year t) by updating the variable value inputs to the ESO PCFM.

2.39.   The AIP will be completed by 30 November prior to each Regulatory Year t, or as soon as is reasonably practicable thereafter.

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[10] Except for 2025/26, when there will be no AIP (see Special Condition 5.2.14).

2.40. The steps of the AIP are specified in Special Condition 5.2, Part A and the process is further described below.

Submission of ESO PCFM

2.41. The licensee must use the version of the ESO PCFM provided to it by the Authority and which incorporates any modifications made to it following the PCFM Working Group. This version of the ESO PCFM will be the one used in the upcoming AIP and will be published by the Authority by the functional cut-off dates set out at Table 2.1.

2.42. Prior to each Regulatory Year, the licensee must submit to the Authority the ESO PCFM by the submission date listed in Table 2.1 and with a completed variable values table (covering activity in the prior Regulatory Year and changes to forecast activity[11]), which has been run to calculate $SOIAR_t$ and $ADJR_t$.

2.43. This submitted version of the ESO PCFM may contain provisional values for variable values that are unknown at the time of submission.

2.44. Where a variable value is unknown at the time of submission, the licensee must calculate a provisional value using the approach specified within this handbook or the PCFM Guidance, as applicable, and otherwise provide its best estimate with the information available at the time.

2.45. Ofgem will review the submitted ESO PCFM and confirm whether these have been prepared in accordance with the PCFM guidance. Where values have not been prepared in accordance with the PCFM guidance, Ofgem will amend such variable values, as appropriate and taking into account any decisions it has made in relation to those values.

Dry Runs process

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[11] Variable values for Regulatory Years later than Regulatory Year t do not feed into the calculation of the term $SOIAR_t$. Therefore, calculated values in the ESO PCFM for Regulatory Years later than Regulatory Year t represent only a forecast. This is without prejudice to the status of the variable values concerned, which may have been decided and/or directed under licence conditions and which may or may not be subject to subsequent revision.

2.46. This process of confirming and amending values will normally take place over a number of months from 31 August to early November and will be iterative to account for updates to the variable values as they become known.

2.47. There will be one or more dry runs of the PCFM between the licensee's initial submission of the ESO PCFM and the final run in early November. The number of dry runs needed will depend on the number and timing of variable value updates required for the licensee in any particular Regulatory Year.

2.48. Where the Authority amends a variable value from an earlier licensee submission, either due to a licensee error or to reflect updates to a provisional value, it will notify the licensee and request a resubmission of the PCFM. Following updates to variable values, the PCFM should be re-run and $SOIAR_t$ should be recalculated to reflect the impact of the updated values.

2.49. Where a licensee has not complied with Step 1 of Special Condition 5.2 Part A and has failed to submit a populated PCFM by 31 August, Ofgem will complete the variable values table and run the macro on the User Interface sheet of the model to calculate $SOIAR_t$.

2.50. In order to facilitate publication of $SOIAR_t$ by 30 November, Ofgem will normally expect to apply the following annual cut-off dates:

   a) 01 June in respect of functional changes to the PCFM, PCFH and PCFM Guidance; and
   b) 31 October in respect of information submitted by the licensee.[12]

Final Run

2.51. The final run of the ESO PCFM will take place in early November and will be performed by Ofgem. This will take into account the variable values in the latest submission from the licensee, as confirmed by Ofgem and will also reflect the updated cost of debt (SOCDE) and

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[12] In applying this cut-off date, Ofgem will, through business correspondence, apprise the licensee of any provisionality it has attached to information submissions, that might involve a restatement of the information by the licensee for the purpose of making a further revision to the variable value(s) concerned for use in a subsequent Annual Iteration Process.

risk free rate (SORFR) variable values, the latter of which is dependent on government bond yield data published by the Bank of England in the first week of November.

2.52. Having determined any revisions to variable values for the licensee, Ofgem will update the ESO PCFM as follows:

   a) revised variable values will be entered in the appropriate Regulatory Year columns of the variable values table for the licensee
   b) the macro in the User Interface sheet of the PCFM will be run so that:
   c) all calculated values within the PCFM will be updated, including:
      i.   the Calculated Revenue (R_t) figure for the licensee for each Regulatory Year of the Price Control Period, and
      ii. the modelled Regulatory Asset Value (RAV_t) balance for the licensee
   d) the PCFM will output the value of $SOIAR_t$ for Regulatory Year t for the licensee.

2.53. The Authority will give the licensee at least 14 days' notice of the value $SOIAR_t$ and $ADJR_t$., and a copy of the ESO PCFM used to calculate it (including the licensee's variable values, which may have been revised through the AIP), in accordance with Special Condition 5.2requirements in the licence, to allow for any representations.

2.54. The Authority will then (by 30 November in Regulatory Year t-1, or as soon as is reasonably practicable thereafter) publish the values of $SOIAR_t$ and $ADJR_t$ and a copy of the ESO PCFM used to calculate it. The values of $SOIAR_t$ and $ADJR_t$ in the publication will be stated in £ millions to one decimal place.

2.55. Where certain information is considered to be commercially sensitive, the licensee may request that this information be redacted before the ESO PCFM is published. The Authority will consider the request and will share the version of the ESO PCFM for publication including any redactions as considered necessary with the licensee in advance of the publication.

2.56. Part C of Special Condition 5.2 specifies what will happen if the Authority does not publish a value for $SOIAR_t$ and $ADJR_t$ by 30 November in Regulatory Year t-1.[13]

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[13] Except for 2025/26, when there will be no AIP (see Special Condition 5.2.14).

Re-publication of the ESO PCFM after 30 November

2.57.   The AIP provides the value of ADJR* which the licensee must use to determine the value of SOIARt.

2.58.   Part B of Special Condition 5.2 specifies that the Authority may re-publish the values of $SOIAR_t$ and $ADJR_t$ after 30 November and before the 30 January in Regulatory Year t-1.

2.59.   This power to re-publish the PCFM after an AIP has been published enables the Authority to update the published values of $SOIAR_t$ and $ADJR_t$ thereby enabling the licensee to reflect the impact of any unforeseen events on the fixed component of SOIARt (ADJR*)in time for it to set its tariffs for the Regulatory Year t.

2.60.   If the licensee becomes aware of an event which will have or is estimated to have a material effect on its ADJR* value for the Regulatory Year t, it may notify Ofgem requesting a re-publication under Part B of Special Condition 5.2 between 01 December and 05 January[14] in the year t-1. A material effect is one which is greater than the licensee's Materiality Threshold as defined in the Special Conditions.

2.61.   Revising the value of SOLARt prior to charge setting does not require a re-publication.

2.62.   A notification under paragraph 2.60 of this Handbook must contain the following

   a)   A description of the event and the rationale as to why it was unforeseen;
   b)   The quantum of the impact on the licensee's Allowed Revenue;
   c)   A statement confirming the materiality of the impact;
   d)   A description of the adjustment that is required to be made to the most recent published ESO PCFM to reflect the impact; and
   e)   A copy of the most recent published ESO PCFM containing the required adjustment.

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[14] The notification cut-off date is 05 January in the Regulatory Year t-1 to accommodate for the 14-day notice period required prior to a re-publication of the ESO PCFM.

2.63.   The Authority will consider any request for a re-publication on a case by case basis. Where it considers that a re-publication is the appropriate course of action, the Authority will notify the licensee.

2.64.   The Authority will review the submitted ESO PCFM and confirm or amend the variable values, as appropriate and in accordance with the PCFM Guidance before giving the licensee notice which will not be less than 14 days.

2.65.   The Authority will then re-publish on its website the version of the ESO PCFM that is to be used to tariff setting in accordance with part B of Special Condition 5.2 (Annual Iteration Process for the ESO Price Control Financial Model) and Special Condition 4.1 (System Operator Internal Revenue Restriction).

2.66.

2.67.   This version of the ESO PCFM will supersede the version published following the most recent November AIP and will be referred to as the "Re-published ESO PCFM November 20XX".

2.68.2.57.   Table 2.1Table 2.1 below summarises the timings for the AIP during the Price Control Period.

Table 2.1 - Summary of timings for the Annual Iteration Process[15]

AIP Year	Licensee submits populated ESO PCFM	ESO PCFM functional change cut-off	Regulatory reporting information cut-off	Notice of proposed variable value revisions by	AIP completed and $SOIAR_t$ and $ADJR_t$ published by	Regulatory Year t in which $SOIAR_t$ applies
Nov-2021	31 Aug 21	01 Jun 21	31 Oct 21	15 Nov 21	30 Nov 21	2022/23
Nov-2022	31 Aug 22	01 Jun 22	31 Oct 22	15 Nov 22	30 Nov 22	2023/24
Nov-2023	31 Aug 23	01 Jun 23	31 Oct 23	15 Nov 23	30 Nov 23	2024/25
Nov-2024	31 Aug 24	01 Jun 24	31 Oct 24	15 Nov 24	30 Nov 24	2025/26

[15] Use previous working day if these dates fall on a weekend or bank holiday.

2.69.2.58.   Some financial adjustments provided for under the ESO RIIO-2 Final Determinations will remain outstanding at the end of the Price Control Period, because relevant data will not be available in time for inclusion in the last AIP. For the avoidance of doubt, adjustments of this type will be addressed as part of the close out of RIIO-2 or as part of the ESO RIIO-3 price control arrangements.

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).

PCFM Variable Values

3.2.   The variable values that can be revised during AIPs 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 (e.g. cost of debt and risk-free rate) and details for some variable values in addition to that provided in Special Conditions (SpC) and other Associated Documents (e.g. taxation and pensions).

Table 3.1 – PCFM Variable Values (VV)

VV	Description	SpC	Cross-reference / Associated Document
Actual Totex			
SOANC	Actual Capex		PCFM Guidance
SOACO	Actual Opex		PCFM Guidance
Pass-through expenditure			
RB_t	Business Rates Payments	SpC 4.2~~1~~, Part G~~H~~	PCFM Guidance
EDE_t	Pension scheme established deficit	SpC 4.2~~1~~, Part F~~G~~	PCFH section 6, PCFM Guidance
$SOBD_t$	Bad Debt Allowance	SpC 4.2~~1~~, Part H~~I~~	PCFM Guidance
WCF_t	Additional Funding - WCF	SpC 4.2~~1~~, Part F~~G~~	PCFM Guidance
FSO_t	Future System Operator Transition Funding term		PCFM Guidance
Other Revenue Allowances			
NIA_t	Network Innovation Allowance	SpC 4.7~~6~~	PCFM Guidance, RIIO-2 NIA Governance Document
$CNIA_t$	Carry Over RIIO-1 Network Innovation Allowance	SpC 4.8~~7~~	PCFM Guidance, RIIO-1 NIA Governance Document
Other Funding			
$ESORI_t$	Reporting & Incentive Arrangements	SpC 4.4~~3~~	PCFM Guidance, ESORI Guidance Document
ADF_t	Additional Funding - Other	SpC 4.2~~1~~, Part C~~D~~	PCFM Guidance
Legacy Adjustments			
$LSOMOD_t$	System Operator legacy MOD	SpC 4.9~~8~~, Part B	PCFH section 6, PCFM Guidance
$LSOTRU_t$	Legacy TRU term	SpC 4.9~~8~~, Part D	PCFH section 6, PCFM Guidance
$LSOEMRINC_t$	Legacy Financial Incentives on EMR	SpC 4.9~~8~~, Part E	PCFH section 6, PCFM Guidance
$LSORAV_t$	RIIO-1 net addition to RAV (including disposals)	SpC 4.10~~9~~	PCFH section 6, PCFM Guidance
COA	Closeout adjustment	SpC 4.9~~8~~, Part B	PCFH section 6, PCFM Guidance
$RPIF_t$	RIIO-1 RPI forecast term	SpC 4.9~~8~~, Part D	PCFH section 6, PCFM Guidance
$SOREV_t$	Revenue for SOTRU term	SpC 4.9~~8~~, Part D	PCFH section 6, PCFM Guidance
Directly Remunerated Services			
$DRSR_t$	Directly remunerated services revenue	SpC 4.2~~1~~	PCFM Guidance

VV	Description	SpC	Cross-reference / Associated Document
DRSC$_t$	Less directly remunerated services cost	SpC 4.~~1~~2	PCFM Guidance
Finance Inputs			
SORFR	Risk-free rate		PCFH section 4, PCFM Guidance
SOCDE	Allowed percentage cost of debt		PCFH section 4, PCFM Guidance
AND$_t$	Adjusted net debt		PCFM Guidance
TDNI$_t$	Tax deductible net interest cost		PCFM Guidance
TTE$_t$	Tax liability - tax trigger events		PCFH section 5, PCFM Guidance
TAXA$_t$	Tax allowance adjustment	SpC 4.~~1~~2, part ~~J~~I	PCFH section 5, PCFM Guidance
SOOGPA$_t$	General pool opening balance adjustment		PCFM Guidance
SOOSRPA$_t$	Special Rate pool opening balance adjustment		PCFM Guidance
SOIAPGP$_t$	Transfer intangible assets to the general pool		PCFM Guidance
SOOGP$_t$	Opening balance brought forward		PCFM Guidance
SOOSRP$_t$	Special Rate capital allowance opening balance brought forward		PCFM Guidance
SOOSBP$_t$	Structures and buildings capital allowance opening balance brought forward		PCFM Guidance
SOODRP$_t$	Deferred revenue expenditure opening balance brought forward		PCFM Guidance
SOOIAP$_t$	Intangible assets capital allowance opening balance brought forward		PCFM Guidance
SOOTL$_t$	Tax loss brought forward		PCFM Guidance
SOARGP$_t$	Totex allocation to "General" tax pool		PCFM Guidance
SOARR$_t$	Totex allocation to "Revenue" tax pool		PCFM Guidance
SOARSR$_t$	Totex allocation to "Special rate" tax pool		PCFM Guidance
SOARSB$_t$	Totex allocation to "Structures and Buildings" tax pool		PCFM Guidance

VV	Description	SpC	Cross-reference / Associated Document
$SOARNQ_t$	Totex allocation to "Non Qualifying" tax pool		PCFM Guidance
$SOARDR_t$	Totex allocation to "Deferred revenue" tax pool		PCFM Guidance
$SOARIA_t$	Totex allocation to "Intangible assets" tax pool		PCFM Guidance
$SOCT_t$	Corporation tax rate		PCFM Guidance
$SOGCA_t$	Capital Allowance rate		PCFM Guidance
$SOSRCA_t$	Special Rate allowance rate		PCFM Guidance
$SOSBCA_t$	Structures and buildings allowance rate		PCFM Guidance
$SODRCA_t$	Deferred revenue expenditure allowance rate		PCFM Guidance
$SOIACA_t$	Intangible assets allowance rate		PCFM Guidance
CST_t	Capitalised share of totex		PCFM Guidance

4. Cost of debt and cost of equity indexation

4.1.   The licensee's Calculated Revenue (R_t) includes amounts to cover the efficient cost of raising finance 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 percentage is Ofgem's estimate of the Weighted Average Cost of Capital (WACC) on a real basis determined using a pre-tax cost of debt percentage, a post-tax real cost of equity percentage and a notional gearing percentage weighting.

4.2.   Under the ESO RIIO-2 Price Control, the notional gearing percentage is fixed for the Price Control Period. However, the cost of debt percentage (SOCDE)[16] and the cost of equity percentage through changes to the real (CPIH) risk-free rate (SORFR)) are updated by Ofgem on an annual basis. The updates are given effect through the AIP and the approaches to determining the updated variable values are described below.

Cost of debt

4.3.   The ESO PCFM as at 1 April 2021 includes an opening cost of debt percentages SOCDE for the licensee for every Regulatory Year of the Price Control Period.

4.4.   Revised SOCDE values for all Regulatory Years in the Price Control Period will be calculated by Ofgem using an annual average of overnight floating rate bank debt (SONIA), or forecasts of the same, in accordance with the approach and steps set out below. Revised SOCDE will be published in respect of each AIP.

Step 1 – establish time periods for data collection and calculations

4.5.   The time periods used in calculating CDE values for a given Regulatory Year may change between AIPs. For all Regulatory Years of the Price Control Period, Table 4.1 shows for each AIP the time periods for which data in the subsequent steps should be collected and calculations performed. The data is either based on outturn, outturn plus forecast or forecast values. The forecast values are indicated by an asterisk in the Table.

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[16] Also referred to as "Allowed return on debt" in ESO PCFM.

Table 4.1 - Time periods over which to obtain data and for calculation

AIP Ending	Regulatory Year				
	2021/22	2022/23	2023/24	2024/25	2025/26
30/11/2021	1/4/21 to 31/10/21 plus forecast to 31/3/22	1/4/22 to 31/3/23*	1/4/23 to 31/3/24*	1/4/24 to 31/3/25*	1/4/25 to 31/3/26*
30/11/2022	True up for outturn 1/4/21 to 31/3/22	1/4/22 to 31/10/22 plus forecast to 31/3/23	1/4/23 to 31/3/24*	1/4/24 to 31/3/25*	1/4/25 to 31/3/26*
30/11/2023	No change[17]	True up for outturn 1/4/22 to 31/3/23	1/4/23 to 31/10/23 plus forecast to 31/3/24	1/4/24 to 31/3/25*	1/4/25 to 31/3/26*
30/11/2024	No change	No change	True up for outturn 1/4/23 to 31/3/24	1/4/24 to 31/10/24 plus forecast to 31/3/25	1/4/25 to 31/3/26*
30/11/2025	No change	No change	No change	True up for outturn 1/4/24 to 31/3/25	1/4/25 to 31/10/25 plus forecast to 31/3/26[18]

Note: * denotes the use of forecast data.

Step 2 - obtain SONIA data

4.6.   For each day in the periods identified in Table 4.1 for which outturn data are available obtain the daily overnight SONIA rate (IUDSOIA).[19]

4.7.   For each day in the periods identified in Table 4.1 for which forecast data are required, use a forecast of a daily overnight rates using curve data as of 31 October in the year the AIP is being conducted. The forecast is based on a linear interpolation between points (available at monthly intervals) of the Bank of England's sterling overnight index swap rates.[20]

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[17] Where "No change" is stated, no change is expected, other than if applicable as contemplated under 4.143.18 and 4.153.19 due to unavailability of data.
[18] Data will be trued up for outturn values in the following year.
[19] Sourced from the statistics page on the Bank of England's website https://www.bankofengland.co.uk/
[20] https://www.bankofengland.co.uk/statistics/yield-curves

Step 3 - obtain inflation data

4.8.   For each Regulatory Year, obtain inflation forecasts of CPI from the OBR's Historical official forecasts database[21] for the days shown in Table 4.1, as follows:

   a) for days up to and including 31 October in the year in which the AIP is being conducted, the inflation value is the latest Office for Budget Responsibility (OBR) year 5 forecast[22] 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

   b) 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 AIP is being conducted,

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

4.9.   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 1 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.

Step 4 – calculate daily real *cost of debt*

4.10. This step converts the nominal values of the preceding steps into a daily real cost of debt value, incorporating an asset swap margin and transaction costs. For each day in the relevant periods identified in Table 4.1, add 180 basis points to the SONIA value collected in

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[21] Sourced from the data page of the OBR website: https://obr.uk/download/historical-Official-forecasts-database/
[22] 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.

Step 2,[23] then deflate these using the inflation figure obtained under Step 3, using the following formula:

$$CoD = (1 + SONIA + 0.018) / (1 + \pi) - 1$$

where:

> CoD is the daily real average of the cost of debt;
>
> SONIA is the daily overnight SONIA rate collected in Step 2 expressed as a decimal percentage; and
>
> π is the inflation figure obtained under Step 3.

Step 5 – average over the relevant period For each Regulatory Year, calculate the arithmetic average value of CoD across the relevant time periods identified in Table 4.1.

4.11. The resulting averages, expressed as a percentage and stated to two decimal places, constitute the revised variable value for the cost of debt (SOCDE value) for each Regulatory Year.

4.12. Ofgem will provide the licensee with a copy of the spreadsheet used to calculate revised SOCDE values at the same time as giving the notice (paragraph 2.53).

4.13. The data and spreadsheet used to calculate revised SOCDE values will be published on the Ofgem Website (by 30 November in each Regulatory Year, or as soon as reasonably practicable thereafter (see para 2.54)).

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

4.14. If, for any reason, the SONIA or OBR series identified above cease 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

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[23] The 180 basis points comprises an asset swap margin (170 basis points) and transaction costs (10 basis points).

replacements. If the consultation is not completed in time to determine revised variable values for the cost of debt for any AIP, Ofgem may use an interim approach to ensure timely completion of an AIP.[24] Any such interim approach for a given Regulatory Year will be revised at the subsequent AIP.

4.15. If, for reasons other than stated in paragraph 4.143.18, SONIA data are unavailable for the relevant periods in Table 4.1 in time to determine revised variable values for the cost of debt for any AIP then, for that AIP only, the period concerned shall be deemed to have ended on the last day for which data has been published. If the data concerned is subsequently published, revised variable values for the affected Regulatory Years will be determined and published.

Cost of equity – risk-free rate

4.16. The ESO PCFM in its state as at 1 April 2021 includes opening real (CPIH) risk-free rates (SORFR) for the licensee for every Regulatory Year of the Price Control Period. Changes in SORFR result in changes to the cost of equity percentage value used in determining the allowance for a cost of capital (determined in the PCFM).

4.17. Revised SORFR values for all future Regulatory Years in the Price Control Period will be calculated by Ofgem in accordance with the approach set out below and published in respect of each AIP. In brief, revised SORFR values will be calculated using yields on government securities (20-year real zero coupon) and applying an adjustment for the difference between RPI and CPIH inflation expectations.

4.18. The steps Ofgem will follow to calculate the revised SORFR values are:

Step 1 – obtain real government bond yields

4.19. For each Regulatory Year, obtain a real government bond yield for the days shown in Table 4.2, as follows:

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[24] This interim approach 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 5.2.8 (b)).

a) for days up to and including 31 October in the year in which the AIP is being conducted, obtain the yield for British government securities, 20-year real zero coupon (series reference IUDLRZC)[25]; and

b) for all other days, forecast a yield 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 securities[26] (using data up to and including 31 October in the year in which the AIP is being conducted) by a no arbitrage condition, where a 10 year rate x years in the future can be derived from the x year rate and 10+x year rate. The forecast is made for dates on half-yearly intervals, and then linearly interpolated between those dates.

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

Regulatory Year	Time period for calculation
2022/23	01 October 2021 to 31 October 2021
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

Step 2 – obtain RPI and CPI inflation forecasts

4.20. For each Regulatory Year, obtain inflation forecasts of CPI and RPI from OBR's Historical official forecasts database[27] for the days shown in Table 4.2, as follows:

a) for days up to and including the 31 October in the year in which the AIP 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

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[25] Sourced from the statistics page of the Bank of England's website: https://www.bankofengland.co.uk/
[26] https://www.bankofengland.co.uk/statistics/yield-curves
[27] Sourced from the data page of the OBR website: https://obr.uk/download/historical-Official-forecasts-database/

b) 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 AIP 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.

4.21. 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 1 November 2018, are the OBR year 5 forecasts of CPI and RPI (for 2023) published in October 2018 and the inflation values for 31 October 2018 are the OBR year 4 forecasts of CPI and RPI (for 2022) published in March 2018.

Step 3 – derive an RPI-CPIH inflation wedge

4.22. 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:

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

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

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

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

Step 5 – calculate average real (CPIH) RFR

4.24. For each Regulatory Year, calculate the arithmetic average value of the real (CPIH) risk-free rates from Step 4 across the periods shown in Table 4.2.

4.25. The resulting averages, expressed as a percentage and stated to two decimal places, constitutes the revised variable value for the real SORFR value for each Regulatory Year.

4.26.   Ofgem will provide the licensee with a copy of the spreadsheet used to calculate revised SORFR values at the same time as giving the notice (paragraph 2.53).

4.27.   The data and spreadsheet used to calculate revised SORFR values will be published on the Ofgem Website (by 30 November in each Regulatory Year, or as soon as reasonably practicable thereafter (see para 2.54)).

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

4.28.   If, for any reason, the Bank of England, or OBR series identified above cease 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. If the consultation is not completed in time to determine revised variable values for the risk-free rate for any AIP, Ofgem may use an interim approach to ensure timely completion of an AIP.[28] Any such interim approach for a given Regulatory Year will be revised at the subsequent AIP.

4.29.   If, for reasons other than stated in paragraph 4.283.32, Bank of England data (20-year real zero coupon, para 4.193.23) are unavailable for an entire trading days period in time to determine revised variable values for the RFR for any AIP then, for that AIP only, the trading days period concerned will be deemed to have ended on the last trading day for which data has been published. If the data concerned is subsequently published, revised variable values for the affected Regulatory Years will be determined and published.

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[28] This interim approach 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 5.2.8(b)).

5. Tax liability allowances

5.1.   The ESO PCFM calculates a licensee's tax liability allowance on a notional basis (ie 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 ESO PCFM by updating the variable values for these rates ($SOCT_t$, $SOGCA_t$, $SOSRCA_t$, $SOSBCA_t$, $SODRCA_t$ and $SOIACA_t$) at each AIP.

5.2.   The ESO PCFM also calculates a tax clawback adjustment.[29] Where a licensee's gearing (calculated using the Adjusted Net Debt variable value (AND_t) and the closing RAV position uplifted to year-end nominal prices in the ESO 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 consumers through the ESO PCFM.

5.3.   Tax liability allowances are also dependent on other PCFM VVs including:
   a) Tax trigger events TTE - a licensee's notional tax liability[30] 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~~review~~ adjustment mechanism $TAXA_t$ – this mechanism enables Ofgem to direct an adjustment to the ~~notional tax allowance~~Calculated Tax Allowance subject to a tax review and having consulted~~consultation~~ with the licensee.
   c) Capital allowances: Opening pool balances – opening balances of capital allowance pools can be updated by licensees, through variable values $SOOGP_t$, $SOOSRP_t$, $SOOSBP_t$, $SOODRP_t$ and $SOOIAP_t$. These balances will be set to reflect actual opening balances as agreed with the licensee for the start of the RIIO-ET2 Price Control.
   d) Capital allowances: allocation rates – the ESO PCFM contains the rates that are used to allocate totex to each of the modelled capital allowance pools. These can be revised through variable values ($SOARGP_t$, $SOARR_t$, $SOARSR_t$, $SOARSB_t$, $SOARDR_t$, $SOARIA_t$, $SOARNQ_t$).

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[29] The tax clawback adjustment will not be applicable for the ESO for the Regulatory Years commencing 1 April 2021 and 1April 2022. See para 7.52 of the Ofgem Final Determinations Finance Annex.
[30] 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-ET1 PCFM following the close-out of the RIIO-ET1 Price Control.

5.4.   T~~Further below, t~~he approach to determining or revising the variable values in paragraph 5.3~~4.3~~ and/or the calculation in the ESO PCFM are described, further below.

5.5.   It should be noted that underlying tax liability allowances for the licensee within the ESO PCFM may also change under the AIP as a consequence of other 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.

5.6.   Any recalculation of the licensee's tax liability allowances necessarily includes an iterative modelling aspect: 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 ESO PCFM and is factored into Calculated Revenue via the AIP.

Regulatory tax losses

5.7.   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 Y~~y~~ear concerned or later Regulatory Y~~y~~ears. The regulatory tax loss balance attributable to each Regulatory Year (together with a running total) is held within the ESO PCFM.

5.8.   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.

5.9.   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.[31]

Group tax arrangements

5.10.   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 toof Ofgem's open letter dated 31 July 2009 (Claw-back of tax benefit due to excess gearing).[32]

5.11.   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

5.12.   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;[33];
b) Financial Reporting Standard 101, EU adopted IFRS with reduced disclosures; or

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[31] https://www.gov.uk/hmrc-internal-manuals/company-taxation-manual/ctm80530
[32] Open letter: Clawback of tax benefit due to excess gearing | Ofgemhttp://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=49&refer=Networks and as amended for the treatment of hybrid financial instruments

[33] Including the provisions of IFRS 1 (First-time Adoption of International Financial Reporting Standards) where applicable.

c) UK GAAP under Financial Reporting Standard 102.

Tax trigger events

5.13.   The ESO 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 liabilities[34] 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 variable values $SOCT_t$, $SOGCA_t$, $SOSRCA_t$, $SOSBCA_t$, $SODRCA_t$ and $SOIACA_t$, 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 t̲T̶a̶x̶ t̲T̶r̶i̶g̶g̶e̶r̶ e̲E̶v̶e̶n̶t̶s̶

5.14.   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 to reduce the licensee's tax liability allowances. For the purpose of complying with this requirement, the licensee must seek to ensure that it identifies and records tax trigger events.

5.15.   If the licensee fails to notify Ofgem of any tax trigger events of which̶e̶v̶e̶n̶t̶s̶ it becomes aware, or should be aware of, then subject to the licensee demonstrating that it uses reasonable endeavours to identify all tax trigger events this may not be considered̶ ̶h̶e̶l̶d̶ a breach of the licence conditions. We will d̶e̶a̶l̶ ̶w̶i̶t̶h̶consider each event on its merits on a case-by-case basis.

5.16.   The notification s̶h̶o̶u̶l̶d̶ ̶i̶n̶c̶l̶u̶d̶e̶, in respect of each tax trigger event should include:
a) a description of the tax trigger event;

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

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 5.64.6 but should ignore the tax trigger deadband;

d) any relevant information provided by HMRC in relation to the tax trigger eventtrigger event;

e) evidence of mitigating measures that the licensee has taken to minimise any additional liabilities arising from the event; and

f) comments byfrom the licensee on:

    i. the relevance of the tax trigger event to its tax position;

    ii. whether grounds exist to contest the applicability of the tax trigger event to the licensee; and

    iii. the reporting treatment the licensee expects to apply in its tax submissions to HMRC and in its Regulatory Accounts or sStatutory accounts where Regulatory accounts are not prepared.

5.17. The licensee's notification should also state whether it considers that the materiality threshold (see paragraph 5.254.25) 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.

5.18. Ofgem will review any notifications given to it by the licensee under paragraph 5.144.14 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.

5.19. Ofgem will inform the licensee by 31 October in the same Regulatory Year t-1 inform the licensee whether, in respect of each tax trigger event, it has:

a) it has agreed (on a provisional or confirmed basis) the change in tax liabilities figure calculated by the licensee;

b) ~~it has~~ determined (on a provisional or confirmed basis) a different change in tax liabilities figure from that calculated by the licensee; or

c) ~~it has~~ decided that consideration of any change in tax liabilities should be deferred until further/better information is available.

5.20.   In deciding which of the actions set out in paragraph 5.19~~4.19~~ should be taken, Ofgem will, ~~without limitation, take account of~~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~~for the purposes of~~ a later Regulatory Year~~AIP~~.

5.21.   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.

5.22.   Ofgem will also notify the licensee by 31 October in each Regulatory Year t-1 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.

5.23.   If Ofgem has not finished considering any matters raised by the licensee under paragraph 5.21~~4.21~~ or paragraph 5.22~~4.22~~ 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 for use in the next Regulatory Year ~~AIP~~.

5.24.   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'

5.25.   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 fixed values on the 'System Operator' worksheet (Tax Trigger calculations section) for the licensee in the ESO PCFM.

5.26.   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 Yyear 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.

5.27.   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.

5.28.   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 Yyear.

Logging of trigger events

5.29.   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

5.30. Special Condition 4.2~~1~~, Part I~~3~~ (Tax Allowance Adjustment) sets out that the Authority will direct any value of $TAXA_t$ that it considers should be made after a ~~t~~Tax ~~R~~review.

5.31. At the outset of the Price Control Period on 1 April 2021, the value of $TAXA_t$ is set at zero for the duration of the Price Control Period~~sprice control~~. Under Special Condition 4.2~~1~~, Part I~~3~~ the licensee's ~~tax liability allowance~~Calculated Tax Allowance can be updated for any periods from 31 March 2021 following a ~~t~~Tax ~~r~~Review. The Authority may consider initiating a ~~T~~tax ~~r~~Review if one or more of the events described below occurs.

 Potential tax review t~~Trigger~~ events

5.32. ~~There are a number of scenarios in which t~~he Authority may consider triggering a tax review for the relevant licensee(s) in the following scenarios~~; these are as follows~~:

a) if there are material, unexplained differences between the ~~notional tax allowance~~Calculated Tax Allowance and Actual Corporation Tax Liability~~actual tax liability~~, which have not been adequately explained~~addressed~~ in the supporting commentary to the reconciliation[35];

b) if Ofgem is notified in writing ~~of a valid concern, whether~~ by the~~a~~ licensee ~~itself~~ or ~~another~~ stakeholder~~;~~ of any event that the licensee or stakeholder considers will have a material, unexplained impact on the differences between the licensee's Calculated Tax Allowance and its Actual Corporation Tax Liability; or

c) if a licensee undergoes a ~~change in ownership or a~~ material change in circumstances, e.g. a change in ownership, ~~-~~ that is likely to result in a material, unexplained~~affect~~ impact on its Actual Corporation Tax Liability ~~its tax liability~~.

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

Materiality

5.33.   Under paragraph 5.324.32, an unexplained difference between the Calculated Tax Allowance and Actual Corporation Tax Liabilitynotional tax allowance and actual tax liability will be subject to the same materiality threshold that is applied to tTax tTrigger eEvents during the Price Control Period as described in paragraph 5.254.26 of this handbook. For the avoidance of doubt, an unexplained difference is considered material if it exceeds the threshold described.

5.34.   Where there are numerous unexplained differences aggregate remaining variance in the submitted Tax Reconciliation, which are individually immaterial but when taken in aggregate are is greater than the materiality threshold amount, Ofgem would expect the licensee is required to provide supporting explanation(s) in the commentary to the Tax Reconciliation as per the RIIO-2 Regulatory Financial Performance Reporting Regulatory Instructions and Guidance..

Notifying the Authority

5.35.   Any notification by the licensee under paragraph 5.324.32b must be made in writing to the Authority on or before 301 JulySeptember 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 itstheir actual corporation tax liabilityActual Corporation Tax Liability;
   b) the impact of the specific event(s) on the licensee's Aactual Ccorporation Ttax lLiability and whether it is considered material;
   c) the Regulatory Year(s) that the licensee considers will be affected by the tax review trigger event;
   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.

5.36.   Any notification by other stakeholders under paragraph 5.32(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 5.35. 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 5.32(b).

5.36.5.37.   Where Ofgem receives a notification of a valid concern from any stakeholder after 31 July in any Regulatory Year, the adjustments will be made in the subsequent Regulatory Yearyear in the AIP following the direction of the $TAXA_t$ term. In such a case, the functionality of the ESO PCFM means that a Time Value of Money Adjustment willould be applied.

5.37.5.38.   If an adjustment is made to the $TAXA_t$ term for a period prior to the Regulatory Year in which the tTax rReview is triggered, any resultant changes to SOIAR 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 SOIAR.

Preliminary assessment

5.38.5.39.   Where one or more of the tax review trigger events under paragraph 5.324.32 occur, Ofgem will perform a preliminary assessment before deciding whether to undertake a tax the review.

*5.39.*5.40.   This preliminary assessment may involve the Authority requesting further information from the affected licensee(s) and from the stakeholder who submitted the notification under 5.32(b) and explaining the Authority it is considering undertaking a tTax rReview.

Review process

5.40.5.41.   If the preliminary information requested does not suitably address the concerns raised, Ofgem may undertake a formal tTax rReview, for which it will require the affected

licensee to procure, at its own expense, a review by an Appropriately Qualified Independent Examiner[36].

5.41.5.42.   Ofgem will notify the licensee or licensees affected in accordance with Part I3 of Special Condition 4.21 (Tax Allowance Adjustment) in orderthat it intends to commence the tax review.

5.42.5.43.   Throughout the course of the tax review, the licensee will have opportunities to comment on the Appropriately Qualified Independent Examinerexaminer's findings and engage with both the examiner and Ofgem before the final report is submitted by the examiner to Ofgem.

After the review

5.43.5.44.   Following the tax review, the Authority will consider the findings of the Appropriately Qualified Independent Examinerexaminer's report. Where the Appropriately Qualified Independent 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.publish a direction on whether or not an adjustment is needed to The Authority will make a direction adjusting the tax allowance through the variable value $TAXA_t$ in accordance with Part I3 of Special Condition 4.21 (Tax Allowance Adjustment).

5.44.5.45.   Before making a direction, the Authority will consult on the proposed adjustment to the $TAXA_t$ for no less than 28 days.

5.45.5.46.   Where the Appropriately Qualified Independent Examiner'sexaminer's report contains information that is considered confidential or market sensitive, the licensee may

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[36]   The examiner would be a qualified tax accountant from a reputable firm regulated by a relevant professional body. The examiner chosen by the licensee should be agreed to by Ofgem. If appropriate, the examiner used may be the licensee's Appropriate auditors as defined in Standard Condition B1 of the Electricity Transmission licence.

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.

5.47. The adjusted value will be reflected in the ESO PCFM and will be published on the Ofgem Website by 30 November in each Regulatory Year.

5.46.5.48. 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

5.47.5.49. Tax liability allowance calculations under the AIP make use of regulatory tax pool balance figures held within the ESO PCFM. The opening balances (as at 1 April 2021) for these tax pools are the variable values $SOOGP_t$, $SOOSRP_t$, $SOOSBP_t$, $SOODRP_t$ and $SOOIAP_t$. The Authority will review the ESO's opening tax pool balances and will set them based on the ESO's actual tax computations.

6. Pensions

Financial Adjustments - Pensions

6.1.   The ESO PCFM contains a Variable Value (EDE) allowance[37] for Pension Scheme Established Deficit (PSED) repair expenditure for each Regulatory Year of the Price Control Period. Opening values for SOEDE are based on the outcome of a pension reasonableness review concluded in November 2020. SOEDE (or the pensions allowance value) will be updated during the Price Control Period, through the AIP, according to the provisions of this chapter.

Expected timing of pensions allowance revisions

6.2.   The intention is that pensions allowance values will only be revised periodically in light of triennial actuarial valuations of the relevant pension schemes. Two pension scheme valuations are expected in the ESO RIIO-2 Price Control Period, as set out in Table 6.1, with only the first of these expected to result in publication of revised allowances within the period.

Table 6.1 – 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

6.3.   Although the intention is to revise pensions allowance values according to the timetable in Table 6.1, it may be necessary to revise them at different times if, for example, the outcome following any detailed review of an established surplus (see paragraph 6.12), or a scheme valuation or completion of a Reasonableness Review (see from paragraph 6.305.30) 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

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[37] In the context of PSED repair expenditure we refer to 'allowances' rather than 'allowed expenditure' because EDE is included in full in Calculated Revenue in the ESO PCFM, ie it is not subject to the TIM.

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 6.1.

6.4.   If the licensee's scheme triennial valuation dates differ to those shown in the first column of Table 6.1 then it 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 Methodology, published in the Triennial Pension Reporting Pack as part of the Regulatory Instructions Guidance.

6.5.   The remainder of this chapter sets out:

   a) general provisions – in section 1
   b) the timetable and process for revising pension allowance values, including details of the Reasonableness Review – in section 2
   c) the calculation of revised pensions allowance values – in section 3.

Section 1 – General provisions

Price control pension principles

6.6.   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.[38]

Pension Scheme Established Deficit

6.7.   For the purposes of this chapter:
   a) the term cut-off date refers to the date of 31 March 2012
   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 pension

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[38] https://www.ofgem.gov.uk/system/files/docs/2017/04/decision_on_policy_for_funding_pseds.pdf

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 transmission business, and

    ii.   attributable to pensionable service up to and including the cut-off date.[39]

6.8.   The licensee's PSED will be calculated using:

a) the triennial actuarial valuation of the pension scheme or schemes that contain the PSED described in paragraph 6.7~~5.7~~ b)

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 actuarial valuation that take effect in the year rr (see Table 6.1), 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.

6.9.   While the Price Control Period ends on 31 March 2026, 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

6.10. 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

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

funding arrangements as described from paragraph 6.145.14, 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.

6.11. 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.

6.12. As part of the Reasonableness Review (see paragraph 6.305.30) 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

6.13. 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

6.14. 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.

6.15.   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).

6.16.   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.

6.17.   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

6.18.   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 6.305.30); 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 conducted[40]

Step 1: by 31 July

6.19. 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.

6.20. The Authority will obtain the licensee's Scheme Valuation Data Set for the relevant valuation of the licensee's defined-benefit pension schemes by 31 July and commence a Reasonableness Review.

6.21. 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 Methodology[41];
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

6.22. The licensee will submit:

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[40] 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.
[41] https://ofgem.gov.uk/publications-and-updates/notice-modify-regulatory-instructions-and-guidance-held-network-operators

a) Explanations and supporting evidence where appropriate for how it has interpreted the interest 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.

6.23. The licensee will also submit Pension Deficit Allocation Methodology information and its PSED figure as at the relevant valuation date indicated in Table 6.1 showing the movements from the previous valuation date.

Step 3: by 14 September

6.24. The licensee will submit:

a) its proposals with supporting explanation for

    i.   Base Annual PSED Allowances (PBAPA$_y$), under paragraph 6.46~~5.46~~

    ii.   payment history allowances (PPH$_y$), under paragraph 6.52~~5.52~~

    iii. any proposed prospective discounting basis for payment history variances, reflected in PhDR$_y$, under paragraph 6.52~~5.52~~.

b) explanation of how it has engaged with pension scheme trustees and managers to advocate for the interest of consumers with respect to the PSED.

6.25. In its explanations under paragraphs 6.24~~5.24~~ b), 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 6.22~~5.22~~.

Step 4: by 30 September

6.26. 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 6.32~~5.32~~ a) and b), and 6.33~~5.33~~

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 6.34~~5.34~~. 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 6.38~~5.38~~.

6.27. 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

6.28. The Authority will complete its Reasonableness Review:

a) determine the values $BAPA_y$, 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 6.46~~5.46~~

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 6.52~~5.52~~

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:

$$SOEDE_y = BAPA_y + PH_y + AF_y$$

e) set out any recommendation to the licensee to adopt good practice before the next Reasonableness Review

f) 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 6.52~~5.52~~

g) confirm whether a more detailed review of any established surplus is required (see paragraph 6.12~~5.12~~).

Step 6: by 30 November

6.29. The Authority will direct revised Pensions Allowance values and will publish a report on the Reasonableness Review.

Reasonableness Reviews and adjustment factors

6.30. After receiving the whole (or substantially the whole) of the licensee's Scheme Valuation Data Set (see paragraph 6.21~~5.21~~) and its proposals for Base Annual PSED Allowances and Payment History Allowances (see paragraph 6.24~~5.24~~) 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; and
   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.

6.31. The review referred to in paragraph 6.30~~5.30~~ is termed the Reasonableness Review for the purposes of this methodology.

6.32. 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 6.46~~5.46~~ and 6.52~~5.52~~;

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 6.345.34; and

e) conducting a more detailed review of any established surplus (see paragraph 6.125.12).

6.33. The Authority will only make a determination in respect of paragraph 6.325.32 b) if it considers the licensee's proposals under paragraphs 6.465.46 and 6.525.52 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.

6.34. Consistent with its price control pensions Principle 3,[42] the Authority will only apply adjustment factors referred to in paragraph 6.325.32 c) and 6.325.32 d) to the extent necessary to disallow any excess costs arising from a material failure 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 time value of money in paragraphs 2.24 in ascertaining the cumulative payment history variance under paragraph 6.495.49 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; and

c) the licensee's failure to respond adequately to any recommendations set out by the Authority in preceding Reasonableness Reviews.

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[42] See Appendix 3, of
https://www.ofgem.gov.uk/system/files/docs/2017/04/decision_on_policy_for_funding_pseds.pdf

6.35.   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 hDR_y.

6.36.   Before deciding to make determinations referred to in paragraphs 6.32~~5.32~~ b), 6.32~~5.32~~ c) and 6.32~~5.32~~ d), the Authority will consult with the licensee (see paragraph 6.27~~5.27~~), giving its reasons with reference to paragraphs 6.33~~5.33~~ and 6.34~~5.34~~ and to the Pensions Principles referred to in paragraph 6.6~~5.6~~.

6.37.   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 6.33~~5.33~~ and 6.34~~5.34~~, that have led to its decision; and
   c) Set out the basis on which it considers any adjustment factors referred to in 6.32~~5.32~~ c) or 6.32~~5.32~~ d) might be discontinued at the next Reasonableness Review.

6.38.   Where, after consulting with the licensee (paragraph 6.27~~5.27~~) 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 considers 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 considers that adopting the recommendations would be in the interest of consumers and would not disproportionately impact the licensee; and
   d) the Authority considers it is practical for the licensee to adopt the recommendations.

Section 3 – Proposals for revised pensions allowance values

6.39.   This section describes what the licensee should take into account in making its proposals for:

a) Base Annual PSED Allowances

b) payment history allowances.

Base Annual PSED Allowances

6.40. 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.

6.41. The licensee must set out its calculations of:

a) the indicative further PSED repair period, see from paragraph 6.42~~5.42~~

b) the indicative base annual PSED allowance, see from paragraph 6.44~~5.44~~ and

c) its proposal for Base Annual PSED Allowances, see from paragraph 6.46~~5.46~~.

Indicative further PSED repair period

6.42. The indicative further PSED repair period represents a number of years (not necessarily a whole number) from the valuation date specified in Table 6.1 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 6.7~~5.7~~ b), expressed in 2018/19 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 6.6~~5.6~~), and

EBAPA is an average of the Base Annual PSED Allowance expressed in 2018/19 price terms for years rr-1 and rr, where the year rr is the Regulatory Year specified in Table 6.1 for the relevant Reasonableness Review.

and

b) 15.

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

6.43. 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 6.425.42 a), and
b) 15.

Indicative Base Annual PSED Allowance

6.44. 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 6.425.42.

6.45. For example, if the PSED was £1m in 2018/19 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

6.46. 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 6.445.44. 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 6.425.42 if it considers that the indicative Base Annual PSED Allowance calculated by paragraph 6.445.44 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
    6.42~~5.42~~ which is less than 5 years; or

  d) is otherwise inappropriate or inequitable.

6.47. The alternative proposal under paragraph 6.46~~5.46~~ must represent a profile of Base Annual PSED Allowances, $PBAPA_y$ for each year y subsequent to the valuation date specified in Table 6.1, such that

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

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 6.49~~5.49~~) 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 6.52~~5.52~~) 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 furthers 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 6.52~~5.52~~.

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

"·" is a symbol for multiply (the mathematical operation of multiplication)

Payment history allowances

6.48.   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 6.405.40. 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.

6.49.   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 6.515.51 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 6.505.50, where relevant

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

rr is the Regulatory Year specified in Table 6.1 for the relevant Reasonableness Review

D_y means the net sum of the following, which may be positive or negative, expressed in 2018/19 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 6.475.47

- 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 6.125.12.

- 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 6.285.28 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 2018/19 prices in accordance with paragraph 6.485.48. 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 6.505.50.

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

$$\prod$$

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 6.285.28 e)) or, where no alternative discounting basis has been specified, the time value of money as described in paragraphs 2.24.

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

6.50. 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 6.49~~5.49~~ and the attributable LTU value from the LTU term applied in paragraph 6.49~~5.49~~.

6.51. The licensee may choose to present a truncated calculation of the term V$_{rr}$ specified in paragraph 6.49~~5.49~~, on a basis that is demonstrably consistent with the formula specified in paragraph 6.49~~5.49~~. 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.

6.52. 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 6.25~~5.25~~. Such a proposal may relate PhDR$_y$ to the value of DR, the time value of money or rates of return on asset-backed arrangements. In the absence of any proposal, PhDR$_y$ is the time value of money in period rr+1 calculated in accordance with paragraphs 2.24.

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 6.475.47) 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 6.475.47 as at the end of the reasonableness review year, after applying appropriate discount rates (generally hDR$_Y$).

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

7. Legacy Adjustments

Overview

7.1.   This section of the handbook provides an overview of the legacy price control adjustments, which are necessary to take account of:

   a)   activities carried out by the licensee;
   b)   incentivised performance by the licensee; and / or
   c)   costs or expenditure incurred by the licensee,

    relating to Regulatory Years prior to Regulatory Year 2021/22 (the "legacy period").

7.2.   Legacy price control adjustments may be necessary where it was not possible to finalise values used in the calculation of the licensee's price control revenue at final determinations, because of the non-availability of outturn data and other relevant information. Adjustments may also be necessary to correct anomalous positions, acknowledged by Ofgem and the licensee.

7.3.   Legacy price control adjustments are divided into two categories, listed below:

   a)   Legacy Adjustments to Revenue allowances - $SOLAR_t$[43]; and
   b)   Legacy Adjustments to RIIO-1 RAV additions – $LSORAV_t$

7.4.   The variable values $SOLAR_t$ and $LSORAV_t$ give effect to legacy adjustments and represent respectively:

   a) the net incremental changes (which may be positive or negative) to RIIO-2 revenue allowances; and

   b) the RIIO-1 Net RAV additions relating to the RIIO-1 Price Control Period.

7.5.   Revisions to $SOLAR_t$ and $LSOPHRAV_t$ affect the calculation of Allowed Revenue for the licensee, through the AIP, in the following ways:

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[43] The calculation of which is addressed in Special Condition 4.9̶8̶, Part A.

a) adjustments to revenue allowances ($SOLAR_t$) flow directly into Allowed Revenue as fast money amounts

b) adjustments to the RIIO-1 Net RAV additions ($LSORAV_t$) flow into Calculated Revenue (R_t) indirectly, by giving rise to adjusted return on RAV and depreciation amounts.

7.6.   It should be noted, however, that revisions to $SOLAR_t$ and $LSORAV_t$ values will also have ancillary effects on other calculations which feed into Allowed Revenue, under the AIP.

7.7.   Revised $SOLAR_t$ and its components are denoted in nominal terms. $LSORAV_t$ values will be denoted in 2018/19 prices, consistent with the price base used in the ESO PCFM.

7.8.   On 1 April 2021, the $SOLAR_t$ and $LSORAV_t$ variable values will be provisional. These values will have been determined using forecast data at the time of final determinations and therefore will be adjusted when outturn data becomes available.

Revision to Legacy Adjustments

7.9.   The Legacy PCFM Variable Values will be revised as necessary during the Price Control Period. However, it is expected that legacy adjustments will be completed through the Close-out of the RIIO-1 price control, as part of the first two AIPs during the RIIO-2 Price Control Period.

7.10. Where applicable, Ofgem will use forecasts to determine a provisional value for legacy adjustments, which will be updated in subsequent AIPs when the outturn data becomes available.

7.11. It might be necessary for a legacy outturn value to be restated by the licensee or adjusted by Ofgem after it has been applied to the determination of a component term value because of:

- errors or omissions in the preparation of information or inconsistencies with the relevant Regulatory Instructions and Guidance (RIGs) or

- an efficiency review by Ofgem.

7.12. In either of those circumstances, the restated/adjusted legacy outturn value would be applied in place of the original value in a subsequent determination of legacy term values, and reflected in a revision to the relevant PCFM Variable Value for the next AIP.

Legacy Adjustment to Revenue – (SOLAR$_t$)

7.13. SOLAR$_t$ is derived in accordance with the formula in Part A of Special Condition 4.8 and comprises three legacy adjustments (see Table 7.1~~Table 7.1~~). These legacy adjustments are determined in accordance with the methodologies set out in Chapter 4 of the special conditions.

Table 7.1 – Legacy Adjustments (SOLAR$_t$)

SOLAR$_t$ Components	Description	SpC
LSOMOD$_t$	System Operator Legacy MOD	SpC 4.9~~8~~, PART B
LSOTRU$_t$	System Operator TRU Term	SpC 4.9~~8~~, PART D~~A~~
LSOEMRINC$_t$	System Operator Financial incentives on EMR	SpC 4.9~~8~~, PART E~~A~~

7.14. Where a methodology for the calculation of a component of SOLAR$_t$ refers to a calculation as set out in the RIIO-ET1 special licence conditions in force on 31 March 2021, this should be done with the exception of the Retail Prices Index Forecast Growth Rate calculation, the definition of which refers to "the HM Treasury "Forecasts for the UK Economy" publication, published in November each year."

7.15. Instead, from 1 April 2021, the Retail Prices Index Forecast Growth Rate should be calculated with reference to the August publication of the HM Treasury Forecasts for the UK Economy publication as the calculation will need to be done in time to feed the SOLAR$_t$ variable value into the November AIP before the cut-off date set out in Chapter 2 of this handbook.

7.16. For this version of the handbook, further detail is only provided for LSOMOD$_t$ (Special Condition 4.9~~8~~, Part B), a component term for SOLAR$_t$.

Legacy MOD (LSOMOD$_t$)

7.17. The Legacy MOD (LSOMOD$_t$) value represents an amount (either positive or negative) to be added to licensee's Allowed Revenue, which relate to the Regulatory Years prior to the current Price Control Period.

LSOMOD$_t$ values for the first two years of RIIO-2

7.18. Ofgem will take the last published RIIO-ET1 PCFM (the RIIO-ET1 Price Control Financial Model following the AIP 2019) and extend the calculations on the 'System Operator's' worksheet, to output a SOMOD$_t$ value for Regulatory Years following the conclusion of RIIO-ET1. This extended version of the last published RIIO-ET1 PCFM will be referred to as the Legacy ESO RIIO-1 PCFM and the RIIO-1 Price Control Period associated with the system operator will be referred to as the ESO RIIO-1 Price Control Period.

7.19. As with the RIIO-1 process, a new SOMOD$_t$ (eg SOMOD$_{2021/22}$ and SOMOD$_{2022/23}$) will be calculated and directed at each AIP, reflecting any changes related to the RIIO-1 variable values or from the closeout process.

7.20. As in the RIIO-1 process, the PCFM Variable Values feeding into the Legacy ESO RIIO-1 PCFM are to be derived in accordance with Chapter 6 (Annual Iteration Process - Adjustments to the System Operator Revenue Restriction) of the Electricity Transmission Licence special conditions and the version of the RIIO-ET1 Price Control Financial Handbook as in force on 31 March 2021.

7.21. These SOMOD$_t$ values will be denoted in £m 09/10 prices, and then inflated by the RPIF$_t$ term consistent with the RIIO-1 methodology and regulatory reporting packs. This nominal SOMOD is used as the value of LSOMOD$_t$, and is added directly to Allowed Revenue in the RIIO-2 period.

7.22. The ESO PCFM, in its state as at 1 April 2021 includes values for LSOMOD$_{2021/22}$ and LSOMOD$_{2022/23}$ (forecast), which are determined based on the calculations and formulae in the Legacy ESO RIIO-1 PCFM and the data available at Final Determinations.

7.23. The value for LSOMOD$_{2021/22}$ relating to Regulatory Year 2019/20 is derived from outturn data submitted by licensees by 31 July 2020 in accordance with the Regulatory Instructions & Guidance (RIGs). Values of LSOMOD$_t$ will not change in any subsequent AIP.

7.24. In absence of outturn data[44], a provisional value will be calculated for $LSOMOD_{2022/23}$, as at 1 April 2021, based on forecast data. This will then be updated at the subsequent AIP in November 2021, following the submission of outturn expenditure data on 31 July 2021.

7.25. To calculate the value of LMOD in Regulatory Years 2022/23 or beyond, PVF terms for Regulatory Years within RIIO-2 are required to make the appropriate time value of money adjustment.

7.26. The PVF term will be the real rate that, when inflated by the corresponding RPI factor (RPIF), implies the same *nominal* time value of money (TVM_t) used in the RIIO-2 Price Control Financial model for that Regulatory Year.

7.27. For example, if the RIIO-2 term TVM_t has a value of 4.55%, a value of PVF will be used such that when inflated by RPI, the nominal rate is also 4.55%.

LSOMODt values to reflect the closeout of RIIO-ET1

7.28. Ofgem will take the Legacy RIIO-ET1 PCFM and modify it to calculate a closeout adjustment value (COA) using the same approach as the SOMODt calculation, applying the same time value of money as would apply to SOMODt in 2021/22.

7.29. The value of LSOMODt for 2023/24 is derived in accordance with Special Condition 4.9~~8~~, Parts B and C based on a value of COA (the closeout adjustment) that the Authority will direct.

7.30. In order to direct the value of COA, the Authority will follow the following process:

- Coordinate adjustments to the Legacy RIIO-ET1 PCFM in accordance with the closeout methodologies listed in paragraph 7.32~~6.32~~
- Ensure "31 March 2024" and the relevant licensee are selected on the "UserInterface" tab of the Legacy RIIO-ET1 PCFM
- Run the tax trigger, then switch the model back into licence model

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[44] There is a two-year lag in reflecting outturn data in Allowed Revenue i.e. outturn data relating to expenditure in Regulatory Year 2020/21 cannot be reflected until after the AIP in 2021 for the Regulatory Year 2022/23.

- Calculate a value of COA using the modified Legacy RIIO-ET1 PCFM from paragraph 7.286.28
- Direct the value of "COA" (in 18/19 prices) from the "Legacy Summary" tab as the corresponding input to the ESO PCFM.

7.31. Until the direction of COA, the value of the COA will remain provisional and licensees will use their best forecast.

Closeout methodologies

7.32. In order to calculate a value of COA, the following adjustments will be made to the Legacy RIIO-ET1 PCFM company input tab in accordance with the Decision on the RIIO-1 close out methodologies for the ESO [45] ("the Decision"):

- Revise the Electricity Market Reform (EMR) IT funding- revise row 11 (SOEMRES) in accordance with the Decision chapter 3,
- Offshore Coordination Project- revise row 11 (SOEMRES) in accordance with the Decision chapter 4; and,
- Early Competition Plan Project- revise row 11 (SOEMRES) in accordance with the Decision chapter 5.

Legacy Adjustment to RAV Additions (LSORAV$_t$)

7.33. This section sets out the methodology by which the Authority will determine LSORAV$_t$ (Special Condition 4.109) values for the licensee.

LSORAV$_t$ values prior to the closeout of RIIO-ET1

7.34. The Authority will derive LSORAV$_t$ values relating to ESO RIIO-1 Price Control Period, at Final Determinations in accordance with the applicable RIIO-ET1 Cost, Volume and Revenue Reporting Regulatory Instructions and Guidance (RIGs).

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[45] Ofgem publication: Decision on the RIIO-1 close out methodologies for the Electricity System Operator | Ofgem

7.35. $LSORAV_t$ should be calculated in accordance with the PCFM Guidance. Ofgem will take the last published ET1 PCFM (the RIIO-ET1 Price Control Financial Model following the AIP 2019) and extend the calculations to enable the calculation of a RAV position for the final Regulatory Year of RIIO-1. Any net additions to RAV balances during this period represent $LSORAV_t$ values.

7.36.   The $LSORAV_t$ values for Regulatory Year 2020/21 are provisional and will be updated with outturn data received by the AIP ending November 2021.

7.37.   By 31 October 2021, the Authority will derive finalised $LSORAV_t$ values for the Regulatory Year 2020/21 for the licensee by inputting actual cost data submitted by 31 July 2021 into the Legacy ESO RIIO-1 PCFM and restating them to 2018/19 prices. There may also be subsequent updates to allowances following the 31 July data submission which will be processed in the same way.

7.38.   The $LSORAV_t$ values, as determined above are used in the PCFM Variable Values table as historical additions to RAV (RIIO-1 Net RAV additions (after disposals)) relating to ESO RIIO-1 Price Control Period and will flow indirectly into ESO RIIO-2 Calculated Revenue (R_t).

7.39.   The $LSORAV_t$ values are contained in the Regulatory Year columns for 2013/14 – 2020/21 (ESO RIIO-1 Price Control Period) in ESO PCFM.

Directing final values of $LSORAV_t$ following the closeout of RIIO-ET1

7.40.   In directing the value of COA in accordance with paragraph 6.30, the Authority will also direct the corresponding values of $LSORAV_t$ from the Legacy RIIO-ET1 PCFM following implementation of the closeout methodologies in paragraph 6.32.

Appendices

Index

Appendix 1 - Glossary

A

Annual Iteration Process

The annual iteration process is the process of annually updating the variable values in the ESO PCFM and running the ESO PCFM calculation functions in order to provide updated Allowed Revenue (AR_t) for a licensee.

Associated Document

A supporting document needed to supplement the application or understanding of the variable values in Table 3.1

Authority's website

www.ofgem.gov.uk

B

Base Annual PSED Allowance

See chapter 6, Section 3

C

Consumer Prices Index Including Owner Occupiers' Housing Costs (CPIH)

The monthly values of the "CPIH All Items", series ID "L522", published by the Office for National Statistics (ONS) or any other public body taking on its functions.

Also see chapter 2, para 2.11

Cut-Off Date

Means 31 March 2010 for DNOs, 31 March 2013 for GDNs and 31 March 2012 for TOs and SOs, see Chapter 6, para 6.7~~5.7~~.

D

Defined Benefit Scheme

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.

E

ENA

Energy Networks Association

Established surpluses

See chapter 6, section 1, para 6.10~~5.10~~ - 6.12~~5.12~~.

ESO

Refers to NGESO. On 1 April 2019, the ESO separated from National Grid Electricity Transmission (NGET) and became a legally distinct company within the National Grid Group.

ESO Price Control

The price control arrangements which will apply to NGESO licensee from 1 April 2021 until 31 March 2026

ESO Price Control Financial Model ("ESO PCFM")

The model of that name ~~including the suffix 'November 20XX' (where 20XX represents the calendar year containing the month of November in the Regulatory Year t-1)~~:

(a) that is represented by a workbook in Microsoft Excel format maintained under that name detailed above, on the Authority's website; and

(b) that the Authority will use to determine the values of the term <u>SOI</u>AR through the application of the Annual Iteration Process, whether under Special Condition 4.<u>2</u>~~1~~, Part <u>A</u>~~B~~ of ESO licen<u>c</u>se.

The ESO PCFM calculates updated Allowed Revenue through an Annual Iteration Process - see chapter 2, para 2.4.

F

Fast money

The proportion of Totex which is not added to the licensee's RAV balance and is effectively included in the licensee's revenue allowance for the year of expenditure.

Final Determinations

Means the document of that name published on the Authority's Website in relation to the RIIO-2 price control.

Funding Adjustment Rate

This is the percentage calculated as 1 - Totex Incentive Strength Rate.

I

International Financial Reporting Standards (IFRS)

IFRS are accounting standards set by the International Accounting Standards board. These standards ensure comparability and accuracy of accounts.

L

Legacy ESO RIIO-1 PCFM

An extended version of the last published RIIO-ET1 PCFM to used to calculate a legacy $SOMOD_t$ value relating to RIIO-ET1 Regulatory Years, for inclusion in the $SOLAR_t$ term.

N

NPV

Net Present Value

O

OBR

Office of Budget Responsibility

Ofgem

The Office of the Gas and Electricity Markets Authority.

P

PCFM

The ESO PCFM (see ESO Price Control Financial Model definition)

PCFM Guidance

An Associated Document issued by the Authority under Part E of special condition 5.2 (Annual Iteration for the ESO Price Control Financial Model), to be used by licensee to populate variable values in ESO PCFM for submission during AIP.

PCFM Variable Values

The variable values in Table 3.1 of this handbook or the PCFM Variable Values table in the ESO Price Control Financial Model.

Pensions Allowance

See chapter 6, Section 3.

Pension Principles

See Chapter 6, para 6.65.6.

Pension Scheme Established Deficit (PSED)

The difference between assets and liabilities, determined at any point in time, attributable to pensionable service up to the end of the respective Cut-Off Dates and relating to Regulated Business Activities under Pension Principle 2. The term applies equally if there is a subsequent surplus.

Also see chapter 6, para 6.75.7.

Price Control Period

The period of five years beginning on 1 April 2021 and ending on 31 March 2026.

R

RAV – Regulatory Asset Value

A financial balance representing expenditure by the licensee which has been capitalised under regulatory rules. The licensee receives a return and depreciation on its RAV as a part of its Allowed Revenue (AR_t).

Reasonableness Review

See Chapter 6, section 2, from para 6.305.30.

Regulatory Year

A period of twelve months commencing on 1 April at 05:00 and ending on the following 1 April immediately before 05:00. The first such Regulatory Year (t=1) commences on 1 April 2021 at 05:00 hours during the RIIO-2 Price Control Period.

Retail Price Index (RPI)

The monthly values of the "RPI All Items Index", series ID "CHAW", published by the Office for National Statistics (ONS) or any other public body acquiring its functions.
Also see Chapter 2, para 2.11.

RIIO

Revenue = Incentives + Innovation + Outputs, Ofgem's framework for the economic regulation of energy networks.

S

Slow money

The proportion of Totex which is added to the licensee's RAV balance on which the licensee receives a revenue allowance to cover finance (vanilla WACC) and depreciation costs.

SONIA

The daily values of the Sterling Overnight Index Average, series ID "IUDSOIA", published by the Bank of England or any other government department acquiring its functions.

T

Tax Review

A review by the Authority of any material differences between the licensee's Calculated Tax Allowance and its Actual Corporation Tax liability.
See chapter 5, from para 5.30~~4.30~~ - 5.47~~4.47~~.

Time Value of Money Adjustment

A multiplier used when the award or application of a financial value, attributable to a particular year, is deferred until a later year, even where the deferral is routine and in accordance with a price control mechanism.
In basic terms, for any one year, the multiplier is (1+X) where: X is the WACC for the licensee applicable to the period of deferral.

Triennial (pension scheme) 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.

U

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 - Regulatory Instructions and Guidance: Triennial Pension Reporting Pack supplement including pension deficit allocation methodology.

V

Vanilla WACC

See WACC

W

WACC

The Vanilla Weighted Average Cost of Capital is Ofgem's preferred way of expressing the rate of return allowed on the Regulatory Asset Values (RAV) of the ESO. The use of Vanilla WACC means that the company's tax cost is separately calculated as a discrete allowance so that only the following have to be factored in:

i)   the pre-tax cost of debt, and

ii)   the post tax cost of equity

weighted according to the price control gearing assumption.

"Real Vanilla WACC" is used which gives a lower percentage than "Nominal Vanilla WACC" would (when inflation is positive).