

PR19 Retail Services business plan table commentaries

September 2018

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R1 - Residential retail

Block A Expenditure

This section outlines expenditure attributed to each core element of the retail operation including Customer Services, Debt Management, Doubtful Debt, Meter Reading and Other Operating Expenditure. Costs are presented in outturn prices.

Costs derive from customer led models, which model the expected costs associated with key retail activities. In relation to R1, key cost drivers within these models include activities such as frequency of outbound contact, inbound contact channel mix, meter penetration and required reads and propensity to contact. A customer segmentation approach was used to model bespoke characteristics of three identifiable customer groups within our household customer base. More detail on segmentation can be found in the 1.1 Customer engagement report of the business plan.

Tactical improvements and a number of innovative capabilities are planned for the AMP7 period. One such capability is the planned investment in automated meter reader (AMR) devices from 2020. This investment will upgrade the handheld devices used by meter readers.

The anticipated benefits of planned capabilities are impact assessed and cost movements are inputted into the business plan. These investments will benefit both residential and non-residential customers. The proportion of costs attributed to each customer group is based upon the expected focus of each capability.

As advised in RAG 2.07, costs are allocated across the 6 customer groups using; write offs for doubtful debts, the debt dashboard for debt management and billed customer numbers for customer services. For the remaining categories we have used unique customers (based on the 1.3 multiplier for dual service customer).

All historical costs were sourced from published regulated accounts and align to published annual performance reviews (APR), though the below have been restated (more information is provided in the individual line details below).

- 2015-16 retail customers
- Capital expenditure (capex) on assets principally used by retail; capex values from regulatory accounts have been restated for the years 2015-16 and 2016-17 to account for changes in treatment of principal use as outlined below.
- Net retail expenditure - customer side leaks, (see tables below in commentary lines 5 and 20 for more details.)
- Depreciation values; Depreciation values from regulatory accounts have been restated for the years 15-16, 16-17 and 17-18 in order to reflect the pre and post AMP 6 split. See breakdown in outturn (millions, 3dp) below;

Depreciation adjustments		15-16	16-17	17-18
Depreciation – tangible fixed assets	Historical		2.439	0.446
Amortisation – intangible fixed assets	Historical		0.703	5.015
Total Depreciation	Historical	2.990	3.142	5.461
Total depreciation on assets existing at 31 March 2015	Updated	2.746	2.666	2.740
Total depreciation on assets acquired after 1 April 2015	Updated	0.245	0.476	2.721

Line 1 Customer Services

The costs associated with providing customer services activities-services as defined in table 2C line 1 of RAG 4.

- *to residential unmeasured and measured customers (as defined in paragraph 3.1 of RAG 2);*
- *in receipt of water only, sewerage only and combined water and sewerage services respectively from the company*

The costs have been derived using the customer led modelling described above. Customer service costs reduce by 2% between 2018-19 and 2024-25, this reduction is not linear but rather reflects the variable levels in expected activity to deliver excellent customer services.

Line 2 Debt Management

All costs relating to the management of debt recovery - monitoring of outstanding debt, including issue of reminders and follow up telephone calls, managing and monitoring field recovery of debt, includes costs of customer visits, managing and monitoring external debt collection routes including debt collection agencies and legal (as defined in table 2C line 2 of RAG 4), split by measured - unmeasured customers and in customers in receipt of water only, sewerage only and combined water and sewerage services respectively from the company.

The cost of debt management services purchased should be included but the costs of services provided for third parties excluded.

The costs have been derived using the customer led modelling described above. Debt management costs reduce by 8% between 2018-19 and 2024-25, the reduction is linear and gradual and reflects a considered approach to managing customer debt. The step change between 2017-18 and 2018-19 reflects the level of activities required to sufficiently manage the volume of customers experiencing financial vulnerability and affordability concerns.

Line 3 Doubtful Debts

The charge-credit to the profit and loss account for doubtful debts for residential customers in receipt of water only, sewerage only and combined water and sewerage services respectively from the company (as defined in table 2C line 3 of RAG 4).

The costs have been derived using the customer led modelling described above. Bad Debt costs reduce by 19% between 2018-19 and 2024-25, the reduction is linear and gradual and reflects the outcome of additional support for customers experiencing financial vulnerability and affordability concerns.

Line 4 Meter reading

The costs associated with providing meter reading (as defined in table 2C line 4 of RAG 4) for measured customers in receipt of water only, sewerage only and combined water and sewerage services from the company. This includes:

- *ad hoc read requests*
- *cyclical reading*
- *scheduling*
- *transport*
- *physical reading*
- *reading queries and read processing costs*
- *managing meter data*
- *supervision and management of meter readers.*

Costs associated with account management (including additional customer contacts) should not be included. The additional working capital (cash flow) costs associated with different payment patterns of metered customers should be excluded - these are collected in the retail margins table R8.

The cost of meter reading services purchased should be included but the costs of services provided for third parties excluded.

Not applicable for unmeasured customers

The costs have been derived using the customer led modelling described above. Metering costs increase by 27% between 2018-19 and 2024-25. This is attributable to a 22% increase in metered customers, where new housing accounts for a proportion of the increase in the meter penetration. We also commit to increase the frequency of meter reads for our vulnerable and high transient customer which drives incremental metering cost.

Line 5 Other Operating expenditure

Any other operating expenditure (as defined in table 2C line 6 of RAG 4) incurred in serving residential customers in receipt of water only, sewerage only and combined water and sewerage services respectively from the company. Where companies report expenditure here they should outline exactly what this covers in the commentary.*

**Note for the purposes of PR19 reporting, other expenditure should exclude local authority - cumulo rates and pension deficit repair costs, as these are separately reported in lines 6 and 7 respectively.*

The costs have been derived using the customer led modelling described above.

As discussed in the commentary to line 20, other operating expenditure has been updated to reflect the adjustment for the treatment of customer side leaks:

	12-13	13-14	14-15	15-16
Historical figures (as previously reported in CAT)	11.458	9.312	13.285	12.412
Customer side leaks adjustment (see line 20)	(1.256)	(0.985)	(1.21)	(1.184)
Updated figures as reported in R1	10.202	8.327	12.075	11.228

Line 6 Local Authority Loans and Cumulo Rates

The cost of local authority rates. This should include both the local authority rates and cumulo rates.

Historical local authority and cumulo rates derive from data submitted in regulatory accounts. (The 2015-16 figure was submitted incorrectly in the APR and subsequently corrected in the CAT tables). All forecast figures assume a revaluation in 2021-22 and again in 2024-25.

Line 7 Pension deficit repair costs

Actual pension deficit recovery payments including costs capitalised and any group recharges for pension deficit costs.

There is no change in total pension deficit repair costs expected over the AMP. The allocation to retail has been made based on staff allocation of the defined benefit scheme members. The allocation between the columns has been calculated by customer numbers.

Line 8 Total Operating expenditure (excluding third party services)

Total retail operating expenditure (excluding third party services) related to serving residential customers in receipt of water only, sewerage only and combined water and sewerage services respectively. The sum of R1 lines 1 to 7.

This includes all costs reported in line 22 (demand side initiative - customer-side leak repairs) but should not include any expenditure funded in wholesale (lines 18 and 21).

It represents total operating expenditure forecasts, including items relating costs which companies think should be excluded from benchmarking. All claims for special cost factors should be reported in table R2.

It excludes capex and depreciation.

The cost services purchased should be included but the costs of services provided for third parties excluded.

Calculated.

Total retail operating expenditure is on average reducing by 2% annually, totalling an 11% reduction between 2018-19 and 2024-25. The most significant cost reduction comes from our doubtful debt costs, where we forecast a 19% £3.8m reduction in costs between 2018-19 and 2024-25.

Line 9 Third party services operating expenditure

The operating costs of providing appointed residential unmeasured retail services to third parties. No third party operating expenditure costs are anticipated.

Line 10 Total operating expenditure, including third party services

Total operating expenditure, including third party costs. The sum of R1 lines 8 and 9. Calculated

Line 11 Total depreciation on legacy assets existing at 31 March 2015

Depreciation of assets which existed before 1 April 2015 (i.e. assets included in wholesale RCV) wholly or principally used by retail (as defined in paragraph 2.1 of RAG 2), split between residential unmeasured customers (as defined in paragraph 3.1 of RAG 2) in receipt of water only, sewerage only and combined water and sewerage services respectively from the company.

We will continue to collect this information for historical years (i.e. up to 2020) as we use historical data for benchmarking purposes (see "Legacy Depreciation" within the cost assessment appendix 12 published alongside the July Consultation document for further details).

Depreciation should be reported on the same accounting basis as PR14 submissions. This figure includes amortisation of deferred credits and intangible assets.

Total depreciation is split between pre AMP 6, AMP 6 and AMP 7 assets. Depreciation values from regulatory accounts are restated for the years 2015-16 and 2016-17 in order to reflect the pre and post AMP 6 split. All historic capital expenditure on assets principally used by retail derive from regulatory accounts. The calculation of historical figures includes amortisation. The forecast of depreciation on assets acquired after 1 April 2020 is based on our investments programme. More detail is provided in the 2.5 Household retail business plan and 2.6 Non-household retail business plans.

Please provide detail in your BPDT commentary to explain the underlying calculations and assumptions for depreciation on legacy assets existing at 31 March 2015 including: original capex value of the assets, assumed asset life (both the original asset life and the remaining asset life within the PR19 period), method of depreciation and end value of the assets.

The original capex value of assets existing at the start of AMP6 totalled £44m. The useful life of assets ranges, with an average intangible asset life of seven years and tangibles ranging from five to sixty years. Asset lives are established per assets acquired. All assets depreciate on a straight line basis. The assets existing at the start of AMP6 have an end value of £18m at the end of AMP7.

	Pre AMP6 Assets
Original Capex Value of Assets	£44m
Depreciation AMP5	(£5m)
Depreciation AMP6	(£13m)
Depreciation AMP7	(£8m)
End Capex Value of Assets (AMP7)	£18m

Line 12 Total depreciation on assets acquired between 1 April 2015 and 31 March 2020

Depreciation charge on AMP6 or (assets that did not exist before 1 April 2015) which are used wholly or principally for the residential retail business (as defined in paragraph 2.1 of RAG 2) split between residential measured - unmeasured customers (as defined in paragraph 2.6 of RAG 2) in receipt of

water only, sewerage only and combined water and sewerage services respectively from the company.

Depreciation includes amortisation of deferred credits and fixed intangible assets.

See commentary for line 11 above for more detail.

Please provide detail in your BPDT commentary to explain the underlying calculations and assumptions for depreciation on assets acquired during the PR14 period including: capex value of the asset, assumed asset life (both the original asset life and the remaining asset life within the PR19 period), method of depreciation and end value of the assets.

The capex value of initiated and planned assets in AMP6 totals £38m. The useful life of assets ranges between 2 – 20 years and is established per assets acquired. All assets are anticipated to depreciate on a straight line basis unless otherwise known at the point of acquisition. All assets initiated have an end value of the assets, the remainder is forecasted based upon the average useful life of the asset. We estimate that the assets created in AMP6 will have an end value of £10m at the end of AMP7.

	AMP6 Assets
Original Capex Value of Assets	£38m
Depreciation AMP6	(£11m)
Depreciation AMP7	(£17m)
End Capex Value of Assets (AMP7)	£10m

Line 13 Total depreciation on assets acquired after 1 April 2020

Depreciation charge on AMP7 or later assets (assets that did not exist before 1 April 2020) which are used wholly or principally for the residential retail business (as defined in paragraph 2.1 of RAG 2) split between residential measured - unmeasured customers (as defined in paragraph 2.6 of RAG 2) in receipt of water only, sewerage only and combined water and sewerage services respectively from the company.

Depreciation includes amortisation of deferred credits and fixed intangible assets.

This should include depreciation reported in table R2.

See commentary for line 11 above for more detail.

Please provide detail in your BPDT commentary to explain the underlying calculations and assumptions for depreciation on assets planned after 1 April 2020 including: capex value of the asset, assumed asset life, method of depreciation and end value of the assets.

The capex value of planned assets beyond 2020 totals £42m, our anticipated change profile across AMP7 commits to greater activity to 2021-22 to ensure the benefits of these capabilities can be realised during the AMP. Due to the nature of the planned assets we anticipate an average useful life of between 7 – 10 years. All assets are anticipated to depreciate on a straight line basis unless otherwise known at the point of acquisition. All assets in the period are expected to depreciate throughout AMP8 and a forecast of the end value of the assets is not yet known with enough certainty to produce a realistic forecast. We do however forecast the value of these assets to be £29m at the end of AMP7.

	AMP7 Assets
Original Capex Value of Assets	£42m
Depreciation AMP7	(£13m)
End Capex Value of Assets (AMP7)	£29m

Line 14 Total residential retail costs (opex plus depreciation, excluding third party services)

Total residential retail costs (opex plus depreciation, excluding third party services). The sum of R1 lines 8, 11, 12 and 13.

Calculated

Line 15 Capital expenditure on assets principally used by retail

Residential element of capital expenditure on assets principally used by retail. It should not include any expenditure in relation to assets which are used both in retail and wholesale where wholesale is the principal use.

Capital expenditure pre 2017-18 are actuals as per APR submissions. The planned capex spend for the remainder of AMP6 totals £17.9m, (this includes an adjustment of -£0.6m for principal use of IT assets.) The capex value of planned assets beyond 2020 totals £42m, (we do not anticipate any principal use costs in AMP7). Our anticipated change profile across AMP7 commits to greater activity in 2020-21 to ensure that the benefits of these capabilities can be realised during the AMP, this results in an 82% increase in capital expenditure in 2020-21 versus 2018-19.

Over AMP7 we plan to build on the capabilities delivered during AMP6 by developing our digital services further and introducing integrated mobile and web services. Making system changes to develop new capabilities such as: segmentation within our customer systems, introducing real-time activity-based costing and real-time exception reporting, instigating variable billing and payment arrangements, targeted promotion of services and tariffs and real-time system updates. This roadmap of activity is anticipated to reduce our retail cost base by 2024-25.

We focus primarily on sustainable programmes that will maintain our standard of service. To this end we have sought to avoid options such as forced channel shifts or increased offshoring, which may deliver short term costs savings at the detriment of our customer service targets.

Block B Customer Numbers

Line 16

Households connected reported by customer type. Exclude void properties. The number of household customers (as defined in column 4 of APR table 2F).

Note: this should be the average number of customers in the year calculated at least on a monthly basis. For the purposes of this table, 'customers' should be equal to the former June return (table 7) definition of 'billed properties'. This is as follows:

"These are properties used as single domestic dwellings (normally occupied), receiving water for domestic purposes which are not factories, offices or commercial premises. These include cases where a single aggregate bill is issued to cover separate dwellings having individual standing charges. (In some instances the standing charge may be zero). The number of dwellings attracting an individual standing charge and not the number of bills should be counted. Exclude mixed-commercial properties and multiple household properties, e.g. blocks of flats having only one standing charge. Where companies issue an assessed charge to a property because metering is not possible or is uneconomic then these properties should be classified as unmeasured."

Customer numbers total the number of households connected to a water supply, excluding voids (unbilled properties). Customer numbers are expected to grow by 0.8% annually as additional housing stock is constructed in Wales and we target a reduction in the number of void properties. Over AMP7 metered customers are forecast to rise at an average rate of 3.26% annually.

To allocate costs across customer groups we calculated the number of unique customers for all years based on a multiplier of 1.3 for dual service customers as advised in RAG 2. Meter and service status (i.e. % metered, wastewater only customers etc.) are estimated based on total unique customers. Since 2016-17 our methodology for calculating property counts has changed, consequently we restated 2015-16 property counts in last year's Cost Assessment Table (CAT), as such 2015-16 retail customers have now been restated in table R1 to align with the figures reported in the CAT.

Block C Operating expenditure ~ part funded through wholesale

Line 17 – 23 General

1. There will be no direct Operating Expenditure (part funded through Wholesale) costs apportioned to retail going forward
2. Wholesale demand-side water efficiency spend remains at zero over AMP7 as all spend is classed as CAPEX.
3. There is no forecast retail cost element to customer side leaks (RAG 2 has changed the cost driver for allocating customer side leaks between retail and wholesale)
4. Over AMP 7 we forecast a slight reduction in the cost of customer side leaks funded by wholesale

Line 17 - Demand-side water efficiency ~ gross retail expenditure

The total retail operating costs of providing water efficiency services to residential customers, including:

- Promotion of water saving initiatives
- Production of customer literature and customer awareness campaigns
- Retro-fitting of water saving devices
- Provision of advice and devices to customers
- Water efficiency audits
- Water and energy conservation, optimisation of systems, advice and investigations into usage
- Data logging

Our forecast assumes that all water efficiency services are funded by wholesale, with the exception of call centre staff providing advice to customers and home visits from our affordability field team. Between 2017-18 and 2019-20 our forecast costs increase by 63% as contact centre staff become more proactive in holding discussions with customers regarding more efficient water usage. Between 2019-20 and 2020-21 we are forecasting a steep reduction in debt calls as more customers move to contact us via digital platforms. This will lead to fewer conversations with customers however the proportion of calls relating to water efficiency continues to increase over the whole of AMP7 as we use other contact channels to drive this. Between 2022-23 and 2024-25 costs continue to rise steadily at an average of 6.8% a year.

Line 18 Demand-side water efficiency ~ expenditure funded by wholesale

The retail operating costs of providing water efficiency services (as defined in R1 line 17) to residential customers that are funded by the wholesale business.

All demand-side water efficiency wholesale spend is capex hence this line has zero expenditure values for all forecast years.

The wholesale capex forecast for households focuses on continuing to offer 15,000 water efficiency packs to customers each year until the end of AMP 7. The forecast also focuses on offering domestic audits to a segment of customers who are ineligible for affordability tariffs and to support the most vulnerable communities.

Line 19 Demand-side water efficiency ~ net retail expenditure

The retail operating costs of providing water efficiency services (as defined in R1 line 17) to residential customers net of any operating costs that are funded by the wholesale business. R1 line 17 minus line 18.

Water efficiency services expenditure reported in R1 line 19 should be included in total retail expenditure, R1 line 8 above.

Calculated

Line 20 Customer-side leak repairs ~ gross retail expenditure

The total retail operating costs associated with residential customer side leaks, to include:

- Investigations
- Activities from enquiries relating to customer-side leaks, including site visits, the use of pipe locating equipment and any attendance on sites during excavations
- Resolution
- Activities comprising pipe repairs and replacement
- Free leak repairs

Since 2016, RAG 2 has changed the cost driver for allocating customer side leaks between retail and wholesale. Expenditure to meet wholesale outcomes is now reported as a wholesale cost, and consequently there is no forecast retail cost element to customer side leaks. Historical figures have been restated to reflect this change.

Other operating expenditure and total operating expenditure are reduced to reflect these restatements; see below for breakdown of changes. Historical figures have also been adjusted to apportion customer side leaks costs between household and business retail, in prior submissions of the regulated accounts all customer side leak costs were incorrectly allocated to households.

	2012-13	2013-14	2014-15	2015-16
Household	£1.256m	£0.985m	£1.210m	£1.184m
Business	£0.000m	£0.173m	£0.198m	£0.196m
Total	£1.256m	£1.158	£1.408	£1.380

Forecast values for customer side leaks funded by wholesale are based on the latest Sustainable Economic Levels of Leakage (SELL). Over AMP 7 we forecast a slight reduction in costs, due to an increase in pressure management-asset renewal that has reduced the impact of the Natural Rate of Rise (NRR).

Line 21 Customer-side leak repairs ~ expenditure funded by wholesale

The retail operating costs associated with residential customer side leaks (as defined in R1 line 20) that are funded by the wholesale business.

See commentary for line 20 above for more detail.

Line 22 Customer-side leak repairs ~ net retail expenditure

The retail operating costs associated with residential customer side leaks (as defined in R1 line 20) net of any operating costs that are funded by the wholesale business. R1 line 20 minus 21.

Customer side leaks expenditure reported in R1 line 21 should be included in total retail expenditure, R1 line 8 above.

Calculated. There is no direct costs apportioned to retail, all forecast costs come direct from wholesale. Hence this line is 0 in the table. See commentary for line 20 above for more detail.

Line 23 Total demand-side water efficiency and customer-side leak repairs ~ net retail expenditure

The retail operating costs of providing water efficiency services to residential customers plus the total retail operating costs associated with residential customer-side leaks net of those funded by wholesale. R1 line 19 plus line 22.

Expenditure reported in R1 line 23 should be included in total retail expenditure, R1 line 8 above.

Calculated.

Block D - Recharges for assets shared by retail and wholesale

Line 24 – 27 General

No costs are attributed to these lines in the years up to 2014-15, as historically tables were not prepared in this way. Calculations of principal use as presented in the APR table 2A relates primarily

to IT additions where the full amount of the asset is recharged back to retail, rather than the share of depreciation and maintenance costs. For table 4f of the APR we did not include any principal use adjustment until 2017-18 when line 14 was added for capital expenditure.

However for the purposes of these tables we have amended our calculation of principal use so that we now recharge the depreciation and financing costs of IT assets on an annual basis.

Forecasted values for assets shared by retail and wholesale for assets existing after 1 April 2015 are based on the principal use of IT assets. Our forecast excludes operational assets and facilities costs.

As stated in Ofwat response to query number 576 published on 25 June 2018, we have only included recharges for assets used by retail in the recharges lines of R1. These costs are not included in other operating expenditure and consequently are excluded from our total opex costs. It is in our view that these costs should be included in total opex costs to give a true view of the total cost to retail.

R2 - Residential retail special cost factors

Overview of the table

As was stated in our special cost factor early submission to Ofwat in May 2018, we are not proposing any special cost claims for the residential retail price control at this time; although we have submitted and had special cost claims for retail bad debts accepted by Ofwat previously, including at PR14. We have made this decision as we understand that the econometric modelling work of Ofwat's Cost Assessment Working Group will take into account the impact of retail bad debts. In the event that the impact of our circumstances is not reflected in the cost models, we may submit further evidence.

R3 - Residential retail ~ further information on bad debt and customer services

Line 1 Debt management ~ residential

Copied from R1

Line 2 Debt written off ~ residential

Revenue written off is revenue relating to residential water and-or sewerage charges that has been written off in the report year, net of revenue collected from residential or agents during the year that had previously been written off. Similarly, where companies sell off bad debt to external debt collection agents, any payment received from the agent should be netted-off the reported write-off numbers. Revenue of all ages that has been written-off should be included.

Revenue written off in previous report years should not be included.

Revenue written-off in relation to court or other debt recovery costs should not be included.

Debt written off in historical years 2012-13 to 2017-18 aligns to APR submissions in these years.

Years 2018-19 and 2019-20 and forecasts to 2024-25 arise from the following assumptions.

- Write-offs continue to occur in a cyclical nature, such that a lower proportion of write offs in one year is followed by a higher rate of write offs due to the length of the debt recovery process which can take more than a year.
- We aim to employ techniques to smooth this volatility by chasing debt earlier and passing to the most relevant debt collection agencies for the account in question.

The volume and value of write offs is cyclical and largely dependent on the stage of the collections process that debt is at. Whilst we actively employ extensive measures to exhaust routes of chasing debt there are situations where further activity is either not economically viable or possible and so we are required to write off this balance as per our write off policy.

Line 3 Total residential revenue outstanding

Total residential revenue outstanding.

Net aged debt (revenue outstanding) in historical years 2012-13 to 2017-18 is taken directly from our debt management system and aligns to our calculation of aged debt as previously reported per the June return table 6a.

Based upon property forecasts and historical trends we are able to project the proportional change in measured and unmeasured revenue outstanding for residential customers within each debt age band. Years 2018-19 and 2019-20 arise from applying these aged debt band proportions to the sum of residential revenue outstanding which derives from the overall revenue forecast for the business. Revenue outstanding reduces annually at an average rate of 1% in each year in AMP7, this is in line with our AMP7 collections strategy.

Line 4 – 15 revenue Outstanding

Residential revenue outstanding means the amount of revenue relating to water and - or sewerage charges (whether measured or unmeasured) at the end of the report year that has been billed to households but which has not been collected. Unmeasured revenue billed in the report year but relating to charges for services to be delivered in the following year, should not be included.

Revenue outstanding should be reported in the relevant age bands.

Revenue that has been written off should not be included in the revenue outstanding lines.

Revenue outstanding should not include any costs that a customer has been billed for in connection with recovery actions (for example, costs associated with court actions), either in the report year or in previous years.

Companies should not report revenue outstanding which they are collecting on behalf of another water or sewerage company. They should, however, report revenue which is due to be collected by

another water company or third party (such as a Local Authority) on their behalf, which remains outstanding to the company at the end of the report year.

Revenue outstanding should be split between measured households and unmeasured households on the basis of how the household is charged at the end of the report year, i.e. if a household switches to a meter during the report year any revenue outstanding, including unmeasured revenue outstanding at the time of switching, should be reported as measured revenue outstanding. Similarly, where a measured household reverts to an unmeasured charging basis within the report year any revenue outstanding at the end of the report year should be classed as unmeasured revenue outstanding.

Aged debt in historical years 2012-13 to 2017-18 is taken directly from our systems and aligns to our calculation of aged debt as per the requirements of June return table 6a.

Based upon property forecast and historical trends we are able to project the proportional change in measured and unmeasured revenue outstanding for residential customers within each age band.

Years 2018-19 and 2019-20 arise from applying these aged debt band proportions by the sum of residential revenue outstanding which derives from the overall revenue forecast for the business.

Revenue outstanding net movements for the remaining AMP6 years is a reduction of 0.5% between 2018-19 and 2019-20 year end.

Line 16 Percentage of revenue collected each year

Total revenue recovered in the year (including revenue in respect of bills raised in prior period) divided by total revenue allowed in the year.

The forecast of this measure uses the total revenue collected in the year, including the collection of outstanding revenue from prior years. Divided by the residential specific element of the business wide revenue (Total revenue due in the year plus prior year revenue outstanding) forecast used within our financial models.

Revenue collected aligns to our AMP7 collection strategy which drives an improvement in the proportion of revenue collected of 0.5% across AMP7. This step improvement occurs in 2022-23 of AMP7 as a result of the implementation of the collection strategies through to 2022 and is anticipated to remain steady after this time.

Line 17 – 21 Customer Service metrics

We have included a set of customer service metrics for PR19 to help us compare cost efficiency in water retailer customer service functions against customer service functions in other sectors. Where companies outsource customer contact activities, outsourced operations that handle less than 1% of total contacts should be excluded from the metrics reported in rows 17-28.

Companies should report the cost per contact, by channel unto 2019-20.

Cost per call - annual contact centre expenditure divided by number of inbound calls in a year

Cost per email - annual contact centre expenditure divided by number of inbound emails in a year

Cost per webchat - annual contact centre expenditure divided by number of inbound webchats in a year (where applicable)

Where annual contact centre expenditure is consistent with expenditure reported in row 28.

For consistency with external benchmarking sources, companies should include total inbound contact volumes across each channel. Companies should only include agent handled inbound calls under call volumes i.e. any automated phone line contacts should be excluded from call volumes.

The cost per contact is calculated as annual call centre costs divided by total volume of inbound contacts for each channel in the reporting year.

Where appropriate, use rows 20 and 21 to enter details of further customer service channels, for example self-service contacts or contacts received by post.

We are able to disaggregate our contact centre costs into call, webchat and emails. We also get a significant number of contacts via letters and web-forms which we have included in block C (see table below for volumes and costs associated with these channels.)

We are able to identify the cost per inbound contact based upon the department and agent that receives the inbound contact and the volume of each specific contact that we receive. At present teams are structured to deal with a specific channel; Call, Webchat, Email and Letter. Over the course of AMP7 we envisage an element of cross skilling and multichannel handling taking place such that agents will cover a number of inbound contact channels.

The cost and volume of Webchat contacts is inclusive of social media contacts, as the social media team handles both webchat and social media replies.

The table below reconciles the 2017-18 cost per contact per channel back to the total contact centre costs for 2017-18 in line 28 to illustrate the links between section C of R3;

Line		Cost per Activity	Total volume of contacts	Percentage of contacts	Total cost of channel
17	Cost per Call	£8.47	826,040	78.07%	£7.00
18	Cost per email	£8.55	43,908	4.15%	£0.37
19	Cost per webchat	£6.00	23,393	2.21%	£0.14
20	Cost per other – letters	£16.24	30,848	2.92%	£0.50
21	Cost per other - webforms	£1.51	133,826	12.65%	£0.20
	Total - As per Line 28		1,058,015		£8.22

We expect that the cost per contact will reduce for all five of the reported contact channels. The investment programme aims to deliver a number of capabilities to improve agent productivity, which will result in our ability to reduce the number of advisors required for each of the service channels. These capabilities include integrated mobile and web self-service, both of which will allow customers to self-serve more using digital channels, reducing the volume of inbound contacts. The cost per call reduces by 21% between 2018 and 2020. This is driven by a targeted coaching initiative, which aims to reduce repeat calls, increase first time resolution and extending automation of after call work. This supports a reduction in call volumes during AMP7.

Rows 22 – 27

Use R3 rows 22-27 to provide an estimate of the mix of inbound customer service channels used, this will support our analysis of an overall cost-per-contact, based on cost per different channel and inbound contact channel distribution. Companies are asked to report this data on a forecast basis to indicate where channel mix volumes may change over the forecast period.

Analysis of all activities derive from customer led activity based models, which model the expected costs associated with key retail activities. A customer segmentation approach was used to model bespoke characteristics of three identifiable customer groups within our household customer base. Relevant to this section, the models predict the frequency of outbound contact, inbound contact channel mix and propensity to contact for our customer groups. See the customer service section 4.1 and 5.2 of the 2.5 Household retail business plan for more insight into the customer service offering. We forecast a changing landscape in future years with regards to contact mix, where the proportion of contact via more traditional manually intensive channels (call and e-mail) is forecast to reduce to meet the demand of new and digitally engaged customers. Planned investment into web self-serve capabilities also facilitates greater contact via digital channels.

This change in contact mix is gradual, representing a natural change in channel preferences. This approach is favoured over a forced channel shift so as not to be at the detriment of quality of service, especially for those customers who may still prefer to utilise more traditional contact channels.

Row 28 – Contact Centre costs

Where annual contact centre expenditure includes all costs (operating and capital costs) associated with the contact centre within the residential retail function. This should include direct and indirect contact centre costs including wages, management, HR and recruitment, building costs, maintenance and power, rent, software licensing, hardware rental, and overheads. Where companies have shared services which cover the contact centre, these costs should be allocated to the contact centre function and the drivers used to allocate shared costs should be reference in the R3 commentary.

All costs provided in this line are included within the total for customer services costs in Line 1 of Block A of table R1. The reconciliation below explains the differences between the two cost lines;

	2018	2019	2020	2021	2022	2023	2024	2025
Customer Services (Outturn R1 Line 1)	12.66	11.44	11.13	10.79	10.96	11.14	11.30	11.23
Variance Explanation - Outbound Contact	2.13	2.14	2.13	2.13	2.35	2.45	2.55	2.60
Variance Explanation - Analytics and Continuous improvement	1.02	0.77	0.77	0.78	0.78	0.75	0.80	0.80
Variance Explanation - Payments	0.56	0.57	0.58	0.58	0.58	0.75	0.80	0.84
Variance Explanation - Contact Failures	0.74	0.71	0.70	0.70	0.70	0.69	0.66	0.66
Contact centre costs (Outturn R3 Line 28)	8.22	7.24	6.95	6.60	6.54	6.51	6.49	6.33

R4 - Business retail ~ Welsh companies

Overview

The R4 table demonstrates the cost and key metrics associated with the retail service to Welsh business Customers for years 2012-13 – 2024-25. This includes historical actuals (2012-13-2017-18) blind years (2018-19-19-20) and forecast years (2021-25.)

The following lines include the cost of delivering MOS commitments which are presented in APP1;

- BL4 Unbilled properties; the cost of reducing voids is accounted for within line A1.
- BL3 Company Level Bad Debt; the cost of bad debt is accounted for within line A1.

Block A Expenditure Overview

This section outlines the retail expenditure associated with serving business customers. The expenditure attributed to each core element of the retail operation including Customer Services, Debt Management, Doubtful Debt, Meter Reading and Other Operating Expenditure is consolidated in line A1. Costs are presented in outturn prices.

Included within this are forecast values for the total operating expenditure required to service non-household customers receiving water or wastewater only and combined dual service customers. Costs are derived from customer led models which model the expected costs associated with key retail activities. Certain costs, such as commercial collections, are wholly attributable to non-household customers. Data permitting we have endeavoured to apply this approach to the apportionment of costs in accordance with RAG 2.07.

Tactical improvements and a number of innovative capabilities are planned for the AMP7 period and result in a reduction in Opex costs. The anticipated benefits of planned capabilities are impact assessed and cost movements are inputted into the business plan. Over the AMP7 period total operating expenditure costs reduce initially due to implementation of capabilities to improve the productivity and efficiency of the service provided but are later offset in part as a result of rising customer numbers and rising indirect cost apportionment from the wholesale business. For more information see section 5.1 of the Non-household retail business plan.

All historical capital expenditure on assets principally used by retail derive from regulatory accounts. These investments will benefit both residential and non-residential customers. The proportion of costs attributed to each customer group is based upon the expected focus of each capability and previous experience of similar capability implementation. Total depreciation is split between pre AMP 6, AMP 6 and AMP 7 assets. Depreciation values from regulatory accounts are restated for the years 2015-16 and 2016-17 in order to reflect the pre and post AMP 6 split. All historical capital expenditure on assets principally used by retail derive from regulatory accounts. The calculation of historical figures includes amortisation. The forecast of depreciation on assets acquired after 1 April 2020 is based on our investment programme. More detail regarding the strategic objectives is provided within the 2.5 Household retail business plan and 2.6 Non-household retail business plans.

All historical costs were sourced from published regulated accounts and align to published annual performance reports (APR), with the exception of the restatements outlined below:

- Capital expenditure (capex) on assets principally used by retail; capex values from regulatory accounts have been restated for the years 2015-16 and 2016-17 as outlined below.
- 2015-16 retail customers
- Net retail expenditure- customer side leaks. (See tables in line 1 and 19 of commentary for detailed breakdown)
- Depreciation values from regulatory accounts have been restated for the years 2015-16, 2016-17 and 2017-18 in order to reflect the pre and post AMP 6 split:

		2015-16	2016-17	2017-18
Depreciation adjustment				
Depreciation – tangible fixed assets	Historical		0.323	0.049
Amortisation – intangible fixed assets	Historical		0.050	0.643
Total Depreciation	Historical	0.648	0.373	0.692
Total depreciation on assets existing at 31 March 2015	Updated	0.586	0.269	0.465
Total depreciation on assets acquired after 1 April 2015	Updated	0.061	0.104	0.227

Line 1 Total operating expenditure

Total retail operating expenditure (excluding third party services) related to serving business customers in receipt of water only, sewerage only and combined water and sewerage services respectively.

This includes all costs reported in line 22 (demand side initiatives - customer-side leak repairs) but should not include any expenditure funded in wholesale (lines 17 and 20).

It represents total operating expenditure forecasts, including items relating to special cost factors. Expenditure related to special cost factor claims should be reported in table R6.

The costs have been derived using the customer led modelling described above. Total operating costs increase by 3% over AMP7 (between 2020-21 – 2024-25) due to the impact of input price pressure (particularly in manpower) and the cost of new initiatives (depreciation of assets). At constant prices AMP7 costs fall by 5.7%. In total the impact of retail input price pressure is more than offset by the improved efficiencies within the retail plan. Further details of this provided in the commentary for App 24a.- Real price effects and efficiency gains. However, having driven costs down during the early part of AMP6 such that there are no English water and sewerage companies with lower published average costs to serve than Welsh Water, we are keen to maintain our leading position, and believe that these cost forecasts will achieve that objective.

Open water 2 costs are not included in these numbers. We estimate that the implementation of this would increase total operating costs by 30% between 2017-18 and 2024-25. This increase is anticipate to result from growth in our commercial retail team in preparation for Open Water 2 in 2020. A yearly summary of the estimated project costs is shown in outturn (millions, 3dp) below;

19-20	2020-21	2021-22	2022-23	2023-24	2024-25
0.905	1.330	1.356	1.383	1.411	1.439

More detail on the impact of open water 2 costs can be seen in section 5.5 of the 2.6 Non-household retail business plan.

As discussed in the commentary to line 19, Total operating expenditure has been updated to reflect the adjustment for the treatment of customer side leaks as per RAG 2:

	2013-14	2014-15	2015-16
Historical figures (as previously reported in the CAT)	6,274	6.511	6.106
Customer side leaks adjustment	(0.173)	(0.198)	(0.196)
Updated figures as reported in R4	6.101	6.313	5.910

Line 2 Total depreciation on assets existing at 31 March 2015

The line should be used for the business element of the depreciation. Depreciation of assets which existed at 31 March 2015 (i.e. assets included in wholesale RCV) wholly or principally used by retail (as defined in paragraph 2.1 of RAG 4).

We will continue to collect this information for historical years (i.e. up to 2020) as we use historical data to assess costs (see the cost assessment appendix for further detail).

Depreciation includes amortisation of deferred credits and intangible assets.

The depreciation on assets existing at March 2015 is consistent with historical asset treatment. The Capital expenditure (capex) of assets existing at the start of AMP6 totalled £6m. The useful life of assets ranges with an average intangible asset life of 7 years and tangibles ranging from 5 to 60 years. Asset lives are established per asset acquired. All assets depreciate on a straight line basis. The assets existing at the start of AMP6 have an end value of £2.1m at the end of AMP7.

	Pre AMP6 Assets
Original Capex Value of Assets	£6.3m
Depreciation AMP5	(£0.9m)
Depreciation AMP6	(£2.0m)
Depreciation AMP7	(£1.3m)
End Capex Value of Assets (AMP7)	£2.1m

Line 3 Total depreciation on assets acquired between 1 April 2015 and 31 March 2020

This line should be used for the business element of the depreciation charge on AMP6 of later assets (assets that did not exist before 1 April 2015) which are principally used by retail. It should not include any charges in relation to AMP6 or later assets which are used by both retail and wholesale where wholesale is the principal user. It should not include any income in relation to AMP 6 or later assets which are used by both retail and wholesale where retail is the principal user.

Depreciation includes amortisation of deferred credits and intangible assets.

This should include depreciation reported in table R6.

The depreciation on assets acquired after the beginning of the 2015 financial year run off during AMP6, as is consistent with historical asset treatment.

The capex value of initiated and planned assets in AMP6 totals £3m. The useful life of assets ranges between 2 – 20 years and is established per asset acquired. All assets are anticipated to depreciate on a straight line basis unless otherwise known at the point of acquisition. All assets initiated have an end value of the asset, the remainder is forecasted based upon the average useful life of similar assets. We estimate that the assets created in AMP6 will have an end value of £0.7m at the end of AMP7.

	AMP6 Assets
Original Capex Value of Assets	£3m
Depreciation AMP6	(£1m)
Depreciation AMP7	(£1.3m)
End Capex Value of Assets (AMP7)	£0.7m

Line 4 Total depreciation on assets acquired after 1 April 2020

This line should be used for the business element of the depreciation charge on AMP7 of later assets (assets that did not exist before 1 April 2015) which are principally used by retail. It should not include any charges in relation to AMP7 or later assets which are used by both retail and wholesale where wholesale is the principal user. It should not include any income in relation to AMP 7 or later assets which are used by both retail and wholesale where retail is the principal user.

Depreciation includes amortisation of deferred credits and intangible assets.

This should include depreciation reported in table R6.

The capex value of planned assets beyond 2020 totals £3.2m, our anticipated change profile across AMP7 commits to greater activity in 2021-22 to ensure that the benefits of these capabilities can be realised during the AMP. Due to the nature of the planned assets we anticipate an average useful life of between 7 – 10 years which will be committed per asset once acquired. All assets are anticipated to depreciate on a straight line basis unless otherwise known at the point of acquisition. All assets in the period are expected to depreciate throughout AMP8.

Line 5 Pension deficit repair costs

Actual pension deficit recovery payments including costs capitalised and any group recharges for pension deficit costs.

Pension deficit repair costs remain constant at £0.035m from 2019-20 for the duration of AMP7. The allocation to retail has been made based on staff allocation of the defined benefit scheme members. The allocation between the columns has been calculated by customer numbers.

Line 6 Total business retail costs (opex plus depreciation, excluding financing costs)

Total expenditure (Opex plus depreciation). Equals sum of R4 lines 1 to 5.

Calculated.

Line 7 Capital expenditure on assets principally used by retail

This line should be used for the business element of capital expenditure on assets principally used by retail. It should not include any expenditure in relation to assets which are used by both retail and wholesale where wholesale is the principal user.

The capex value of planned assets beyond 2020 totals £3.2m, we do not anticipate any principal use assets in AMP7. The most significant expenditure expected in the year 2020-21. Our anticipated change profile across AMP7 commits to greater expenditure at this point in order to ensure the benefits of these capabilities can be realised during the AMP.

Over AMP7 we plan to build on the capabilities delivered during AMP6 by developing our digital services and introducing integrated mobile and web services. Making system changes to develop new capabilities, such as embedding customer segmentation within our customer systems.

Introducing real time activity based costing and real time exception reporting. Instigating variable billing and payment arrangements, targeted promotion of services and tariffs, and real time system updates. This roadmap of activity is anticipated to reduce our retail cost base by 2024-25.

We focus primarily on sustainable programmes that will maintain our standard of service. To this end we have sought to avoid options such as forced channel shifts or increased offshoring, which may deliver short term costs savings at the detriment of our universal service obligation.

Line 8 Services to developers (retail)

Operating costs of providing service cost to developers (as defined in table 2C line 5 of RAG 4)

Forecast expenditure attributable to services to developers remains stable over the period, increasing slightly over AMP7 due to labour input price pressure, which is offset by efficiency savings elsewhere in the plan.

Line 9 Miscellaneous costs

Include other mandatory business retail costs that are not captured in rows 1-7. For example, non-exited retailers should include their unavoidable MOSL fees (i.e. excluding additional service, fines etc.) as a miscellaneous cost. Companies should clearly set out i) their mandatory MOSL fees, ii) non-mandatory costs i.e. excluding additional services, fines etc. This will allow us to consider how we treat these costs, aligning our approach with the approach of the Retail Exit Code review as appropriate.

It is anticipated that there are no miscellaneous charges incurred in any years.

Line 10 Total business retail costs, less services to developers and miscellaneous costs.

Calculated

Line 11 Cross-check total business retail costs from tariffs

Cross check. Total expenditure should be equal to the total expenditure reported by type of tariff band (section B).

Following the update of our template to Ofwat on 1 August 2018, formulas for lines 11, 13 and 15 have been updated in accordance with Ofwat response to query Q651 as published in PR19 Final methodology queries and answers - 18 July 2018.

The cross check holds true for all years, there is zero variance.

Line 12 Total business projected wholesale charge allocated to tariffs

No definition for this line

The total combined wholesale charge of all 3 tariff bands is aligned to the total business wholesale charges in App 17.

Line 13 Total business retail service revenue

No definition for this line

The inputs are calculated from R4 Line 12 + total retail cost (sum of retail cost per customer x customer numbers per tariff band, summed for all three tariffs) + total retail margin (which has been calculated based on either a net or gross margin basis per tariff.) This reconciles to the calculation of R4 Line 12 + R7 Lines 20 & Line 21,

Line 14 Aggregate net margin

No definition for this line

As per R8 our calculations for all years up until 2021 show our combined business customer net margin as 1%. The calculation in this line is on a different basis to that included in R8.

Block B Customer Numbers

Line 15 Businesses connected

Total businesses connected. Exclude void properties. The number of business customers (as defined in column 4 of APR table 2F). This is the aggregate of lines 31 for each tariff.

Note: this should be the average number of customers in the year calculated at least on a monthly basis. For the purposes of this table, 'customers' should be equal to the former June return (table 7) definition of 'billed properties'. This is as follows:

"These are properties used as single domestic dwellings (normally occupied), receiving water for domestic purposes which are not factories, offices or commercial premises. These include cases where a single aggregate bill is issued to cover separate dwellings having individual standing charges. (In some instances the standing charge may be zero). The number of dwellings attracting an individual standing charge and not the number of bills should be counted. Exclude mixed/commercial properties and multiple household properties, e.g. blocks of flats having only one standing charge. Where companies issue an assessed charge to a property because metering is not possible or is uneconomic then these properties should be classified as unmeasured."

Calculated.

The forecast figures for this line do not align with the figures reported in WS3 and WWS3 due to the fact that R tables report retail customers whereas wholesale customers are reported in WS3 and WWS3. The company currently has five wholesale customers that are billed by another retailer. These customers are therefore excluded from R4.

Customer numbers total the number of businesses connected to a water supply, excluding voids (unbilled properties). Business customer numbers are expected to grow by 0.4% annually for the remainder of AMP6 and duration of AMP7.

Since 2016-17 our methodology for calculating property counts changed, consequently we re-stated 2015-16 property counts for measured and unmeasured domestic strength water and waste water in last year's Cost Assessment Table (CAT), as such 2015-16 retail customers have now been restated in table R4 to align with the figures reported in the CAT, (trade effluent customers was as reported in the APR.) Historical actuals have also been re-allocated to reflect PR16 update to three tariff bands only.

Overview of Block C Operating expenditure part funded through wholesale

General comments

I. There is no forecast retail cost element to customer side leaks (RAG 2 has changed the cost driver for allocating customer side leaks between retail and wholesale)

II. Over AMP 7 we forecast the cost of customer side leaks funded by wholesale to stay relatively flat

Line 16 Demand side water efficiency initiatives ~ gross retail expenditure

The total retail operating costs of providing water efficiency services to business customers, including:

- *Promotion of water saving initiatives*
- *Production of customer literature and customer awareness campaigns*
- *Retro-fitting of water saving devices*
- *Provision of advice and devices to customers*
- *Water efficiency audits*
- *water and energy conservation, optimisation of systems, advice and investigations into usage*
- *Data logging*

Our forecast assumes that all water efficiency services are funded by wholesale, with the exception of call centre staff providing advice to customers and home visits as arranged through our debt management teams.

Between 2017-18 and 2019-20 our forecast shows a rapid 62% increase in costs as contact centre staff become more proactive in holding discussions with customers regarding more efficient water usage and only a small reduction in call volumes to the call centre is seen. Between 2019-20 and 2020-21 we are forecasting a reduction in debt calls as more customers contact us via digital platforms. This will lead to fewer conversations with customers, however the proportion of calls relating to water efficiency continues to increase over the whole of AMP7. Between 2022-23 and 2024-25 costs continue to rise steadily at an average of 6.4% a year.

Line 17 Demand side water efficiency initiatives ~ funded by wholesale

The retail operating costs of providing water efficiency services (as defined in line 16) to business customers that are funded by the wholesale business

All demand-side water efficiency wholesale spend is capex hence this line has zero expenditure values. The capex forecast includes carrying out 100 non domestic audits per year for the remaining years of AMP6 and AMP7 through a schools outreach programme.

Line 18 Demand side water efficiency initiatives ~ net retail expenditure

The retail operating costs of providing water efficiency services (as defined in line 16) to business customers net of any operating costs that are funded by the wholesale business. Equals R4 line 17 minus line 18.

Net retail expenditure on demand side water efficiency is forecast to remain stable for the duration of AMP7.

Line 19 Customer side leak repairs ~ gross retail expenditure

The total retail operating costs associated with business customer side leaks, to include:

- *Investigations*
- *Activities from enquiries relating to customer-side leaks, including site visits, the use of pipe locating equipment and any attendance on sites during excavations*
- *Resolution*
- *Activities comprising pipe repairs and replacement*
- *Free leak repairs*

Since 2016, RAG 2 has changed the cost driver for allocating customer side leaks between retail and wholesale. Expenditure to meet wholesale outcomes is now reported as a wholesale cost, and consequently there is no forecast retail cost element to customer side leaks. Historic figures have been restated to reflect this change.

Line 1 Total operating expenditure has been reduced to reflect these restatements; see below for breakdown of changes. Historic figures have also been adjusted to apportion customer side leaks costs between household and non-household, in prior submission of the regulated accounts all customer side leak costs were incorrectly allocated to households.

	2012-13	2013-14	2014-15	2015-16
Household	£1.256m	£0.985m	£1.210m	£1.184m
Business	£0.000m	£0.173m	£0.198m	£0.196m
Total	£1.256m	£1.158m	£1.408m	£1.380m

Forecast values for customer side leaks funded by wholesale are based on the latest SELL (Sustainable Economic Levels of Leakage). Over AMP 7 we forecast a slight reduction in costs, due to an increase in pressure management/asset renewal that has reduced the impact of the Natural Rate of Rise (NRR).

Line 20 Customer side leak repairs funded by wholesale

The retail operating costs associated with business customer side leaks (as defined in line 19) that are funded by the wholesale business.

See commentary for line 19.

2017-18 costs are significantly lower than all other years as a result of a change in approach used to apportion residential and business customer's costs. In 2017-18 apportionment was based on the customer numbers, for all other years we have based the apportionment on whether it was initiated by a customer as per RAG 2 guidance.

Line 21 Customer side leak repairs ~ net retail expenditure

The retail operating costs associated with business customer side leaks (as defined in line 19) net of any operating costs that are funded by the wholesale business. Equals R4 line 20 minus 21.

Customer side leaks expenditure reported in row 22 should be included in total retail expenditure, R4 line 5 above.

We do not expect any allocation to the retail business in AMP7 for customer side leaks funded by retail, this explains the zero values presented in this line. All forecast costs are 100% accounted for in the direct wholesale costs. See commentary for line 19 above for more detail.

Line 22 Total demand side water efficiency and customer side leak repairs not funded by wholesale (and so funded through retail)

The retail operating costs of providing water efficiency services to business customers plus the total retail operating costs associated with business customer-side leaks net of those funded by wholesale. Equals R4 line 19 plus line 22.

Expenditure reported in R4 line 22 should be included in total retail expenditure, R4 line 6 above.

Calculated

Block D Recharges for assets shared by retail and wholesale

General comments

- I. No costs are attributed in the years up to 2014-15, as historically tables were not prepared in this way. Calculations of principal use as presented in the APRs relates primarily to computer additions where the full amount of the asset is recharged back to retail, rather than the share of depreciation and maintenance costs.

- II. No costs are forecast for assets existing prior to 31 March 2015. Forecasted values for assets shared by retail and wholesale for assets existing after 1 April 2015 are based on the principal use of IT assets. Our forecast excludes operational assets and facilities costs.
- III. As stated in Ofwat response to query number 576 (published 25 June 2018), we have only included recharges for assets used by retail in the recharges lines of R4. These costs are not included in other operating expenditure and consequently are excluded from our total opex costs. It is in our view that these costs should be included in total opex costs to give a true view of the total cost to retail.

Line 23 Recharge from wholesale for legacy assets principally used by wholesale (assets existing at 31 March 2015)

Where a legacy asset (asset existing before 31 March 2015) is principally used by wholesale, the capex and depreciation should be recorded in wholesale with a recharge made to business retail to reflect the proportion of the asset used by business retail. The recharge to business retail should be recorded in this line. Companies should state in their table commentary how much of this recharge is from water (water network+ and water resources) and how much is from wastewater (wastewater network+ and bio resources). This line should be entered as positive values. Recharges should cover depreciation, repair and maintenance costs only and should not include a return on the asset.

We do not forecast any recharges of this nature to business customers in AMP7.

Line 24 Income from wholesale for legacy assets principally used by retail (assets existing at 31 March 2015)

Where a legacy asset (asset existing before 31 March 2015) is principally used by retail, the capex and depreciation should be recorded in retail with a recharge made to wholesale to reflect the proportion of the asset used by wholesale. The corresponding income to business retail should be recorded in this line. Companies should state in their table commentary how much of this income is from water (water network+ and water resources) and how much is from wastewater (wastewater network+ and bio resources). This line should be entered as positive values. Recharges should cover depreciation, repair and maintenance costs only and should not include a return on the asset.

No income is forecast for assets existing prior to 31 March 2015. We do not forecast any income of this nature to business customers in AMP7.

**Line 25 Recharge from wholesale assets acquired after 1 April 2015 principally used by wholesale
Income from wholesale assets acquired after 1 April 2015 principally used by retail**

Where an AMP6 or later asset (acquired after 1 April 2015) is principally used by wholesale, the capex and depreciation should be recorded in wholesale with a recharge made to business retail to reflect the proportion of the asset used by business retail. The recharge to business retail should be recorded in this line. Companies should state in their table commentary how much of this recharge is from water (water network+ and water resources) and how much is from wastewater (wastewater network+ and bio resources). This line should be entered as positive values. Recharges should cover depreciation, repair and maintenance costs only and should not include a return on the asset.

These refer to principal use recharges for general offices and ICT assets

Line 26 Income from wholesale assets acquired after 1 April 2015 principally used by retail

Where an AMP6 or later asset (acquired after 1 April 2015) is principally used by retail, the capex and depreciation should be recorded in wholesale with a recharge made to wholesale to reflect the proportion of the asset used by wholesale. The corresponding income to business retail should be recorded in this line. Companies should state in their table commentary how much of this income is from water (water network+ and water resources) and how much is from wastewater (wastewater

network+ and bio resources). This line should be entered as positive values. Recharges should cover depreciation, repair and maintenance costs only and should not include a return on the asset.

These refer to principal use recharges for general offices and ICT assets

Overview Block E-N Tariff Bands

Historical costs are aggregated based on historical tariff bands prior to PR16, and applied to the three existing tariff bands, as confirmed in Ofwat's query response Q49 published in Q&A feedback dated 22 February 2018.

- I. Water supplies less than 50 MI; business customers using less than 50MI of water a year. This tariff is attributable to those customers on unmeasured, measured or assessed measured charges.
- II. Water supplies 50 MI and over; business customers using more than 50MI of water a year. This tariff is attributable to those customers on a measured charge.
- III. Wastewater; business wastewater charges. This tariff is attributable to all customers on unmeasured measured or assessed measured charge.

In all tariff bands (E to G) column 2020-25 of lines 30 to 35 has been left blank as it is not clear what is required and no validation error is generated.

Block E Tariff Band 1

Line 27 Default tariff cap name

The tariff cap name is water supplies less than 50 MI.

Line 28 Margin type

The margin shown is net margin.

Line 29 Tariff categorisation

The tariff is categorised as business customers using water supplies less than 50 MI

Line 30 Number of customers within the default tariff cap grouping

The number of customers is forecast to increase by 1.5% over AMP7.

Line 31 Number of debtor days

Debtor days is used to calculate the total number days in which debtors pay their bills. The factors include the value of debt, the regulated revenue and total number of days in a financial year for the following groups; open water customers, non-open water customers and waste water non-household customers.

Debtor days is forecast to remain fairly constant at 10 days until 2023-24 when it falls to 9 days followed by 8 days in 24-25 as debt collection processes improve.

Weighted average debtor days from all tariff bands aligns to business customer debtor days as shown in section D of App 13 for all years

Line 32 Net margin percentage.

This line is greyed out depending on the margin type selected in R4 line 28.

Following Ofwat guidance in the Delivering Water 2020: Our final methodology for the 2019 price review section 10.8.2 Retail Margins, Net margin percentage remains constant at 1.00% from 2015-16.

Line 33 Gross margin percentage.

This line is greyed out depending on the margin type selected in R4 line 28.

Gross margin is not used for this customer group.

Line 34 Retail cost per customer

Over AMP7 retail cost per customer is forecast to increase by 2%, this is driven by the overall rise in business retail costs, (less services to developers and miscellaneous costs.) This is offset by a slight reduction in the proportion of costs allocated to serving this customer group as we become more efficient at dealing with these customers.

Line 35 Forecast allocated wholesale charges (nominal price base).

The total combined wholesale charge of all 3 tariff bands is aligned to the total business wholesale charges in App 17.

Block F Tariff Band 2

Line 27 Default tariff cap name

The tariff cap name is water supplies 50 Ml and over.

Line 28 Margin type

The margin shown is gross margin.

Line 29 Tariff categorisation

The tariff is categorised as business customers using water supplies 50 Ml and over.

Line 30 Number of customers within the default tariff cap grouping

The number of customers is forecast to remain flat over AMP7.

Line 31 Number of debtor days

Debtor days is used to calculate the total number days in which debtors pay their bills. The factors include the value of debt, the regulated revenue and total number of days in a financial year for the following groups; open water customers, non-open water customers and waste water non-household customers.

Debtor days is forecast to peak at 19 days in 2019-20, and then steadily fall over AMP 7 to 14 days by 2024-25 as debt collection processes improve.

Weighted average debtor days from all tariff bands aligns to business customer debtor days as shown for all years in section D of App 13.

Line 32 Net margin percentage.

This line is greyed out depending on the margin type selected in R4 line 28.

Net margin is not used in AMP7 for this customer group but has been completed for AMP5 and AMP6 years. At PR16, as agreed in our final determination of business retail price control letter dated 15 December 2016, we have been allowed a 3.3% gross margin, however for the remaining years of AMP 6 we have chosen to maintain our margin at 1% net in line with the competitive market. This adheres to Ofwat guidance in the 'Delivering Water 2020: Our final methodology' for the 2019 price review section 10.8.2 Retail Margins.

Line 33 Gross margin percentage.

This line is greyed out depending on the margin type selected in R4 line 28.

We are proposing to maintain our agreed gross margin percentage of 3.3% throughout AMP7 consistent with the gross margin set at PR16. This adheres to Ofwat guidance in the 'Delivering Water 2020: Our final methodology' for the 2019 price review section 10.8.2 Retail Margins.

Line 34 Retail cost per customer

Over AMP7 retail cost per customer is forecast to rise steadily by around 18% over the whole of AMP7 driven mainly by the rise in the overall proportion of costs of serving these customers, plus a general overall rise in business retail costs, (less services to developers and miscellaneous costs).

Line 35 Forecast allocated wholesale charges (nominal price base).

The total combined wholesale charge of all three tariff bands is aligned to the total business wholesale charges in App 17 and reflects the reduction in wholesale charges between 2019-20 and 2020-21 as a result of the reduction in the cost of capital.

Block G Tariff Band 3

Line 27 Default tariff cap name

The tariff cap name is wastewater.

Line 28 Margin type

The margin shown is net margin.

Line 29 Tariff categorisation

The tariff is categorised as business customers using wastewater only.

Line 30 Number of customers within the default tariff cap grouping

The number of customers is forecast to increase by 1.5% over AMP7.

Line 31 Number of debtor days

Debtor days is used to calculate the total number days in which debtors pay their bills. The factors include the value of debt, the regulated revenue and total number of days in a financial year for the following groups; open water customers, non-open water customers and waste water non-household customers.

Debtor days is forecast to remain fairly constant at 10 days from 2017-18 to 2021-22, reducing by 1 day in each of the remaining years of AMP 7 as debt collection processes improve.

Weighted average debtor days from all tariff bands aligns to business customer debtor days for all years as shown in section D of App 13.

Line 32 Net margin percentage.

This line is greyed out depending on the margin type selected in R4 line 28.

Following Ofwat guidance in the Delivering Water 2020: Our final methodology for the 2019 price review section 10.8.2 Retail Margins, Net margin percentage remains constant at 1.00% from 2015-16.

Line 33 Gross margin percentage.

This line is greyed out depending on the margin type selected in R4 line 28.

Gross margin is not used for this customer group.

Line 34 Retail cost per customer

Over AMP7 retail cost per customer is forecast to rise steadily, (4.25% over the whole of AMP7), this is driven predominantly by the rise in business retail costs, (less services to developers and miscellaneous costs.)

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Line 35 Forecast allocated wholesale charges (nominal price base).

The total combined wholesale charge of all 3 tariff bands is aligned to the total business wholesale charges in App 17 and reflects the reduction in wholesale charges between 2019-20 and 2020-21 as a result of the reduction in the cost of capital.

R5 - Business retail non-exited companies operating in England

Overview of the table

This table relates to non-exited companies operating in England and does not apply to us. We have entered zero into to the cells in order to resolve the validation error that was showing.

R6 - Business retail special cost factors

Overview of the table

We are not submitting any special cost claims at this time whilst cost assessment working group is considering how to assess business retail costs.

R7 - Revenue and cost recovery for retail

Block A - Residential retail costs ~ England and Wales

Line 1 Total cost to serve

The business activities and total incurred cost to serve residential customers.

The total cost to serve for residential retail costs is calculated using table R1 as follows;

		2020-21	2021-22	2022-23	2023-24	2024-25
		£m	£m	£m	£m	£m
R1 line 14	Total residential retail costs (opex plus depreciation, excluding third party services)	58.440	58.752	59.050	58.239	58.337
less: R1 line 11	Total depreciation on legacy assets existing at 31 March 2015	(1.929)	(1.670)	(1.622)	(1.606)	(1.604)
less: R1 line 7	Pension deficit repair costs	<u>(0.311)</u>	<u>(0.311)</u>	<u>(0.311)</u>	<u>(0.311)</u>	<u>(0.310)</u>
R7 line 1	Total cost to serve - Residential retail	56.200	56.771	57.117	56.322	56.423

We have excluded the depreciation on legacy assets existing at 31 March 2015 as this is deemed to be included in the wholesale RCV and recovered via the wholesale building blocks. Pension deficit repair costs are also excluded in line with IN 13/17: Treatment of companies' pension deficit repair costs at the 20014 price review. Detail on each R1 line in the formulae above is included in the commentary for table R1.

Line 2 Net margin (excluding tax and interest)

The net margin is intended to provide an efficient company with a normal return that is appropriate to the capital employed and risks as a retailer. It excludes taxes and interest.

We have used the Ofwat financial model to calculate the margin for the Retail business. We have accepted the guidance on retail margins in section 10.8.2 of Ofwat's final methodology for PR19 'Delivering Water 2020: Our final methodology for the 2019 price review, which for the residential retail is a net margin of 1%.

Line 3 Current tax ~ residential retail

Current Tax Liabilities.

At an Appointee level, we do not expect to pay any UK corporation tax during the forecast period, based on our expected levels of income and expenditure. Therefore the retail share of the current tax liability is nil throughout the period. (The notional company model generates a tax charge in the Retail business, however we do not expect this to be realised in the actual company.)

Line 4 Interest

The interest amount payable.

We do not calculate interest payable at business unit level. All borrowings are held at an appointee level and the interest income and expense in App11 is for the whole business including retail. The interest amount payable for retail is therefore nil throughout the period.

Line 5 EBIT margin

The EBIT margin is the ration of Earnings before Interest and Taxes to net revenue-earned. Equals sum of R7 lines 2 to 4.

Calculated.

Line 6 Retail residential charge ~ total

The sum of residential retail charges. Equals sum of R7 lines 1 and 5.

The output of this line is calculated using a formula prepopulated in the data table.

Block B - Business retail costs ~ Wales

Line 7 Total cost to serve

The business activities and total incurred cost to serve business customers.

The total cost to serve for business retail costs is equal to line 10 on R4. This line includes both depreciation on legacy assets existing at 31st March (R4 Line 2) and pension deficit repair costs (R4 Line 5). We would expect these costs to be excluded from the Total cost to serve (see comment on R7 line 1). However due to the validation check on R4 line 11, these cost are included in the Total cost to serve business retail customers. Detail on each R4 line in the formulae above is included in the commentary for R4.

Line 8 Net margin (excluding tax and interest)

The net margin is intended to provide an efficient company with a normal return that is appropriate to the capital employed and risks as a retailer. It excludes taxes and interest.

We have used the Ofwat financial model to calculate the margin for the Retail business. We have accepted the guidance on retail margins in section 10.8.2 of Ofwat's final methodology for PR19 'Delivering Water 2020: Our final methodology for the 2019 price review, which for business retail activities in Wales for customers using up to 50 megalitres of water a year and wastewater customers is a net margin of 1% and for contestable customers the gross margins allowed at PR16 remain appropriate, being 3.3% gross.

Line 9 Current tax ~ business retail

Current Tax Liabilities.

At an appointee level, we do not expect to pay any UK corporation tax during the forecast period, based on our expected levels of income and expenditure. Therefore the retail share of the current tax liability is nil throughout the period. (The notional company model generates a tax charge in the retail business, however we do not expect this to be realised in the actual company.)

Line 10 Interest

The interest amount payable.

We do not calculate interest payable at business unit level. All borrowings are held at an appointee level and the interest income and expense in App11 is for the whole business including retail. The interest amount payable for retail is therefore nil throughout the period.

Line 11 EBIT margin

The EBIT margin is the ration of Earnings before Interest and Taxes to net revenue-earned. Equals sum of R7 lines 8 to 10.

The output of this line is calculated using a formula prepopulated in the data table.

Line 12 Retail business charge ~ total

The sum of the retail business charge. Equals sum of R7 lines 7 and 11.

The output of this line is calculated using a formula prepopulated in the data table.

Block C - Retail revenues

Line13 -18 - Allowed revenue for residential customers by customer type

We have used the Ofwat financial model to calculate the Allowed revenue for residential retail customers. The calculations are based on the forecast wholesale charge and retail cost to service and retail margins.

Line 19 Revenue ~ residential retail

Allowed revenue for all residential customers, both metered and unmetered. Equals sum of R7 lines 13 to 18.

The output of this line is calculated using a formula prepopulated in the data table.

Line 20 - 21 – Allowed revenue for business customers

Allowed revenue for business metered customers.

We have used the Ofwat financial model to calculate the allowed revenue for business retail customers. The calculations are based on the forecast wholesale charge and retail cost to service and retail margins. We have amended the calculation of the gross retail margin on contestable customers (Tariff Band 2) in the model to reflect the calculation of retail revenues allowed in the PR16 determination “PR16 Dŵr-Cymru-Cyfyngedig-Final-Determination-Letter-NHH”. Further detail of this are contained in the supporting document PR18 Financial Model Cover Note WSH.

Line 22 Revenue ~ business retail

Allowed revenue for all business customers, both metered and unmetered. Equals sum of R7 lines 20 and 21.

The output of this line is calculated using a formula prepopulated in the data table.

R8 - Net retail margins

Line 1 – Required retail margin – residential customers

Proposed retail margin as a percentage of retail revenue. Where this differs from our guidance the reasons should be clearly explained.

We have accepted the guidance on retail margins in section 10.8.2 of Ofwat’s final methodology for PR19 ‘Delivering Water 2020: Our final methodology for the 2019 price review’.

The retail margin for residential customers expressed as a percentage of total retail revenue including wholesale charge (excluding Retail Revenue adjustment from the Revenue adjustment feeder model which is included in Revenues in R7 and App17), is maintained at 1% throughout AMP7.

			2020-21	2021-22	2022-23	2023-24	2024-25
			£m	£m	£m	£m	£m
R7 line 5	Retail residential EBIT margin	Outturn	6.914	7.094	7.279	7.471	7.667
	Retail residential EBIT margin	2017-18 FYA CPIH deflated	6.458	6.496	6.535	6.576	6.616
Feeder model	less: Retail revenue adjustment	2017-18 FYA CPIH deflated	(0.926)	(0.926)	(0.926)	(0.926)	(0.926)
	Retail residential EBIT margin pre post financeability adjustments	2017-18 FYA CPIH deflated	5.532	5.570	5.609	5.650	5.690
R7 line 19	Revenue - residential retail	Outturn	63.114	63.866	64.395	63.794	64.089
	Revenue - residential retail	2017-18 FYA CPIH deflated	58.952	58.485	57.813	56.151	55.304
App17 line 20	Wholesale unmeasured charge - residential	2017-18 FYA CPIH deflated	325.808	324.070	322.571	321.772	320.278
App17 line 22	Wholesale measured charge - residential	2017-18 FYA CPIH deflated	168.332	174.253	180.426	187.194	193.767
	Revenue - residential retail	2017-18 FYA CPIH deflated	58.952	58.485	57.813	56.151	55.304
	less: Retail revenue adjustment	2017-18 FYA CPIH deflated	(0.926)	(0.926)	(0.926)	(0.926)	(0.926)
	Total	2017-18 FYA CPIH deflated	552.167	555.883	559.885	564.190	568.423
	Retail margin as a % of Total Retail Residential Revenue		1.00%	1.00%	1.00%	1.00%	1.00%

Line 2 - Required retail margin – business customers

Proposed retail margin as a percentage of retail revenue for serving business customers in Wales and retail customers of companies that have not exited the market in England. Where this differs from our guidance the reasons should be clearly explained.

We have accepted the guidance on retail margins in section 10.8.2 of Ofwat’s final methodology for PR19 ‘Delivering Water 2020: Our final methodology for the 2019 price review’.

The retail margin for business customers expressed as a percentage of total retail revenue including wholesale charge, is 1.32% throughout AMP7. This is a blended margin across our three tariff bands. The retail margin for business customers using water supplies less than 50MI and all wastewater customers is 1% throughout the AMP. For those contestable business customers using water supplies 50 MI and over per annum we have accepted the guidance in the final methodology and applied a gross margin cap of 3.3%, which for this tariff band is equivalent to a net margin of 3.2%.

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			2020-21	2021-22	2022-23	2023-24	2024-25
			£m	£m	£m	£m	£m
R7 line 11	Retail business EBIT margin	Outturn	2.213	2.289	2.374	2.468	2.561
	Retail business EBIT margin	2017-18 FYA CPIH deflated	2.067	2.096	2.131	2.172	2.210
R7 line 22	Revenue - business retail	Outturn	7.381	7.577	7.718	7.826	7.972
	Revenue - business retail	2017-18 FYA CPIH deflated	6.894	6.939	6.929	6.888	6.879
App17 line 21	Wholesale unmeasured charge - business	2017-18 FYA CPIH deflated	4.639	4.687	4.739	4.804	4.861
App17 line 23	Wholesale measured charge - business	2017-18 FYA CPIH deflated	145.161	147.538	150.068	153.046	155.729
	Revenue - business retail	2017-18 FYA CPIH deflated	6.894	6.939	6.929	6.888	6.879
	Total	2017-18 FYA CPIH deflated	156.695	159.163	161.737	164.739	167.469
	Retail margin as a % of Total Retail business Revenue		1.32%	1.32%	1.32%	1.32%	1.32%

R9 -PR14 reconciliation of household retail revenue

Lines 1 - 6 Forecast customer numbers

Forecast customer numbers as set out in the PR14 final determination company specific appendix.

Data is from the Final Determination letter.

Lines 7 – 12 Reforecast customer numbers

Reforecast customer numbers for each customer type at the beginning of each year from company regulatory reporting.

Reforecast customer numbers for 2015-16 to 2018-19 are the customer numbers used when setting the charges. The reforecast customer for 2019-20 are equal to the 2019-20 forecast customer numbers.

Lines 19 – 24 Actual revenue collected

The revenue that each company actually collected per customer type from company regulatory reporting. Retail revenue per customer type – RAG Proforma 2F.

Actual revenue collected is obtained from table 2F of the APR for 2015-16 to 2017-18. The forecast actual revenue is assumed to equal the retail revenue allowance less the forecasted revenue sacrificed.

Lines 25 – 30 Revenue sacrifice

Revenue sacrifice. Revenue voluntarily foregone by companies, for example through customer discounts from company regulatory reporting

Revenue sacrifice is revenue foregone from assistant tariffs and operational decisions. The forecast revenue sacrifice is based on forecast customer numbers.

Lines 31 – 36 Actual revenue collected (net)

Actual revenue collected (Net). The revenue that each company actually collected per customer type less any forgone revenue. Calculated

Calculated line.

Lines 37 – 42 Modification factor

Modification Factors. Each company has a specific modification factor for each customer type each year from PR14 final determination company specific appendix.

Data is from the Final Determination letter.

Line 43 - Materiality threshold

Materiality threshold is specified at 2% of revenue expected from actual customers from AMP6.

Pre-populated line.

Line 44 – Discount rate

The discount rate used to provide a financing adjustment for the time value of money of the incentive reward - penalty. Input to be defined at PR19, if required. This may be required if the materiality threshold is exceeded.

The discount rate is the appointee WACC average RPI and CPIH weighted basis.

Line 45 - Residential retail revenue adjustment at the end of AMP6

The total revenue adjustment for household retail due to differences in actual and forecast customer numbers and differences in revenue per customer type. Output item from household retail revenue reconciliation model as appears on the Calc sheet

Output from the household retail revenue reconciliation model line 94 in the Calc Sheet.

Line 46 - Residential retail revenue adjustment at 2017-18 FYA CPIH deflated price base
Output item from revenue adjustments model. The value entered is prior to profiling.
Output from the revenue adjustment feeder model.

R10 - PR14 Service incentive mechanism

Line 1 - 1st survey score

Score of the first qualitative survey for the current reporting year.

Historical Data is obtained from the SIM results. Forecast performance for 2018-19 and 2019-20 is based on the historical performance trend.

Line 2 - 2nd survey score

Score of the second qualitative survey for the current reporting year.

Historical Data is obtained from the SIM results. Forecast performance for 2018-19 and 2019-20 is based on the historical performance trend.

Line 3 - 3rd survey score

Score of the third qualitative survey for the current reporting year.

Historical Data is obtained from the SIM results. Forecast performance for 2018-19 and 2019-20 is based on the historical performance trend.

Line 4 - 4th survey score

Score of the fourth qualitative survey for the current reporting.

Historical Data is obtained from the SIM results. Forecast performance for 2018-19 and 2019-20 is based on the historical performance trend.

Line 5 - Qualitative SIM score (out of 75)

Companies should use the formula below to calculate their score and then input this number in line 5. The qualitative score is calculated as follows:

$$[(S - LS) - (HS - LS)] * WS$$

where:

S = qualitative survey annual average score (unrounded), calculated using unrounded quarterly Wave scores. LS = minimum survey score possible (set at 1).

HS = maximum survey score possible (set at 5). WS = survey weighting (set at 75).

Calculated using Ofwat formula.

Line 6 - Quantitative composite score

The quantitative composite score is calculated as follows:

$$[(\text{unwanted phone contacts} \times 1) + (\text{written complaints} \times 5) + (\text{escalated written complaints} \times 100) + (\text{CCWater investigated complaints} \times 1000)] - (\text{connected household properties} - 1000)$$

Historical data is pre-populated. Data from 2015-16 is obtained from CCWater. 2016-17 and 2017-18 is from the APR table 3D. 2018-19 and 2019-20 are based on forecasts.

Line 7 Quantitative SIM score (out of 25)

The quantitative score is calculated as follows:

$$[1 - [(C - CL) - (CH - CL)]] * WC$$

where:

C = total contact score (see above).

CL = contact score minimum (set at 0).

CH = contact score maximum (set at 500).

WC = contact score weighting (set at 25).

Calculation.

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Line 8 - Total annual SIM score (out of 100)

The total annual SIM score is the addition of R10 lines 5 and 7
Calculation.

Line 9 - SIM forecast revenue adjustment at 2017-18 FYA CPIH deflated price base

SIM high performance payment - (low performance penalty) revenue adjustment at end of period for retail. Output item from revenue adjustments model. The value entered is prior to profiling.

Forecast revenue adjustment. Based on our actual performance and forecast performance this is forecast to be nil.