

Supplementary PR24 data tables commentary

October 2023



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SUP1A Connected properties, customers and population

Customer numbers - average during the year Lines 1A.1 - 1A.9

Residential customers (SUP1A.1 to SUP1A.4)

2022/23 data is based on recorded property numbers set out in table 4R of the APR.

We forecast that the number of properties billed for measured water will continue to increase over AMP8.

Data has been derived from recorded information and the projected forecasts for customers switching from unmeasured to measured supplies, as well as anticipated new build properties, based upon the **ONS trend** projection. SUP1A reflects year average values

Residential water only customers (SUP1A.1)

Data has been derived from recorded information regarding measured/unmeasured status and account type (water, wastewater, water & wastewater), forecast for customers switching from unmeasured to measured and new build properties.

The forecast has been based upon ONS trend projections property totals for the Anglian Water region (**ONS 2020** base-lined LAUA **trend** property projections).

Note that the WRMP24 property forecast has been based upon a more risk averse Local Authority based projection in alignment with Water Resource Planning Guidelines.

Base-year water customer data has been derived from billing data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon **ONS trend** information, along with our projections for customer switching (optant and 'move in') and new builds. Forecast totals align with figures in table RR7.

- Out-turn - recorded water customer numbers. Total water property numbers (water account) have been calculated as part of the APR process, based upon internal premise data and data from companies who bill on our behalf. This allows the derivation of both measured and unmeasured property totals, for the different account types (water, water & waste, waste).
- Forecast - the total number of water customers has been derived using the ONS trend-based Household and Population forecast model, baselined to a central

forecast outturn using a combination of actual data and a forecast based on the trend. The measured and unmeasured split has been derived, using baseline out-turn data and the meter installation/optant forecasts provided by the metering team, (as used in the WRMP24 demand forecast model).

- Void property numbers have been calculated from the WRMP24 forecast projections and apportioned in proportion to the over-all account type split.

Residential wastewater only customers (SUP1A.2)

Base-year wastewater customer data has been derived from APR data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon **ONS trend** information, along with our projections for customer switching (optant and 'move in') and new builds. Forecast totals align with figures in table RR7.

- Out-turn - recorded wastewater customer numbers. Total wastewater property numbers (water account) have been calculated as part of the APR process, based upon internally reconciled premise data and data from companies who bill on our behalf. This allows the derivation of both measured and unmeasured property totals, for the different account types (water, water & waste, waste).
- Forecast - the total number of wastewater customers has been derived using the **ONS trend**-based Household and Population forecast model, baselined to a central forecast. The measured and unmeasured split has been derived, using baseline out-turn data and the meter installation/optant forecasts provided by the metering team, as used in the WRMP24 demand forecast model.
- Void property numbers have been calculated from the WRMP24 forecast projections and apportioned in proportion to the over-all account type split.

Residential water and wastewater customers (SUP1A.3)

Base-year water and wastewater customer data has been derived from billing data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon **ONS trend** information, along with our projections for customer switching (optant and 'move in') and new builds. Forecast totals align with figures in table RR7.

- Out-turn - recorded water & wastewater customer numbers. Total water & wastewater property numbers (water account) have been calculated as part of the APR process, based upon internal premise data and data from companies who bill on our behalf. This allows the derivation of both measured and

unmeasured property totals, for the different account types (water, water & waste, waste).

- Forecast - the total number of water & wastewater customers has been derived using the **ONS trend**-based Household and Population forecast model. The measured and unmeasured split has been derived, using baseline out-turn data and the meter installation/optant forecasts provided by the metering team (as used in the WRMP24 demand forecast model).
- Void property numbers have been calculated from the WRMP24 forecast projections and apportioned in proportion to the over-all account type split.

Total Residential customers (SUP1A.4)

These totals are aggregated from the above figures.

Business Customers (SUP1A.5 to SUP1A.7)

2022/23 data is based on recorded property numbers.

Forecast data is in line with recent trend evidence. This shows a limited switching programme from unmeasured services as the majority of properties that can be metered have and low-level growth.

Business water only customers (SUP1A.5)

Base-year water and wastewater business customer data has been derived from billing data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon **ONS trend** information, along with our projections for customer switching (optant and 'move in') and new builds. Forecast totals align with figures in table RR7.

- Forecast - the total number of business water customers has been derived using the WRMP24 Demand Forecast Model. The measured and unmeasured split has been derived by apportionment based upon historic splits.
- Void property numbers have been calculated from the WRMP24 forecast projections and apportioned in proportion to the over-all account type split.

Business wastewater only customers (SUP1A.6)

Base-year water and wastewater business customer data has been derived from billing data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon **ONS trend** information, along with our projections for customer switching (optant and 'move in') and new builds. Forecast totals align with figures in table RR7.

- Forecast - the total number of business wastewater customers has been derived using the WRMP24 Demand Forecast Model, baselined to APR out-turn totals. The measured and unmeasured split has been derived by apportionment based upon historic splits.
- Void property numbers have been calculated from the WRMP24 forecast projections and apportioned in proportion to the over-all account type split.

Business water & wastewater customers (SUP1A.7)

Base-year water and wastewater business customer data has been derived from billing data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon **ONS trend** information, along with our projections for customer switching (optant and 'move in') and new builds. Forecast totals align with figures in table RR7.

- Forecast - the total number of business water & wastewater customers has been derived using the WRMP24 Demand Forecast Model, baselined to APR out-turn totals. The measured and unmeasured split has been derived by apportionment based upon historic splits.
- Void property numbers have been calculated from the WRMP24 forecast projections and apportioned in proportion to the over-all account type split.

Total business customers (SUP1A.8)

These totals are aggregated from the above figures.

Total customers (SUP1A.9)

These totals are aggregated from the above figures.

Property numbers - average during the year Lines 1A.10 - 1A.16

These lines are a summary by service and billing type of the property data reported in lines 1 to 7.

Residential properties billed (SUP1A.10)

Total values for residential properties are calculated from SUP1A.1 and SUP1A.3.

Residential void properties (SUP1A.11)

Total values for residential properties are calculated from SUP1A.1 and SUP1A.3.

Total connected residential properties (SUP1A.12)

Calculated values from above.

Business properties billed (SUP1A.13)

Total values for residential properties are calculated from SUP1A.7 and SUP1A.9.

Business void properties (SUP1A.14)

Total values for residential properties are calculated from SUP1A.7 and SUP1A.9.

Total connected business properties (SUP1A.15)

Calculated values from above.

Total connected properties (SUP1A.16)

Calculated values from above.

Population data Lines 1A.17 - 1A.18

SUP1A.17 Resident population

Population is calculated based upon our customer information and ONS population and local authority household data. Population is derived using the in-year assessment of households we serve as a percentage of the Office of National Statistics (ONS) property totals, as applied to the ONS Local Authority and Unitary Authority (LAUA) property and population tables. Additional account is taken of non-household communal population, which is derived using census data.

The estimate of household population is based on the 2021 (2018 updated - 2021 issued) sub-national population and the December 2018 (June 2021 Issue) household projections from the ONS. Population projections have been amended to reflect the current ONS mid-year population estimates.

Baseline population and property figures are derived for each LAUA, utilising ONS population and household data. Actual recorded properties in our 'billing' system for the base-year are then compared to the LAUA household official totals, either directly through GIS or via parish attribution. This allows the percentage of households served by Anglian Water to be determined for the AWS statutory water and sewerage areas. These property totals for the Anglian Water statutory water and wastewater geographies, once derived, are internally reconciled and are then used to provide the baseline for the forecast models. Base-line population totals are then derived using the known household percentages derived from the comparison of Anglian Water and ONS household totals and applying these to the ONS sub national population figures (snpp) (per LAUA).

We apportion the data for the districts we serve to derive an estimate of both the water and the waste-water populations in the Anglian Water region.

The estimate of non-household population is based on the latest census data published by the ONS. This 'communal' population covers prisons, care homes and military bases among many categories. These projections have been revised in line with the paper 'Updating the Department for Communities and Local Government's Household Projections', specifically annex 2 'Improving Institutional Population Estimates and Projections'. In addition, we have added an estimate of people resident in mixed properties. This value is now based upon new estimates derived by our demographic consultants.

Forecast - This has been derived in accordance with the WRMP24 methodology, utilising Local Planning Authority projections to derive a plan based population forecast (See Overview (WRMP Forecast Process)). Note that the population projection is fully aligned with WRMP24 **preferred plan projection** for population.

Data referenced:

- ONS snpp (sub national population projections).
- DCLG Household projections.
- Local Authority planning projection data.
- ONS mid-year estimates.
- Census data - re Communal population data.
- SAP baseline Anglian Water household data.

From 2022/23 to 2029/30 we expect to see an increase in the total water population from 4,972,797 to 5,283,511. An increase of 310,714.

From 2022/23 to 2029/30 we expect to see an increase in the total wastewater population from 6,494,202 to 6,853,639. An increase of 359,437.

SUP1A.18 Non-resident population (wastewater)

Baseline non-resident population figures have been provided by the wastewater team and the forecast has been then projected in line with WRMP24 population growth.

For non-resident population we expect this to increase from 221,866 to 235,729.

Household population data Lines 1A.19 - 1A.21

SUPIA.19 Household population

The household population for water has been calculated and shown, excluding the non-household communal population (as derived above).

Non resident population has been apportioned to the water cohort, based upon the wastewater value.

SUPIA.20 Household measured population (water only)

The measured household population for water has been derived based upon the APR assessment.

The forecast measured and unmeasured split has been derived, using baseline out-turn data and the meter installation/optant forecasts provided by the metering team, as used in the WRMP24 demand forecast model.

From 2022/23 to 2029/30 we expect to see an increase in the total measured water population from 4,119,400 to 4,608,635; an increase of 489,235.

SUPIA.21 Household unmeasured population (water only)

The unmeasured household population for water has been derived based upon the APR assessment.

The forecast measured and unmeasured split has been derived, using baseline out-turn data and the meter installation/optant forecasts provided by the metering team, as used in the WRMP24 demand forecast model.

From 2022/23 to 2029/30 we expect to see a decrease in the total unmeasured water population from 775,608 to 595,997; a decrease of 179,611.

SUP1B Properties and meters

Property and meter numbers - at end of year (31st March) Lines 1B.1 - 1B.11

2022/23 data is based on recorded property numbers set out in table 4R of the APR.

SUP1B.1: Total new residential properties connected in year

Household property connection data has been derived from recorded information regarding measured/unmeasured status and meter type (No meter, Basic meter, AMR Meter, AMI Meter) for the base-year.

The forecast has been based upon ONS trend projected property totals for the Anglian Water region (ONS 2020 trend based LAUA property projections). (Note that the WRMP24 property forecast has been based upon a more risk averse Local Authority based projection in alignment with Water Resource Planning Guidelines).

Base-year water customer data has been derived from billing data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon ONS trend information.

All new properties are expected to be measured.

- Out-turn - recorded new household property connections. Total new water property connection numbers (water account) have been calculated as part of the APR process, based upon internally reconciled premise data. This allows the derivation of both measured and unmeasured property totals, for the different account types (water, water & waste, waste).
- Forecast - the total number of new household water property connection numbers has been derived using the ONS trend based Household and Population forecast model, baselined to APR totals. The meter type split has been derived, using baseline out-turn data and proportionally split based upon meter type volumes per year (up to 2024/25). Beyond 2024/25 we have assumed that all new connections will be smart AMI.

Note that our preferred smart meter technology is AMI (Automated Meter Infrastructure, remotely read by our network), with our current 10-year rollout progressing.

Values have been reconciled internally generating year end values.

SUP1B.2: Total number of new business properties connections

Business property connection data has been derived from recorded information regarding measured/unmeasured status and meter type (No meter, Basic meter, AMR Meter, AMI Meter) for the base-year.

The forecast has been based upon historic trends and ONS trend projected property totals for the Anglian Water region (ONS 2020 trend based LAUA property projections). (Note that the WRMP24 property forecast has been based upon a more risk averse Local Authority based projection in alignment with Water Resource Planning Guidelines).

Base-year water customer data has been derived from billing data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon ONS trend information.

All new properties are expected to be measured.

- Out-turn - recorded new business property connections. Total new water property connection numbers (water account) have been calculated as part of the APR process, based upon internally reconciled SAP premise data. This allows the derivation of both measured and unmeasured property totals, for the different account types (water, water & waste, waste).
- Forecast - the total number of new business water property connection numbers has been derived using the ONS trend-based Household and Population forecast model, baselined to APR totals. The meter type split has been derived, using baseline out-turn data and proportionally split based upon meter type volumes per year (up to 2024/25). Beyond 2024/25 we have assumed that all new connections will be smart AMI.

Note that our preferred smart meter technology for Anglian Water is AMI (Automated Meter Infrastructure, remotely read by our network), with our current 10-year rollout progressing.

Values have been reconciled internally generating year end values.

SUP1B.3: Residential properties billed at year end

Household property connection data has been derived from recorded information regarding measured/unmeasured status and meter type (No meter, Basic meter, AMR Meter, AMI Meter) for the base-year.

The forecast has been based upon ONS trend projected property totals for the Anglian Water region (ONS 2020 trend based LAUA property projections), with additional data regarding meter installation programs to 2029/2030.

Base-year water customer data has been derived from billing data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon ONS trend information, along with our projections for our meter installation program for smart metering and meter opting/switching.

All new properties are expected to be measured.

Note that our preferred smart meter technology is AMI (Automated Meter Infrastructure, remotely read by our network), with our current 10-year rollout progressing.

Values have been reconciled internally generating year end values.

SUP1B.4: Residential uneconomic to bill

We do not recognise properties as uneconomic to bill. Un-billed properties are based on fairness rather than economics.

SUP1B.5: Residential void properties at year end

Base-line and forecast values have been derived from our recorded information and internal projections.

SUP1B.6: Total connected residential properties at year end

Values calculated from above.

SUP1B.7: Business properties billed at year end

Business property connection data has been derived from recorded information regarding measured/unmeasured status and meter type (No meter, Basic meter, AMR Meter, AMI Meter) for the base-year.

The forecast has been based upon ONS trend projected property totals for the Anglian Water region (ONS 2020 trend based LAUA property projections), with additional data regarding meter installation programs to 2029/2030 from our WRMP24 projections.

Base-year business customer data has been derived from billing data and projected to 2024/25 AMP7 out-turns.

The 2025/26 to 2029/30 forecasts have been generated based upon ONS trend information, along with our projections for our meter installation program for smart metering and meter opting/switching in alignment with the WRMP24.

All new properties are expected to be measured.

Note that our preferred smart meter technology is AMI (Automated meter Infrastructure, remotely read by our network), with our current 10-year rollout progressing.

Values have been reconciled internally generating year end values.

SUP1B.8: Business properties unbilled at year end

Base-line and forecast values have been derived from our recorded information and internal projections.

SUP1B.9: Business void properties at year end

Base-line and forecast values have been derived from our recorded information and internal projections.

SUP1B.10: Total connected business properties at year end

Values calculated from above.

SUP1B.11: Total connected properties at year end

Values calculated from above.

SUP11 Real price effects and frontier shift

Table SUP11 sets out our assumptions concerning Real Price Effects (RPEs) and Frontier Shift for the purpose of the PR24 Business Plan.

Below, we review the basis for our figures in each row.

CPIH assumptions used for RPE calculations Line 11.1

The year average CPIH forecasts used here are taken from Table PD1 row 35.

Real Price Effects Lines 11.2 - 11.6

SUP11.2 Wholesale Real Price Effect - Labour

Our forecast for nominal Labour costs is based upon the most recent (March 2023) Office for Budget Responsibility (OBR) forecast. This represents the most authoritative forecast of UK earnings available. As the OBR is not expected to update its forecasts before the submission of Business Plans early in October 2023, the figures we have used are the most current forecasts available to us.

The figures are for average earnings from Table A3. Table A3 gives the outturn figure for 2021/22 and then forecasts for 2022/23 to 2027/28. We have chosen to assume that the forecast for 2027/28 is replicated in 2028/29 and 2029/30.

SUP11.2R - 6R

These are the retail equivalents of the five wholesale RPEs quoted in SUP11.2 - SUP11.6. The factors driving retail Price Effects are the same as those for wholesale RPEs, though the relative weighting of cost types is different. The difference between the Retail and the Wholesale controls is that Retail is computed on a nominal basis whereas Wholesale is on a real basis. Consequently, the Price Effects used for Retail should be nominal (that is before removing inflation) rather than Real as is used for Wholesale.

SUP11.3 Wholesale Real Price Effect - Energy

Energy prices broadly trebled between the long-term costs included in the cost assessment models and 2022/23. Whilst market prices have fallen back since then they are still approximately double the historic levels assumed in the model.

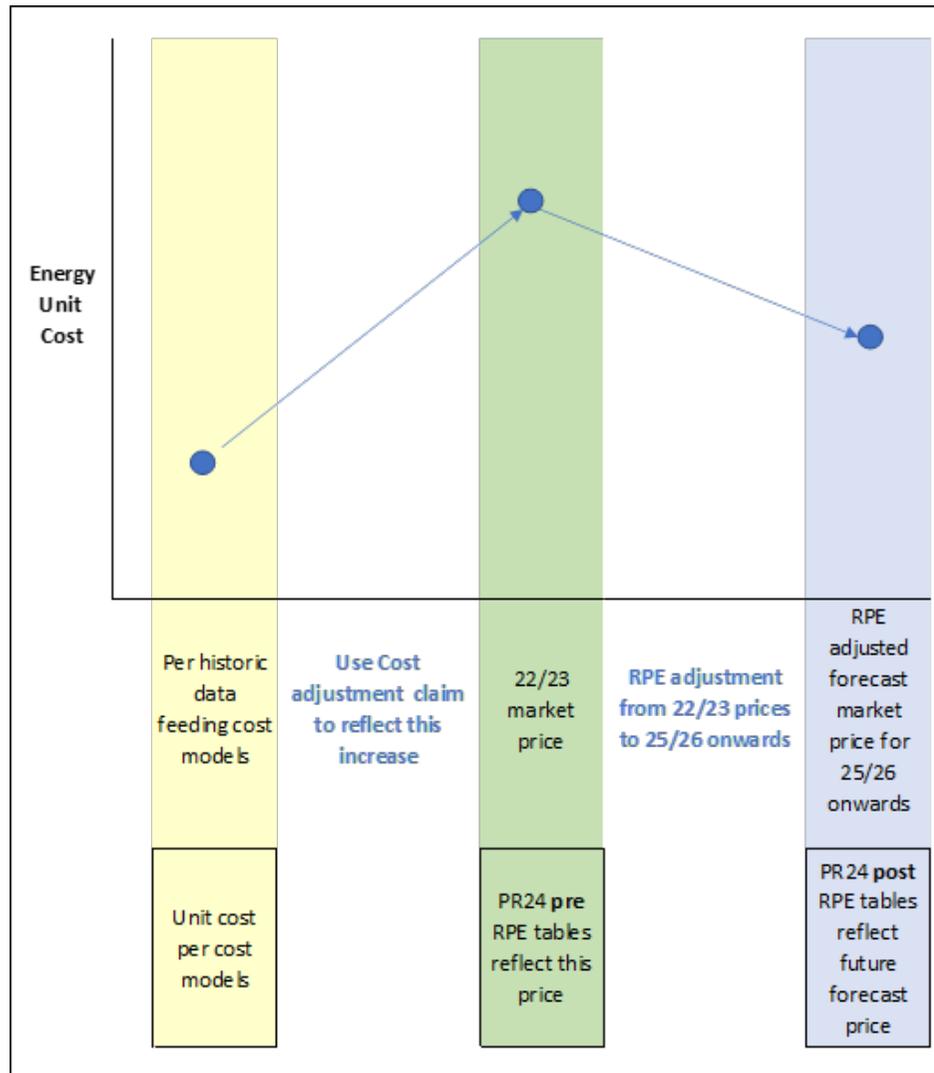
Our understanding of the guidance informs us that we need to use two separate steps within the PR24 methodology to arrive at the correct funding level for energy costs for AMP8: the Cost Adjustment Claim and RPE adjustment processes. It is worth noting that whilst the RPE is written as the second step below, the guidance

for this asks us to calculate the RPE based on macro-economic factors outside of the companies' direct control. This drives to use market data, which show a significant reduction in energy prices post 2022/23, which in turn means we need to use the same market data in calculating the Cost Adjustment Claim. The effect of this is to end up with a very large cost adjustment claim, a large negative RPE adjustment, and - combining the two steps - a large net increase in power costs reflecting the current forecast costs of energy compared to the historical costs used in the cost assessment models.

It is essential to view these two steps together to get the overall picture. Changes in the methodology for one of these could well lead to a change in methodology for the other. In particular the methodology for calculating the 2022/23 market rate must be the same in both steps to ensure consistency. The result of the two adjustments together should arrive at the forward market rates for energy that we expect to incur in AMP8.

In our approach it is particularly important to also use this 2022/23 rate as the starting point in the calculation of the RPE adjustment. By keeping the methodology on the 2022/23 market price aligned across the two separate adjustments, we ensure we end up at the expected unit cost of energy for AMP8. The graphic below seeks to demonstrate this, and the approach we are taking.

Figure 1 The impact of price increases and RPE to energy costs between AMP7 and AMP8



We do not think however that a ‘CAC+RPE’ approach is the best way to deal with this issue. A more sensible approach would be some kind of indexation of the price control to quoted energy prices: this reflects good principles of economic regulation as energy is a volatile and large common cost which is mainly uncontrollable and companies would still have an incentive to contract efficiently by using a public index. Failing that, or in addition to it, an uncertainty mechanism with true-up (ideally on the basis of a published index) could also work. Our RPE figures have been calculated to work alongside our CAC; if Ofwat decided that mechanisms such as the ones we describe would be more successful in aligning risks and incentives in energy purchase we would withdraw our CAC and adjust our RPE forecasts accordingly.

On the basis there are currently no alternatives to the ‘CAC+RPE’ approach the steps we have followed are as below.

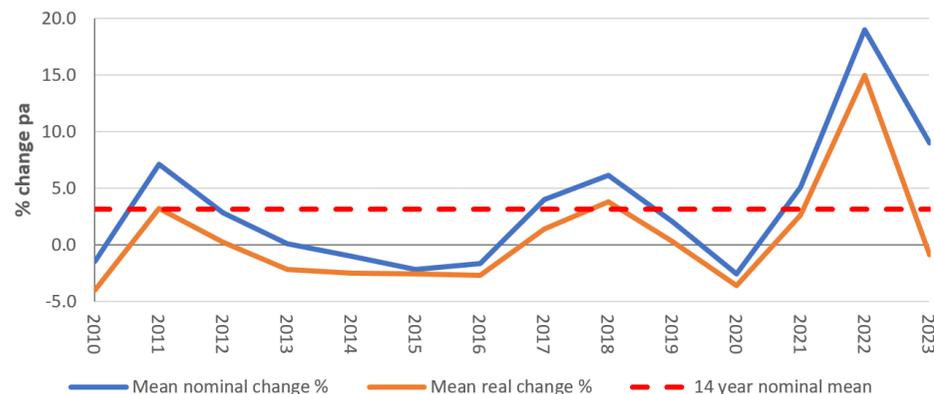
The first step is this cost adjustment claim, calculating the gap between the implicit allowance for energy costs made by the cost models and what that would have been if the 2022/23 energy prices were used in the models instead.

The second step is to use the RPE process to pick up the difference between the 2022/23 market price and the latest expected forward rates for forward purchasing in AMP8.

SUP11.4 Wholesale Real Price Effect - Chemicals

Our approach to forecasting the nominal price effects for chemicals is rooted in the uncontentious observation that chemical prices are volatile. Below we illustrate this point by graphing the Producer Price Index for chemicals, GB7Z, as published by the Office for National Statistics (ONS) over the last 14 years.

Figure 2 Annual change in ONS chemicals producer price inflation



The following table sets out the chemicals PPI nominal Compound Annual Growth Rate (CAGR) over different numbers of years.

Table 1 Chemicals PPI nominal CAGR over different numbers of years

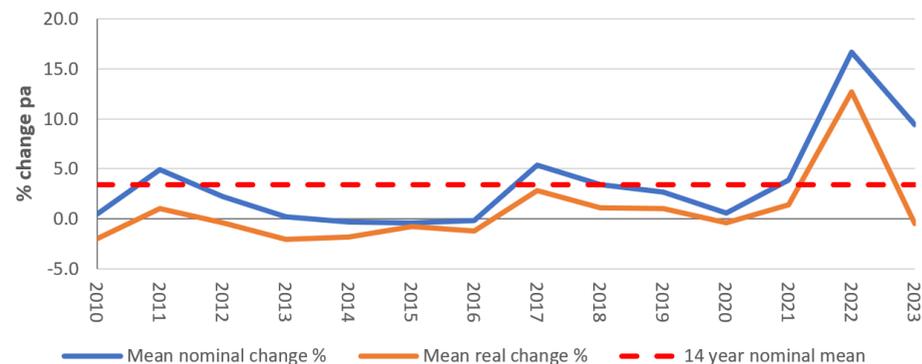
Compound Annual Growth Rate over # years	Nominal CAGR
14	3.2%
10	3.6%
5	6.3%
1 (year to Mar 2023)	9.0%

Any attempt to forecast chemical costs over the next seven years would be based on forecasts of supply and demand factors which in turn are extremely unclear. Rather than make any such attempt, we have chosen to base our forecasts for AMP8 on the long-term trend, which appears to be a nominal increase of slightly over 3% pa. In the latter two years of AMP7, we have chosen to use the five-year compound annual growth rate.

SUP11.5 Wholesale Real Price Effect - Machinery, Plant & Equipment

Our approach to computing the RPE for machinery, plant and equipment follows the same lines as we did for chemicals. Below we have graphed the Producer Price Index for metals, machinery and equipment, GB82, as published by the Office for National Statistics (ONS) over the last 14 years.

Figure 3 ONS metals, machinery and equipment PPI annual change



The following table sets out the nominal CAGR for the MPE PPI over different numbers of years.

Table 2 The nominal CAGR for the MPE PPI over different numbers of years

Compound Annual Growth Rate over # years	Nominal CAGR
14	3.4%
10	4.0%
5	6.5%
1 (year to Mar 2023)	9.4%

In terms of forecasting nominal price effects over the next seven years up to the end of AMP8, we have taken the same approach for MPE as for chemicals. In other words, the best estimate of price movements in the future is the long-term compound annual growth rate for this producer price index. Again, for this purpose, the 14-year CAGR has been used.

SUP11.6 Wholesale Real Price Effect - Other

The immediate difficulty when estimating this element of costs is what exactly is included within this category.

For opex, the composition of 'Other' costs is shown in the table below. The cost shares are based on data taken from the data set used by the CMA, running from 2012 to 2020.

In terms of input price changes:

- Rates are indexed to CPIH so we use an input price equivalent to the long-run CPIH forecast, which we take to be 2.0%.
- EA charges for abstraction licence fees are taken to be indexed to CPIH.
- EA charges for discharge fees will rise sharply at the start of AMP8 as they have not done so for a decade and the EA has indicated that charges will rise sharply. Thereafter in AMP8 these charges are assumed to stay steady in nominal terms.
- For service contracts we use the figures calculated for MPE under capex - see below

Table 3 Other costs by Price Controls

	Water resources		Water N+		Water resources N+		Water recycling N+		Bioresources	
	Cost share	Input price change	Cost share	Input price change	Cost share	Input price change	Cost share	Input price change	Cost share	Input price share
Rates	76.59%	2.00%	98.72%	2.00%	40.00%	2.00%	42.10%	2.00%	18.87%	2.00%
Abstraction charges	23.41%	2.00%	1.28%	2.00%	-	-	-	-	-	-
Service contracts	-	-	-	-	47.00%	3.00%	44.59%	3.00%	81.13%	3.00%
Discharge permit fees	-	-	-	-	13.00%	20.00%	13.31%	0.00%	-	-
Weighted average nominal price effect	-	2.00%	-	2.00%	-	4.81%	-	2.18%	-	2.81%

For capex, 'Other' covers preliminary costs. These are listed in the following table. They can be seen to be predominantly labour cost related. Consequently, we have

assumed these costs will follow the OBR wages assumptions set out above.

Table 4 Constituent parts of Other costs for capex

Cost category	Description
Project management	This includes centrally & office based project management.
Site supervision	This includes supervisory or managerial staff permanently located on site.
Mobilisation and subsistence	This includes the cost of mobilising the labour force to site and the provision of temporary accommodation and associated costs including land rental costs.
Office, welfare and stores	This includes the site set-up costs; site clearance, temporary cabins, stores & amenities.
Commissioning	This includes costs for the Site wide Works commissioning cost, training, labour and laboratory and sampling costs. This is specifically for the direct labour employed by the delivery route (Alliance, Local Partners, Special Projects). Commissioning and training costs from sub-contractors should be recorded at the Plant Group level against labour costs. Training costs relates to the costs for training the site operatives in using the equipment/plant/process. Includes first fill of chemicals.
Temporary works - dewatering	This includes the cost of providing temporary works to enable the site or service to function whilst the construction work takes place.
Temporary works - tankering	This includes the cost of providing temporary works to enable the site or service to function whilst the construction work takes place. Record the volume of the tanker (multiplied by number of trips to site) to get the total volume rather than the actual volume tankered away from site.
Temporary works - access roads	This includes the cost of providing temporary works to enable the site or service to function whilst the construction work takes place.
Temporary works - over pumping	This includes the cost of providing temporary works to enable the site or service to function whilst the construction work takes place. This includes work such as: over pumping, dewatering, re-circulation, tankering, access roads and any temporary processing/treatment plant.
Temporary works - treatment plant	This includes the cost of providing temporary works to enable the site or service to function whilst the construction work takes place.
Abortive	This includes the abortive cost due to mobilising the labour force to site for work not carried out due to unforeseen events outside contractor's control. If scheme has not passed design stage then add all costs under this Equipment Type but if it has passed design stage then breakdown/split is required.
Prelims overhead	Overhead activity relating to construction work, for example NRSWA (new roads and street works) coordinators, road closures, enabling coordinators etc.
Piling	This should include the cost for construction of piling to deal with poor ground conditions.
Railway/Highway crossing permits	This should include the cost for the liaison to acquire the permits required from Highway and Railway to cross these infrastructure assets.

Cost category	Description
Works in congested area/town centre	This should include the costs of additional working in busy areas such as: additional traffic management, bollard removal, installation of banksman, etc.
Environmental mitigation	This should include the cost of the construction of localised mitigation to deal with environmental protection such as ponds, fences, nests, etc.
Contamination	This should include the costs for surveys and reports to ensure that the land is not hazardous to human health.
Third party liaison	Cost related to the liaison with third parties such as BT with telecom masts.
Specialist scaffolding	This is the cost for the hire and supply of specialist scaffolding required to access the asset, usually for water tower, reservoirs and high rise buildings.

Wholesale base cost weights Lines 11.7 - 11.24

The wholesale base cost weights shown for Water (SUP11.7 - SUP11.12), Water Recycling (SUP11.13 - SUP11.18) and Bioresources (SUP11.19 - SUP11.24) were all computed in the same manner.

The split of the opex element of base costs were taken from our Regulatory Accounts for the three years 2019/20, 2020/21 and 2021/22. The cost shares (of labour, energy etc.) for each year by category were calculated and then the weighted average of the three years' percentages computed.

Capital maintenance costs over the same period were categorised by the various cost types and the weighted average percentages over the three-year period was computed. The opex and capital maintenance percentages were then combined using the respective average spends as weights.

Wholesale enhancement cost weights Lines 11.25 - 11.42

The approach taken to calculating enhancement cost weights was the same as that taken for capital maintenance cost weights.

Retail cost weight Lines 11.49 - 11.54

The approach taken to calculating retail cost weights was the same as that taken for wholesale opex.

Frontier shift assumption Lines 11.55 - 11.62

At PR19, Ofwat initially proposed an on-going productivity of 1.5% pa. At Final Determination (FD), Ofwat scaled back its figure to 1.1% pa, while the CMA determined 1.0% for the four appellant companies.

The water industry commissioned Economic Insight (EI) to estimate a credible range for quality adjusted productivity growth within the industry. The key findings of EI's analysis are set out below:

We summarise our results (for the total water value chain) with respect to three estimated ranges:

- our 'plausible range' is 0.3%-0.8% (we think it is implausible, but not impossible, for frontier shift to lie outside of this range);
- our 'PR24 focused range' is 0.3%-0.7% (we think it is likely frontier shift will be within this range at PR24); and
- our 'sensitivity analysis range' is 0.1%-1.1% (this shows what frontier shift could be, under alternative sets of comparators and time periods to those we recommend).

For the last two years of the current AMP, we have used the frontier shift challenge set by the CMA in its re-determination. For each year of AMP8, we have chosen to use the most challenging and ambitious end of the EI plausible range, 0.8% pa, for all categories of cost and for each price control.

Net price change in the year Lines 11.63 - 11.70

Net (real) price changes in the year are computed. The formulae are those provided by Ofwat. We have corrected errors found in the 2024 figures for enhancement, additional controls and retail.

Cumulative net price change Lines 11.71 - 11.78

The cumulative net price changes rows use formulae provided by Ofwat.

SUP12 Direct procurement for customers (DPC)

Direct procurement for customers (DPC) Lines 12.1 - 12.14

DPC eligible projects at PR24 have been identified through the application of Ofwat's guidance¹. The commentary below explains the process followed to identify the projects represented in table SUP12, and provides the additional supplementary information as required by Ofwat's data table guidance. Further detail on the DPC assessment can be found in ANH30. .

In the first instance, our enhancement programme was reviewed to identify candidate projects and programmes which appear suitable for DPC, considering Ofwat's size test (>£200m whole life totex)² and whether the smaller projects could be scaled to create a larger programme of works suitable for DPC (discreteness test 1: programme scalability)³. This assessment identified 6 projects which were progressed for detailed analysis.

The next stage of the assessment considered the construction, operation and maintenance risks applicable to the project (discreteness tests 2 and 3)⁴ to identify any significant reasons why risks could not be transferred and/or mitigated through contractual arrangements. Project-specific factors were identified, and their implications for DPC eligibility were explored. Finally, Ofwat's updated guidance on the technical discreteness of programmes of smaller assets and those with shorter lives than an average DPC contract was factored into the assessment⁵.

Of the 6 projects shortlisted for the detailed assessment, 1 project (Colchester re-use) was assessed as suitable for DPC, whilst the remaining 4 were either found to be ineligible and were excluded by Ofwat's updated guidance.

- Table 5 summarises the outcome and underlying rationale behind AWS' assessment of each project's DPC eligibility⁶.
- Table 6 provides the key information required as per Ofwat's data table guidance.

1 Ofwat (December 2022) PR24 Final Methodology Appendix 5 DPC; Ofwat (December 2022) PR24 Final Methodology Appendix 5 DPC; Ofwat (July 2023). Additional guidance letter on Technical Discreteness.

2 Ofwat (December 2022) PR24 Final Methodology Appendix 5 DPC; pg. 5

3 Ofwat (April 2023) DPC Technical Discreteness Guidance; pg. 5-7

4 Ibid; pg. 8-11

5 On the 3rd July 2023 Keith Mason sent a letter to industry regulatory directors excluding bundles with individual assets below £5-10m and bundles with an overall project life less than an expected CAP agreement term.

6 Additional detail on the rationale behind the DPC eligibility assessment for each project can be found in ANH30

Table 5 Summary of DPC eligibility assessment outcome

Project name	DPC eligible?	Rationale
Colchester re-use	Yes	Project passes the size threshold and there is no significant reason why most construction, operation and maintenance risks cannot be transferred to a CAP.
Continuous river water quality monitoring	No	Programme passes the size test however it is considered ineligible for DPC under Ofwat's additional technical discreteness guidance because the individual asset values are <£5m and the asset lives are shorter than an average DPC term.
Grafham to Bury St. Edmunds transfer	No	Whilst above the size threshold, the project must be delivered within constrained timescales. It is unlikely that the risk of delivery within the required timescales for the project can be effectively transferred or mitigated contractually. Further, the future use case for the transfer is uncertain and has the potential to be significantly impacted by other projects and sources of supply. This is likely to be challenging to transfer or mitigate contractually.
Bradenham 45 MI/d Supply (NBR6)	No	Whilst the size threshold is passed, the transfer's position in a complex network means that the planning, construction and commissioning interfaces risks cannot be effectively transferred or mitigated contractually. The project is required by 2030, which may be difficult to achieve via a DPC contract. Further, the project has interface and operational risks that are difficult to transfer to CAP. The future use case for the transfer might also change overtime and entering into a CAP would reduce flexibility and could impact future performance.
Storm and retention tanks	No	Whilst the programme passes the size threshold, not all assets are likely to be over the £5m threshold. It may not be practical to subdivide the programme between larger and smaller assets, and the programme does not meet Ofwat's scalability consideration for projects that form part of a wider system. Further, some assets are integrated into AWS' existing sites and treatment works, meaning works would be required on the same site. For network storage, the timing of delivery across a multitude of dispersed assets prevents effective packaging. The assets are effectively passive and therefore offer little opportunity to transfer operational risk to the market. As the assessment concluded that construction risks cannot be transferred, maintenance is therefore also excluded.
Strategic catchments	No	Strategic catchment solutions are not well defined, and delivery will require a significant amount of stakeholder buy-in and co-ordination. At this nascent stage of development, a clear DPC package of works is hard to define.

Table 6 Project information

Project name	DPC Eligible?	Whole life totex (£m)	Construction start	Operation start	Asset operation assumption (the annual opex cost reflects...)
Colchester re-use	Yes	297.7	2028/29	2031/32	The asset will be operated as a BAU treatment asset, i.e. constant operation at or around stated MI/d / DO
Continuous river water quality monitoring	No	390.6	2026/27	2028/29 (continuous rollout until 2030) ^a	River water quality will be monitored continuously against a range of parameters (currently under development). Opex includes the cost of maintenance, recalibration etc.]
Grafham to Bury St. Edmunds transfer	No	616.9	2025/26	2032/33	Opex assumption is an early estimate, but is likely to change as asset utilisation will vary significantly. The transfer will be used (inter alia) as a North-South transfer within the AWS region, as a temporary source of additional supply to Cambridge Water, and potentially in future as part of a West-East interface in conjunction with the operation of the Fens Reservoir.
Bradenham 45 MI/d Supply (NBR6)	No	277.6	2026/27	2030/31	Opex assumptions are early estimates. The transfers will be used as an integral role within AWS' network to manage balance of supply. Changing operational needs may make it difficult to determine the precise level of usage for each. The transfers' pattern of usage may also change when Fens Reservoir comes into service.]
Storm and retention tanks	No	1037.7	2025/26	2025/26 (continuous rollout until 2030)	Opex will be minimal (predominantly diversion of flows into and out of storage) and likely managed as part of network operations. Maintenance will be the main cost across the network.
Strategic catchments	No	Caister: 62.6 Southend: 199.9	2027/28	2030/31	For green solutions, opex will mostly derive from maintenance. However, the nature of the solutions is yet to be defined meaning there is a significant amount of uncertainty as to the actual cost of operation.

^a Continuous river water quality monitoring, strategic catchments and storm and retention tanks are all driven by a 10-year programme to reduce the frequency of spills at the worst performing sewer overflows by 2035. The programmes considered within this exercise represent the AMP8 portion only. Construction and operation are both shown to begin in 2025, however in practice the rollout would continue across the AMP, with some assets delivered in year 1, but others in subsequent years.

Table SUP12 has been populated with information relating to the 6 projects identified above. The approach taken for population is as follows:

The data table guidance requires an explanation of the approach taken to the calculation of key costs and any assumptions made. For SUP12, this is summarised in Table 7.

- For DPC eligible projects all columns have been populated.
- For projects which are not eligible for DPC, the columns for AMP8 development costs (SUP12.8) and total AMP8 DPC related costs (SUP12.14) have not been populated, as development costs would be captured as part of the project's enhancement cost line.

Table 7 Approach to calculation of costs included SUP12

Cost item / line	Method of calculation
Whole life totex	Whole life totex has been calculated using construction capex, renewal capex, capex repeat and opex costs from AWS' C55 investment optimisation model, matched against AWS' assumption for the life of each asset.
AMP8 project development costs	Project development costs have been calculated using the approach applied for the Middlegate WTW at PR19, that is, as 6% of each project's totex.
DPC-related costs	DPC-related costs have been calculated using the approach applied for the Middlegate WTW at PR19: <ul style="list-style-type: none"> • Pre-tender costs: £1m, inflated by CPIH to 22/23 prices. • Tender costs: 1% of construction capex. • Management costs: £0.15m per annum (inflated by CPIH to 22/23 prices) from the year in which the contract is expected to be awarded until the end of the AMP.

Total construction costs (disaggregated)

Ofwat's guidance stipulates that for projects involving connected assets, disaggregated construction costs should be provided for each. These cost lines are set out in Table 8, noting that:

- The transfer schemes have been assessed to be ineligible for DPC by virtue of their being disparate schemes, each of which has construction and operational complexities which result in differing risk profiles and, ultimately, the likely inability to transfer risk effectively and efficiently to a third-party as part of a programme.
- Disaggregated costs have not been provided for the strategic catchments and storm and retention tanks programmes as these comprise a much larger number of very small interventions which in practice would always be delivered as a programme by a single (or small number of) providers.

Table 8 - Disaggregated construction costs

Project / Programme	Component	AMP8				
		25-26	26-27	27-28	28-29	29-30
Grafham to Bury St. Edmunds Transfer	Cambs Water	2.107		5.195	7.792	10.390
	Suffolk West	3.143	6.604	13.209	19.813	26.418

Strategic Resource Options

Table 9 Fens Reservoir SRO Summary

Project Name	Fens Reservoir
DPC Eligible	SIPR - Yes
Rationale	SIPR rationale is provided for within the Enhancement Case.
Wholelife TOTEX (Total Expenditure)	Whole life totex has been calculated using construction capex, renewal capex, capex repeats and opex costs from AWS' C55 investment optimisation model, and are aligned with the WRMP Table 5 submission, with capex and opex aligned to EBSD modelling. This also includes the whole life totex period of 80 years. The scheme costs presented exclude the Fens to Cambridge transfer, as per EBSD modelling.
Construction Start	2029
Construction Finish	2036
Asset Operation Assumption	Operation of asset by the Infrastructure Provider.
Partner Water Companies	Both the development costs (SUP12.8) and the Procurement Costs (SUP12.14) are assumed to be shared equally with Cambridge Water as per the agreed development funding ratios with RAPID. Therefore, the total costs are represented in the tables.
Total Development Cost	As provided in SUP12.8, the development costs include the design costs, costs to obtain the necessary planning consents to deliver the project, acquiring land rights necessary for the project to be delivered, delivering any AMP8 site enabling works (where relevant), and delivering any interface works to be completed in AMP8.
Total Procurement Costs	The procurement costs relating to SIPR are provided in SUP12.14, which include finance and legal costs, as well as the procurement of the Infrastructure Provider and Main Works suppliers.

Table 10 Lincs Reservoir & Peterborough to Grafham SRO Summary

Project Name	Lincs Reservoir & Peterborough to Grafham
DPC Eligible	SIPR - Yes
Rationale	SIPR rationale is provided for within the Enhancement Case.
Wholelife TOTEX (Total Expenditure)	Whole life totex has been calculated using construction capex, renewal capex, capex repeats and opex costs from AWS' C55 investment optimisation model, and are aligned with the WRMP Table 5 submission, with capex and opex aligned to EBSD modelling. This also includes the whole life totex period of 80 years.
Construction Start	2029
Construction Finish	2040
Asset Operation Assumption	Operation of asset by the Infrastructure Provider.
Partner Water Companies	Both the development costs (SUP12.8) and the Procurement Costs (SUP12.14) are assumed to be 100% Anglian Water as the sole-promotor of the SRO.
Total Development Cost	As provided in SUP12.8, the development costs include the design costs, costs to obtain the necessary planning consents to deliver the project, acquiring land rights necessary for the project to be delivered, delivering any AMP8 site enabling works (where relevant), and delivering any interface works to be completed in AMP8.
Total Procurement Costs	The procurement costs relating to SIPR are provided in SUP12.14, which include finance and legal costs, as well as the procurement of the Infrastructure Provider and Main Works suppliers.
Other assumptions and inclusions:	The Lincs Reservoir also includes the Peterborough to Grafham (P2G) section only. These are included within the wholelife costs (SUP12.7), the development costs (SUP12.8) and the associated capex costs (SUP12.9) of which is assumed to be delivered within AMP8. The opex costs associated with P2G are also included within SUP12.10.

SUP14 Customer engagement and affordability/acceptability of business plans

Customer engagement Lines 14.1 - 14.2

These lines have been calculated in accordance with Ofwat guidance and reflects all engagement we have undertaken with household and non-household customers to inform our Plan. See ANH71 Index of Customer Engagement for a list of all activity undertaken and numbers sampled. More detail on the nature of the engagement can be found in Chapter 4 Customer Engagement and Annex ANH58 Customer Engagement Technical.

Affordability and Acceptability

The full detail and results of how we conducted our Affordability and Acceptability survey are set out in ANH91 Affordability and Acceptability Quantitative Survey. The survey fully complied with the Guidance. Fieldwork commenced on the 18th of August 2023 and closed on the 19th of September.

The tables are based on, unless specifically stated otherwise in the report at ANH91, the Anglian Dual, Hartlepool, and ESW merged datasets.

SUP15 Affordability - residential customers

A1. Social tariffs and WaterSure - residential customers - Number of residential customers Lines 15.1 - 15.3

Number of customers on social tariffs (SUP15.1)

Numbers reported relate to our LITE tariffs. For 2020/21 to 2022/23 these are based on recorded property numbers set out in table 2N of the APR.

The maximum contribution to social tariffs supported by customer engagement is as set out in table 2N of the APR for 2020/21 to 2022/23. For 2023/24 the maximum contribution is unchanged from the previous year. The maximum contribution supported by customers will increase to £24 from 2024/25. This is based on the results of customer engagement carried out by Accent re Willingness To Pay (WTP) for social tariff in June 2023 ANH51

The phased forecast take-up on LITE for the 2024/25 to 2029/30 reflects the maximum contribution, the current mix of single and dual service customers supported on the tariff, the recent trend in take-up on the tariff following changes to the eligibility criteria and data sharing with DWP and the forecast bill profile over AMP8.

We engaged Experian to model the extent of water poverty across the our customer base for the periods 2022/23 to 2029/30, based on actual and forecast bills provided by Anglian Water and Experian's calculation of equivalised net incomes after housing costs. Experian's report is attached at ANH70.

The forecast take-up on LITE is consistent with the level of water poverty forecast and recent trends in take-up. Although we have taken a prudent view for future take-up for single service customers based on experience to date, across the concessionary tariffs available to Anglian Water, and the given the maximum level of contribution from customers, we are confident that we have the capacity to provide tariff support to all customers in water poverty as modelled.

Number of customers on Watersure tariffs (SUP15.2)

Numbers reported relate to our tariff detailed in the Water Industry Act (Charges) (Vulnerable Group) Act. For 2020/21 to 2022/23 these are based on recorded property numbers.

Properties are forecast to increase in line with recent trends.

Number of customers not on social tariffs (SUP15.3)

For 2020/21 to 2022/23 these are based on recorded property numbers set out in table 2N of the APR.

From 2023/24 projections are as per table SUP1a less those on a social tariff.

A1. Social tariffs and WaterSure - residential customers - WaterSure tariff discount Lines 15.6-15.7

Total reduction in bills for WaterSure customers (SUP15.6)

For 2020/21 to 2022/23 the total reduction in bills for WaterSure tariffs is as per reported revenue and as reflected in table 2F of the APR.

The average percentage discount per WaterSure tariff is not expected to change and therefore projections are based on the average discount per customer in 2022/23 plus/minus the weighted average charge increase and the number of customers on WaterSure tariffs for each year.

A1. Social tariffs and WaterSure - residential customers - Social tariff cross-subsidy - residential customers Lines 15.8 - 15.9

Total amount of money collected from all customers in charges to fund social tariffs discounts (SUP15.8)

For 2020/21 to 2022/23 money collected is as set out in table 2N of the APR, repriced to 2022/23 prices.

The average percentage discount per social tariff is not expected to change and therefore projections for 2023/24 onwards are based on the average discount per social customer in 2022/23 plus/minus the weighted average charge increase and the number of customers on social tariffs for each year, expressed in 2022/23 price base, capped by the maximum contribution per customer agreed in consultation.

A1. Social tariffs and WaterSure - residential customers - Social tariff and WaterSure tariff cross-subsidy - company Line 15.10

Total revenue forgone by company to subsidise social tariffs (SUP15.10)

No revenue has been or is projected to be forgone by Anglian Water to subsidise social tariffs.

A1. Social tariffs and WaterSure - residential customers - Social tariff support - willingness to pay Lines 15.11 - 15.12

Level of support for social tariff customers reflected in charges (SUP15.11)

The level of support set out reflects the cross-subsidy from customers utilised in the provision of discounted charges on the social tariff in the respective charging year, expressed in 2022/23 price base.

Maximum contribution to social tariffs supported by customer engagement (SUP15.12)

The maximum contribution to social tariffs supported by customer engagement is as set out in table 2N of the APR for 2020/21 to 2022/23. For 2023/24 the maximum contribution is unchanged from the previous year. The maximum contribution supported by customers will increase to £24 from 2024/25. This is based on the results of customer engagement carried out by Accent in June 2023 (ANH51) Maximum contribution is expressed in nominal prices for the respective charging year.

A2. Vulnerability - Priority Services for customers in vulnerable circumstances - PSR Lines 15.13 - 15.20

PSR Reach (SUP15.13 - SUP15.18)

In 2020, following analysis of trends in the energy sector we set an ambitious target of achieving 12.8% of customers on our PSR by 2025 and 15% by 2030. This target represents double the industry target previously set by Ofwat. The forecast reflects this target. The forecast number of customers requiring the differing support

service by line is based on the percentage of customers who currently subscribe to those services. Due to the small numbers for lines 15.17 and 15.18, these have both been rounded to 2% for the forecasted values.

By the end of 2025 we will have identified a high proportion of customers who would benefit and wish to access support, as such there is likely to be a smaller subset of customers left requiring identification and support. The ongoing rate of growth of our PSR is therefore expected to be much reduced. Nevertheless, we still expect to see an increase of approx. 15% over the 9-10 year period 2020 to 2030.

Maintaining the level of PSR numbers requires constant promotion to maintain elevated levels of awareness. We will continue to carry out extensive promotion of the services on offer, including radio ads, social media campaigns and advertising at key customer touch points, such as pay point receipts, pharmacy bags and bus adverts.

To ensure our services are easy to access and available to all, we engage with around 700 organisations across our region, such as Scope and Kidney Care UK, to promote awareness.

We will continue to work closely with our Customer Champion group, which is formed of customers with varying support needs, building our knowledge to enhance the range of services we provide to ensure we are delivering the most effective tailored support. We will maintain the ISO22458 and Kitemark standard, which will seek and assess continual improvements and innovation in the support we provide to our diverse range of customer needs.

Contacts - Attempted and Actual (SUP15.19 - 15.20)

We will continue to attempt to contact all of our PSR customers on a minimum bi-annual basis using several different contact methods aligned to their personal communication preference. We will maintain the functionality for customers to manage their Priority Services using our online account management portal and app. We will however ensure we make actual contact with a minimum of 35% of our PSR customers on a minimum bi-annual basis.

Customers when they disclose their circumstances or support needs don't want to repeat this information each time they contact. We are making significant investment in our systems to enable a "tell-us-once" approach, creating a single point of data across our platforms, and as a result increasing the visibility of customer support needs and the ability to update these during key interactions.

B1. Income deprivation - Proportion and number of households that are income-deprived (income score of IMD) - to be supplied by Ofwat Lines 15.21 - 15.22

IMD score (proportion of income deprived households) (SUP15.21)

The Indices of Deprivation were produced for the Ministry of Housing, Communities and Local Government. This was summarised in Ofwat's residential retail cost model and is not projected to change.

We engaged Experian to provide an updated analysis of water poverty across the region we serve, based on actual and forecast bill distribution by LSOA compared to equivalised net income after housing costs. Experian have modelled water poverty for the years 2022/23 through to 2029/30. The report is included at ANH51 of the Business Plan submission. The analysis suggests that the proposed bill increase for AMP8, broadly corresponding to scenario 1 in the report, will result in water poverty increasing from its current level of c.8.5% to 9.9% in 2027/28 before reducing marginally. The report also highlights that c.20% of our customer base have bills that are between 3 to 5% of their effective disposable income, which underlines to us the importance of the budgeting and payment support we provide, and the greater flexibility and control that we are giving customers, as set out in Chapter 3 of our Business Plan narrative.

B2. Innovative charges - Number of residential customers on innovative charges to support affordability and average bill reductions Lines 15.23 - 15.26

We are targeting tariff trials from April 2024, and working with the Centre for Competition Policy (CCP) at the University of East Anglia (UEA) to develop a robust methodology aligned to Ofwat's principles to provide guidance on trial design and data analysis.

In collaboration with Anglian Water, CCP published a report in 2018 that examined evidence regarding the application and effectiveness of Increasing Block Tariffs (IBT/RBT). The report questioned the effectiveness of RBTs in the UK context given low discretionary use, low Price Elasticity of Demand, and the relatively low value of water. We have been working with the Centre for Climate Change & Social Transformation (CAST) to better understand how customers use water, understand their use and value that use. We operate in a water scarce region. Innovative tariffs are those aimed at supporting customers struggling to pay or incentivising

customers to reduce discretionary demand for water. Our focus is on water efficiency, helping customers to value water more, use less, and so reduce the need for future bill increases, as well as reducing their charges as households today. We are concerned that the structural reliance of RBTs on free or low cost blocks of water are inconsistent with the messaging to customers we have used for the last 20 years to "love every drop". We are also concerned that without accurate occupancy data per household, free or low cost blocks of water benefit low occupancy households to the detriment of higher occupancy households, irrespective of per capital demand, and without taking into account the equivalised income of households.

The generosity of our customers demonstrated in the recent consultation on support for a maximum contribution of £24 for our social tariff LITE means that we can focus support for customers with affordability issues through the LITE tariff.

The extent of our smart metering roll out gives us an almost unique position to trial seasonal tariffs as a means of encouraging greater water efficiency, but also to test whether an element of progressive charging can be in-built to lower charges for those customers with little or no non-essential use. We intend to share the results of the trial with the industry.

We note that price elasticity of demand suggests price alone will not drive demand reductions, so a comprehensible structure and messaging are crucial. On this basis our new behavioural change team will be a key strength in developing the right strategy to create buy-in and traction with our customers.

We remain open minded regarding RBTs and will look to build on wider industry experience as to their effectiveness in future trials we undertake.

We are planning to start a trial of a seasonal tariff from 1 April 2024/25. The tariff will consist of a higher volumetric charge in the summer months and a lower volumetric charge for the remainder of the year. We plan to test variations in price differentials across seasons and different communication strategies across several customer cohorts.

Number of income-deprived households on innovative charges (SUP15.23)

No income-deprived households will be part of the proposed tariff trial given the decision to exclude customers on a concessionary tariff, at least from initial phases of the trial. We expect to fully roll out a seasonal tariff from 2027/28. The number of income deprived households on the tariff is projected to be consistent with the percentage of customers in income deprivation.

Number of non-income-deprived households on innovative charges (SUP15.24)

The trial is expected to cover approximately 13,500 households with 9,000 charged on a seasonal tariff.

From 2027/28 a seasonal tariff is expected to be rolled out to all measured customers excluding those on the WaterSure tariff which consists of a fixed charge only. The number of customers is consistent with SUP1A.

Average net bill reduction for income-deprived households as a result of innovative charges (SUP15.25)

Initial modelling suggests there will be predominately three types of response to a seasonal tariff:

1. Households with above average/average discretionary use who do not respond to the increased price signal.
2. Households with above average/average discretionary use who do respond to the increased price signal.
3. Households with no/little discretionary use who have little ability to respond to the increased price signal.

The tariff in aggregate and at the average will be revenue neutral so the additional revenue from the group who do not respond to the tariff and therefore pay more will be used to lower the tariff in the non summer months. This will benefit in particular customers with no/little discretionary use who are likely to include income-deprived households.

Provisional modelling which estimates the number of households in each group, price elasticity and the impact on demand of the tariff, forecasts there will be a reduction in the average bill for an income-deprived customer of £9 in 2022/23 prices based on the average discounted rate for social tariffs. This is forecast to 2029/30 based on the annual weighted average charge increase. Whilst modest, this reduction is based on a prudent view of the initial price differential between the two seasonal prices. As we were to increase the differential over time, this average bill reduction for income-deprived customers would also increase.

B3. Targeted demand side support - Water efficiency advice Lines 15.27 - 15.28

Number of income-deprived households provided with water efficiency support measures (SUP15.27)

The number of income-deprived households provided with water efficiency support reflects the overall water efficiency visits undertaken and the proportion of income-deprived households based on the IMD index. The forecast reflects the current trend in visits and the growth in the connected properties.

Our "Drop 20" water efficiency programme optimises existing customer visits, like meter exchanges and leakage investigations, to include a 15-minute engagement around household consumption. Customers are guided through our usage calculator to understand how and where most water is used within the home and then advised on the best ways to use less. Customers will be given free behaviour change devices, tailored to their needs and aiming to save 20 litres per day this could include items such as water efficient shower heads and cistern bags.

Average net bill reduction from water efficiency support measures provided to income-deprived households (SUP15.28)

Average bill reduction reflects the target for each household to save 20 litres per day in line with our "Drop 20" programme.

B3. Targeted demand side support - Provision of meter Lines 15.29-15.30

Number of income-deprived households moved from unmeasured to measured billing (SUP15.29)

The majority of households supplied with a water service by Anglian Water are already charged on a measured basis. This is expected to increase from current level of 86% at 2022/23 to 90% by 2029/30. Ongoing switching from unmeasured to measured billing is therefore proportionately low and of these we estimate the number of income deprived switchers to be in line with the income deprivation proportion.

Average net bill reduction from meter provision to income-deprived households (SUP15.30)

We would expect the average demand of unmeasured switchers to be below the average for unmeasured customers as a whole, as it is these customers that benefit from switching. However, we would equally expect that the average demand of these switchers will be above the average for measured households. We have therefore forecast the level of demand to be the median point between the two averages.

The average net bill reduction is based on the difference between the typical unmeasured bill and the measured bill based on the forecast demand of switchers. This is forecast to change in line with the weighted average charge increase.

B4. Other affordability support measures that reduce bills for customers struggling to pay their bills - Affordability support from financial hardship funds Lines 15.32 - 15.33

Line SUP15.32 Number of customers provided with affordability support from financial hardship funds

The Anglian Water Assistance Fund is a hardship fund to support customers struggling to pay their arrears and are either:

- terminally ill, or
- sectioned under mental health regulations; or
- in receipt of mental health crises treatment covered under the Debt Respite (Breathing Space) Scheme; or
- have a serious debilitating illness which adversely affects their income.

Wastewater forecasts beyond 2023/24 reflect plans to outsource billing of sewerage only customers in the Essex and Suffolk Water company region.

Forecasts assume that current trends for 2023/24 will continue into AMP8.

Line SUP15.33 Average affordability support payment

Values represent directly billed customers only.

Forecasts assume that current trends for 2023/24 will continue into AMP8.

B4. Other affordability support measures that reduce bills for customers struggling to pay their bills - Charges written off during application period for Universal Credit Lines 15.34-15.35

We have no plans to write-off charges during the Universal Credit application process but will suspend collections activities and where eligible will backdate concessionary tariffs to the start of the application period if the customer is awarded Universal Credit.

B4. Other affordability support measures that reduce bills for customers struggling to pay their bills - Debt support through matched payment schemes to clear debt arrears Lines 15.36-15.37

Line SUP15.36: Number of customers supported through matched payment schemes

The Anglian Water 'Back on Track Scheme' matches payments made by eligible customers on a concessionary tariff who are in arrears..

Wastewater forecasts beyond 2023/24 reflect plans to outsource billing of sewerage only customers in the Essex and Suffolk Water company region.

Forecasts for 2023/24 extrapolate current trends.

Forecasts beyond 2023/24 are based on modelling by Experian of customers expected to be in water poverty.

Line SUP15.37: Average amount of matched payments

Values represent directly billed customers only.

Forecasts assume that current trends for 2023/24 will continue into AMP8.

B4. Other affordability support measures that reduce bills for customers struggling to pay their bills - Other measures to support customers struggling to pay water bills to reduce their bills Lines 15.38-15.39

Number of customers supported through other measures (SUP15.38)

Other tariffs supporting customers struggling to pay water bills

In addition to the LITE and WaterSure tariffs we also have the legacy tariff, Aquacare Plus to support customers struggling to pay water bills.

This is a benefits based tariff introduced in the 1990's to assist high usage/low income households switching to measured charges. It consists of a higher fixed charge but lower volumetric charge than the the Standard tariff.

For 2020/21 to 2022/23 the number of households is based on recorded property numbers using the same methodology as for LITE and WaterSure. We are projecting the number of customers on this tariff to reduce as more customers switch to LITE and to settle at a nominal level by 2029/30.

Charges holidays supporting customers struggling to pay water bills

For 2020/21 to 2022/23 the number of households is based on recorded property numbers. We are projecting the number of customers supported up to 2029/30, to be consistent with the recent trend.

Medical Needs Discount

Our shareholders will fund a bill discount for customers with specific medical needs that create a higher water dependency and who do not otherwise currently receive any support for this extra financial burden. We estimate that approximately 8,000 customers will benefit from an average £100 discount to their bill.

Average net bill reduction through other support measures (SUP15.39)

Other tariffs supporting customers struggling to pay water bills

For 2020/21 to 2022/23 the average reduction in bills for the Aquacare Plus tariff is as per reported revenue and consistent with table 2F of the APR.

This level of reduction is not expected to change and projections are therefore based on the average discount per customer in 2022/23 plus/minus the annual weighted average charge increase.

Charges holidays supporting customers struggling to pay water bills

The average bill reduction through charges holidays is projected to be in line with the average household bill.

Medical Needs Discount

The average bill reduction for customer eligible for the medical needs discount is projected to be £100 per annum.

B5. Other measures that assist customers struggling to pay their bills without reducing their bills Lines 15.41 - 15.43

Number of customers assisted with advice on income maximisation and managing debts (SUP15.41)

Values represent directly billed customers only and include Extra Care Assessments performed by agents via telephone, by customers online and those completed by customers at Gov.UK where the customer consents to passport their data.

Wastewater forecasts beyond 2023/24 reflect plans to outsource billing of sewerage customers in the Essex and Suffolk Water company region.

Forecasts for 2023/24 extrapolate current trends.

Forecasts beyond 2023/24 reflect the take-up on on concessionary tariffs.

Number of customers granted payment breaks / deferrals (SUP15.42)

Wastewater forecasts beyond 2023/24 reflect plans to outsource billing of sewerage customers in the Essex and Suffolk Water company region.

Forecasts for 2023/24 extrapolate P3 actuals based current trends.

Forecasts beyond 2023/24 are based on modelling by Experian of customers expected to be in water poverty .

Number of customers struggling to pay their bills assisted through other measures that do not reduce their bills (SUP15.43)

Values represent directly billed customers only and includes Temporary Payment Plans, free/subsidised Leakage Repairs for vulnerable customers and Water Direct Payments from Department of Work and Pensions.

Wastewater forecasts beyond 2023/24 reflect plans to outsource billing of sewerage customers in the Essex and Suffolk Water company region.

Forecasts for 2023/24 extrapolate current trends based on trend seen in 2022/23.

Forecasts beyond 2023/24 are based on forecast trends by Experian of customers expected to be in water poverty (5% of income).

B6. Total benefit of affordability support measures for customers struggling to pay their bills - Financial support provided from all affordability measures Lines 15.44 - 15.47

Average household bill (SUP15.45)

The average household bill reflects the household revenue reported in table RR27 and the number of households as reported in table SUP1A.

B6. Total benefit of affordability support measures for customers struggling to pay their bills - Impact on customers in water poverty Lines 15.48-15.49

Number of households below the water affordability threshold before affordability support measures (SUP15.48)

Experian has been engaged to help us better understand the affordability position of their customers measured by water bills as a proportion of household disposable income at LSOA level.

Estimates were made of average disposable household income across different household segments within the Anglian Water supply area and the location of lower and higher income areas at LSOA level.

The conclusion is that:

- Household income in the Anglian Water supply area is above the national averages accordingly to the latest Experian estimates. However, the most recent local estimates for housing costs have indicated that housing costs as a proportion of household income have risen compared to the previous 2015/16 estimates and this may push more households above the affordability thresholds.
- Households disposable income is likely to increase above the long-term trend in 2023/24 and 2024/25 only in nominal terms as income growth from wages, state benefits (including state pension) will be lower than the headline inflation. The demographic profiles of Anglian Water customers on average are relatively resilient to economic headwinds, however, there are some household segments that are more vulnerable to rising housing costs.
- Experian estimates that 8.5% of directly-billed households in the Anglian Water area are spending more than 5% of their equivalised disposable income after housing costs on water & sewerage charges in 2023/24 and close to 20% of households are spending between 3-5% of their income on water & sewerage charges. Based on the proposed bill profile, the affordability metric is expected to peak at c.9.9% for the 5% measure in 2027/28 before returning to below 9% in 2029/30.

The number of households below the water affordability threshold is therefore the total number of households as per SUP1A at the proportion of customers in water poverty detailed above.

Number of households below the water affordability threshold after affordability support measures (SUP15.49)

Based on an examination of company data relating to customers successfully applying for a concessionary tariff, 27% are lifted out of water poverty as a result of the tariff. This proportion of customers on a concessionary tariff is therefore deducted from the number of households below the water affordability threshold to leave the number of customers below the water affordability threshold after support measures.

Our experience is that a discount of at least 80% is required to lift customers struggling to pay out of water poverty. We previously provided a maximum discount of 80% on our LITE tariff, and around two thirds of applicants qualified for the maximum discount. We reduced the maximum discount for applicants to 50% following consultation in 2020 with customers regarding further contribution to fund the social tariff.

B7. Total funding of affordability support measures for customers struggling to pay their bills - Funding provided by company to reduce bills for customers struggling to pay Lines 15.50 - 15.52

Total revenue forgone by company to fund other measures to support affordability for customers struggling to pay (SUP15.51)

Our shareholders will fund a bill discount for customers with specific medical needs that create a higher water dependency and who do not otherwise currently receive any support for this extra financial burden. We estimate that approximately 8,000 customers will benefit from an average £100 discount to their bill. In addition, our owners will fund the full administration costs for providing this support.

B7. Total funding of affordability support measures for customers struggling to pay their bills - Funding through revenue from residential customers to reduce bills for customers struggling to pay Lines 15.53-15.55

Total revenue from customers to fund other measures to support affordability for customers struggling to pay (SUP15.54)

The reported values are the revenue from customers to fund the Watersure tariff, financial hardship funds, matched payment schemes and other affordability measures. It excludes revenue forgone by the company (£4.5m) to fund measures to support affordability for customers struggling to pay.

B7. Total funding of affordability support measures for customers struggling to pay their bills - Funding provided by charitable trusts and other third parties to reduce bills for customers struggling to pay Lines 15.56- 15.58

Total contributions from charitable trusts to fund all measures to support affordability for customers struggling to pay (SUP15.56)

We don't receive contributions from charitable trusts to fund measures to support affordability for customers struggling to pay.

Total contributions from other third parties to fund all measures to support affordability for customers struggling to pay (SUP15.57)

We distributed £2m of Household Support Funds on behalf of 6 local authorities during 2022-23 and are actively working with local authorities to distribute further funds during 2023-24. We have estimated the allocation between service types based on historic and estimated proportions of household revenues.

Impact of affordability support measures on bad debt Lines 15.59 - 15.61

Line SUP15.60 is the result of the prior calculations where we determine the reduction in customer bills as a result of affordability support measures. These measures are targeting the most financially vulnerable in the communities we serve, so we assume the reduction in bills as a result of these measures will be a direct read across to a reduction in the bad debt charge.

The doubtful debt after the application of affordability measures (SUP15.61) is the same as reported in RET1a;

“The notable difference between these last two years of AMP7 is the result of the forward economic view of unemployment rates. This is expected to be significantly better in 2023/24 than it was in 2022/23 meaning a provision release. This forecast then deteriorates between 2023/24 and 2024/25 resulting in an additional provision being booked in the last year of AMP7.”

The resulting value of SUP15.59 is determined by adding the value of SUP15.60 to the value of SUP15.61



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