

December 2019

# PR19 final determinations

**Hafren Dyfrdwy – Allowed revenue appendix**

## **PR19 final determinations: Hafren Dyfrdwy – Allowed revenue appendix**

This appendix provides supporting information on the calculation of allowed revenue as set out in section 4 of the final determination. It sets out for each year and for each price control:

- The calculation of allowed revenue;
- Pay as you go (PAYG) rates and PAYG allowed income;
- Allowed return on capital;
- Regulatory capital value (RCV) run-off rates and RCV run-off allowed income; and
- RCV.

All values are stated in 2017-18 prices unless otherwise stated.

## 1. Calculation of allowed revenue

The following tables set out the build up of allowed revenue for each wholesale price control for each year of the price review period as set out in tables 4.1 (wholesale price controls) and 4.2 (retail price controls) of the final determination.

**Table 1.1: Water Resources (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Pay as you go	4.2	3.9	3.2	3.1	3.3	17.8
RCV run-off	3.6	3.5	3.4	3.3	3.2	17.0
Allowed return on capital	1.3	1.3	1.3	1.2	1.2	6.4
Revenue adjustments for PR14 reconciliations	0.0	0.0	0.0	0.0	0.0	0.0
Fast track reward	0.0	0.0	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Grants and contributions after adjustment for income offset (price control)	0.0	0.0	0.0	0.0	0.0	0.0
Deduct non-price control income	-5.9	-5.8	-5.7	-5.6	-5.5	-28.5
Innovation competition	0.0	0.0	0.0	0.0	0.0	0.0
Revenue re-profiling	-0.1	0.0	0.1	0.1	0.0	0.0
<b>Final allowed revenues</b>	<b>3.2</b>	<b>3.0</b>	<b>2.2</b>	<b>2.1</b>	<b>2.2</b>	<b>12.7</b>

**Table 1.2: Water network plus (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Pay as you go	16.3	15.8	15.8	15.6	15.6	79.1
RCV run-off	1.1	1.4	1.7	2.0	2.3	8.4
Allowed return on capital	0.4	0.6	0.7	0.8	1.0	3.5
Revenue adjustments for PR14 reconciliations	0.2	0.2	0.2	0.2	0.2	0.9
Fast track reward	0.0	0.0	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Grants and contributions after adjustment for income offset (price control)	0.4	0.5	0.5	0.5	0.5	2.5
Deduct non-price control income	-2.0	-2.0	-2.0	-2.0	-2.0	-10.1
Innovation competition	0.1	0.1	0.1	0.1	0.1	0.4
Revenue re-profiling	-0.5	0.2	0.3	0.3	-0.2	0.0
<b>Final allowed revenues</b>	<b>15.9</b>	<b>16.6</b>	<b>17.2</b>	<b>17.6</b>	<b>17.4</b>	<b>84.6</b>

**Table 1.3: Wastewater network plus (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Pay as you go	2.2	2.2	2.1	2.0	2.1	10.6
RCV run-off	0.1	0.2	0.2	0.4	0.5	1.3
Allowed return on capital	0.0	0.1	0.2	0.2	0.3	0.8
Revenue adjustments for PR14 reconciliations	0.2	0.2	0.2	0.2	0.2	0.9
Fast track reward	0.0	0.0	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Grants and contributions after adjustment for income offset (price control)	0.1	0.1	0.1	0.1	0.1	0.6
Deduct non-price control income	-0.1	-0.1	-0.1	-0.2	-0.1	-0.5
Innovation competition	0.0	0.0	0.0	0.0	0.0	0.1
Revenue re-profiling	0.0	-0.1	0.0	0.1	-0.1	0.0
<b>Final allowed revenues</b>	<b>2.5</b>	<b>2.6</b>	<b>2.8</b>	<b>2.9</b>	<b>3.0</b>	<b>13.7</b>

**Table 1.4: Bioresources (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Pay as you go	0.7	0.8	0.8	0.8	0.8	3.8
RCV run-off	0.0	0.0	0.0	0.0	0.0	0.0
Allowed return on capital	0.0	0.0	0.0	0.0	0.0	0.0
Revenue adjustments for PR14 reconciliations	0.0	0.0	0.0	0.0	0.0	0.0
Fast track reward	0.0	0.0	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Grants and contributions after adjustment for income offset (price control)	0.0	0.0	0.0	0.0	0.0	0.0
Deduct non-price control income	0.0	0.0	0.0	0.0	0.0	0.0
Innovation competition	0.0	0.0	0.0	0.0	0.0	0.0
Revenue re-profiling	-0.1	0.0	0.0	0.0	0.0	0.0
<b>Final allowed revenues</b>	<b>0.7</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>3.8</b>

**Table 1.5: Residential retail control (nominal price base)**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Total wholesale revenue - nominal (£m)	23.1	24.3	24.7	25.7	26.2	123.9
Proportion of wholesale revenue allocated to residential (%)	65.4%	65.3%	65.1%	65.0%	64.9%	65.1%
Residential retail costs (£m)	2.8	2.9	2.9	2.9	3.0	14.4
<b>Total retail costs (£m)</b>	<b>17.9</b>	<b>18.7</b>	<b>19.0</b>	<b>19.6</b>	<b>19.9</b>	<b>95.1</b>
Residential retail net margin (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Residential retail net margin (£m)	0.2	0.2	0.2	0.2	0.2	1.0
Residential retail adjustments (£m)	-0.2	-0.2	-0.2	-0.2	-0.2	-1.0
<b>Residential retail revenue (£m)</b>	<b>2.8</b>	<b>2.9</b>	<b>2.9</b>	<b>2.9</b>	<b>2.9</b>	<b>14.4</b>

## 2. Pay as you go (PAYG) rates

Companies recover expenditure in line with our totex allowances either in period from current customers using pay as you go (PAYG) or add it to the regulatory capital value (RCV) and recover from future customers using the RCV run-off rates.

The PAYG revenue for each year of the price control is based on the totex allowance for each year multiplied by the relevant PAYG rate plus an allowance for pension deficit recovery costs.

Table 4.5 of the final determination sets out the five year PAYG allowances and the unweighted average PAYG rates for each of the wholesale controls. The following tables set out the totex, PAYG rates and resultant PAYG revenue allowance for each wholesale control for each year of the price review.

**Table 2.1: Water resources**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Totex allowance (£m)	6.2	6.0	4.4	4.2	4.4	25.2
Final determination PAYG rate	68.3%	65.8%	72.4%	73.7%	75.2%	70.5%
Pay as you go totex (£m)	4.2	3.9	3.2	3.1	3.3	17.8
Pension deficit recovery costs (£m)	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total pay as you go (£m)</b>	<b>4.2</b>	<b>3.9</b>	<b>3.2</b>	<b>3.1</b>	<b>3.3</b>	<b>17.8</b>



**Table 2.2: Water network plus**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Totex allowance (£m)	22.0	21.7	22.2	21.8	21.9	109.6
Final determination PAYG rate	73.1%	71.5%	70.1%	70.7%	71.2%	71.3%
Pay as you go totex (£m)	16.1	15.5	15.5	15.4	15.6	78.1
Pension deficit recovery costs (£m)	0.3	0.3	0.3	0.3	0.0	1.0
<b>Total pay as you go (£m)</b>	<b>16.3</b>	<b>15.8</b>	<b>15.8</b>	<b>15.6</b>	<b>15.6</b>	<b>79.1</b>

**Table 2.3: Wastewater network plus**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Totex allowance (£m)	4.0	4.3	4.5	5.5	4.1	22.4
Final determination PAYG rate	54.7%	50.0%	46.9%	36.0%	52.7%	47.2%
Pay as you go totex (£m)	2.2	2.2	2.1	2.0	2.1	10.6
Pension deficit recovery costs (£m)	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total pay as you go (£m)</b>	<b>2.2</b>	<b>2.2</b>	<b>2.1</b>	<b>2.0</b>	<b>2.1</b>	<b>10.6</b>

**Table 2.4: Bioresources**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Totex allowance (£m)	0.7	0.8	0.8	0.8	0.8	3.8
Final determination PAYG rate	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Pay as you go totex (£m)	0.7	0.8	0.8	0.8	0.8	3.8
Pension deficit recovery costs (£m)	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total pay as you go (£m)</b>	<b>0.7</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>3.8</b>

### 3. Regulatory capital value (RCV)

Tables 4.8 and 4.9 of the final determination set out the opening RCV balance at 1 April 2020 and closing RCV balance at 31 March 2025. During that period the RCV balance is adjusted by adding totex not recovered in period through PAYG and subtracting the amortisation of RCV through RCV run-off.

The PR19 methodology confirmed we will transition to CPIH as the primary inflation rate from 2020. At 1 April 2020, we index 50% of RCV to RPI; the rest, including new RCV, is indexed to CPIH. Through the price control period, we maintain separate balances for RCV inflated by RPI and RCV inflated by CPIH.

The PR19 methodology confirmed our protection of the value of the RCV as at 31 March 2020 across each of the wholesale price controls. Totex that is added to the RCV from 1 April 2020 is stated as ‘post 2020 investment’.

The following tables set out the movement on each component of RCV for each wholesale control for each year of the price control. We also set out below the average RCV balance for each component of the RCV as this is used for the calculation of the Allowed return on capital.

In tables 3.1 to 3.12 in this appendix, the opening RCV values have been inflated (by either RPI or CPIH) and then deflated to 2017-18 prices using CPIH. This is consistent with tables 4.1 to 4.3 in this appendix, and allows the correct calculation of return on capital. However, it results in different opening RCV values for RPI inflated RCV to table 4.8 of the final determination.

#### 3.1 Water resources

**Table 3.1: RPI inflated RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RCV	28.20	26.67	25.25	23.92	22.65
Less : RCV run-off	1.78	1.68	1.59	1.51	1.43
Closing RCV	26.42	24.99	23.66	22.41	21.22

**Table 3.2: CPIH inflated RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RCV	28.08	26.31	24.65	23.10	21.64
Less : RCV run-off	1.77	1.66	1.55	1.46	1.36
Closing RCV	26.31	24.65	23.10	21.64	20.28

**Table 3.3: Post 2020 investment RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RCV	-	1.91	3.76	4.69	5.47
Add : Post 2020 investment RCV	1.97	2.04	1.20	1.11	1.09
Less : RCV run-off	0.06	0.18	0.28	0.33	0.38
Closing RCV	1.91	3.76	4.69	5.47	6.18

**Table 3.4: Total RCV and average for each element of RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Total Opening RCV	56.27	54.88	53.67	51.70	49.77
Total Closing RCV	54.64	53.40	51.45	49.52	47.68
Average RPI inflated RCV	27.31	25.83	24.46	23.16	21.94
Average CPIH inflated RCV	27.19	25.48	23.87	22.37	20.96
Average post 2020 investment RCV	0.95	2.84	4.23	5.08	5.83

## 3.2 Water network plus

**Table 3.5: RPI inflated RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RCV	6.93	6.56	6.21	5.88	5.57
Less: RCV run off	0.44	0.41	0.39	0.37	0.35
Closing RCV	6.50	6.15	5.82	5.51	5.22

**Table 3.6: CPIH inflated RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RCV	6.90	6.47	6.06	5.68	5.32
Less: RCV run-off	0.43	0.41	0.38	0.36	0.34
Closing RCV	6.47	6.06	5.68	5.32	4.99

**Table 3.7: Post 2020 investment RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RCV	-	5.72	11.35	17.05	22.17
Add : Post 2020 investment RCV	5.91	6.19	6.62	6.39	6.33
Less : RCV run-off	0.19	0.56	0.92	1.28	1.60
Closing RCV	5.72	11.35	17.05	22.17	26.90

**Table 3.8: Total RCV and average for each element of RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Total Opening RCV	13.84	18.75	23.63	28.61	33.06
Total Closing RCV	18.69	23.56	28.55	33.00	37.11
Average RCV RPI	6.72	6.35	6.01	5.70	5.39
Average RCV CPIH	6.69	6.27	5.87	5.50	5.15
Average RCV post 2020 investment	2.86	8.54	14.20	19.61	24.53

### 3.3 Wastewater network plus

**Table 3.9: RPI inflated RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RCV	0.34	0.32	0.31	0.30	0.29
Less: RCV run-off	0.01	0.01	0.01	0.01	0.01
Closing RCV	0.32	0.31	0.30	0.29	0.28

**Table 3.10: CPIH inflated RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RCV	0.33	0.32	0.31	0.29	0.28
Less : RCV run-off	0.01	0.01	0.01	0.01	0.01
Closing RCV	0.32	0.31	0.29	0.28	0.27

**Table 3.11: Post 2020 investment RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RCV	-	1.77	3.81	5.98	9.18
Add: Post 2020 investment RCV	1.81	2.16	2.38	3.54	1.92
Less: RCV run-off	0.04	0.12	0.21	0.33	0.44
Closing RCV	1.77	3.81	5.98	9.18	10.67

**Table 3.12: Total RCV and average for each element of RCV (£ million)**

	2020-21	2021-22	2022-23	2023-24	2024-25
Total Opening RCV	0.67	2.42	4.43	6.57	9.75
Total Closing RCV	2.41	4.42	6.57	9.75	11.21
Average RCV RPI	0.33	0.32	0.31	0.30	0.29
Average RCV CPIH	0.33	0.31	0.30	0.29	0.27
Average RCV post 2020 investment	0.89	2.79	4.89	7.58	9.92

Note: there is no RCV for bioresources.

## 4. Allowed return on capital

Companies are allowed a return on the RCV in the calculation of allowed revenue.

The allowed return on capital is calculated by multiplying the annual average RCV for each component of RCV (RPI inflated, CPIH inflated and post 2020 investment) by the allowed return for each control. Our final determination is based on an allowed return for the wholesale price controls of 2.92% – CPIH deflated (1.92% – RPI deflated). The CPIH allowed return is applied to the CPIH inflated RCV and the post 2020 investment RCV. The RPI deflated allowed return is applied to the RPI inflated RCV.

Table 4.10 of the final determination sets out the five year allowed return on capital for each component of RCV for each wholesale control. The following tables set out the allowed return on capital for each year of the price review.

**Table 4.1: Water resources allowed return on capital**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
RPI inflated RCV (£m)	0.5	0.5	0.5	0.4	0.4	2.4
CPIH inflated RCV (£m)	0.8	0.7	0.7	0.7	0.6	3.5
Post 2020 investment (£m)	0.0	0.1	0.1	0.1	0.2	0.6
Other adjustments (£m)	-	-	-	-	-	-
<b>Total allowed return on capital (£m)</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.2</b>	<b>1.2</b>	<b>6.4</b>

**Table 4.2: Water network plus return on capital and weighted average cost of capital**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
RPI inflated RCV (£m)	0.1	0.1	0.1	0.1	0.1	0.6
CPIH inflated RCV (£m)	0.2	0.2	0.2	0.2	0.2	0.9
Post 2020 investment (£m)	0.1	0.2	0.4	0.6	0.7	2.0
Other adjustments (£m)	-	-	-	-	-	-
<b>Total return on capital (£m)</b>	<b>0.4</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>1.0</b>	<b>3.5</b>

**Table 4.3: Wastewater network plus return on capital and weighted average cost of capital**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
RPI inflated RCV (£m)	0.0	0.0	0.0	0.0	0.0	0.0
CPIH inflated RCV (£m)	0.0	0.0	0.0	0.0	0.0	0.0
Post 2020 investment (£m)	0.0	0.1	0.1	0.2	0.3	0.8
Other adjustments (£m)	-	-	-	-	-	-
<b>Total return on capital (£m)</b>	<b>0.0</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.8</b>



## 5. RCV run-off rates

RCV run-off is the proportion of the RCV which is recovered each year during the price review period. Companies are able to propose different run-off rates for RPI inflated and CPIH inflated RCV and also, for the water resources and bioresources controls, for post 1 April 2020 investment.

Table 4.11 of the final determination sets out five year total of the RCV run-off revenue for each component of RCV for each wholesale control. The following tables set out the RCV run off rates for each wholesale control for each year of the price review period and the resultant total RCV revenue for each year.

**Table 5.1: Water resources**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Run-off on RPI inflated RCV (%)	6.30%	6.30%	6.30%	6.30%	6.30%	
Run-off on CPIH inflated RCV (%)	6.30%	6.30%	6.30%	6.30%	6.30%	
Run-off on post 2020 investment RCV (%)	6.30%	6.30%	6.30%	6.30%	6.30%	
<b>Total RCV run-off (£m)</b>	<b>3.61</b>	<b>3.52</b>	<b>3.42</b>	<b>3.29</b>	<b>3.17</b>	<b>17.01</b>

**Table 5.2: Water network plus**

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Run-off on RPI inflated RCV (%)	6.30%	6.30%	6.30%	6.30%	6.30%	
Run-off on CPIH inflated RCV (%)	6.30%	6.30%	6.30%	6.30%	6.30%	
Run-off on post 2020 investment RCV (%)	6.30%	6.30%	6.30%	6.30%	6.30%	
<b>Total RCV run-off (£m)</b>	<b>1.06</b>	<b>1.38</b>	<b>1.70</b>	<b>2.00</b>	<b>2.28</b>	<b>8.42</b>

**Table 5.3: Wastewater network plus**

	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>	<b>Total</b>
Run-off on RPI inflated RCV (%)	4.30%	4.30%	4.30%	4.30%	4.30%	
Run-off on CPIH inflated RCV (%)	4.30%	4.30%	4.30%	4.30%	4.30%	
Run-off on post 2020 investment RCV (%)	4.30%	4.30%	4.30%	4.30%	4.30%	
<b>Total RCV run-off (£m)</b>	<b>0.07</b>	<b>0.15</b>	<b>0.24</b>	<b>0.36</b>	<b>0.46</b>	<b>1.28</b>

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Ofwat  
Centre City Tower  
7 Hill Street  
Birmingham B5 4UA

Phone: 0121 644 7500  
Fax: 0121 644 7533  
Website: [www.ofwat.gov.uk](http://www.ofwat.gov.uk)  
Email: [mailbox@ofwat.gov.uk](mailto:mailbox@ofwat.gov.uk)

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