

Water & Sewerage Services Price Control 2021-2027

Draft Determination – Annex A Financing Investment September 2020





Draft Determination – Annex A

Financing Investment

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1. Allowed Revenue

1.1 Our revenue and price limits for NI Water cover the six-year period from 1st April 2021 to 31st March 2027. We have calculated an allowed revenue requirement of £2807.5m.

	NI Water corrected business plan	Utility Regulator draft determination	Saving over PC15
Overall revenue	£2,817.5m	£2807.5m	£9.8m
Table 1.1 – A	Ilowed Revenue		

1.2 The remainder of this chapter looks at how the overall revenue has been calculated





2. Regulatory Capital Value (RCV)

Roll forward of the RCV from PC21

- 2.1 The RCV has been developed for regulatory purposes and represents the capital base established for the purposes of setting price limits.
- 2.2 The first stage in establishing an RCV for PC21 is to update the RCV published as part of the PC15 final determination. Table 2.1 shows our calculation of the roll forward using the actual Retail Price Index (RPI):

Nominal Prices	2015-16	16-17	17-18	18-19	19-20	20-21
	£m	£m	£m	£m	£m	£m
Closing RCV (previous year)	2,045.5	2,133.2	2,244.9	2,396.1	2,537.9	2,681.8
Indexation	22.0	45.7	84.0	73.2	74.8	75.8
Opening RCV	2,067.5	2,179.0	2,328.9	2,469.3	2,612.7	2,757.6
Capital expenditure	152.5	154.3	158.5	162.2	165.2	170.4
Grants and contributions	-6.1	-6.3	-6.5	-6.5	-6.7	-6.8
Depreciation charge (MNI)	-58.7	-59.6	-61.5	-63.0	-64.4	-65.9
Adjustment to MNI for depreciation of capital grants	3.9	3.7	3.7	3.5	3.4	3.2
Infrastructure renewals charges	-24.6	-25.0	-25.7	-26.4	-27.0	-27.6
Disposal of assets)	-1.2	-1.2	-1.3	-1.3	-1.4	-1.4
Closing RCV	2,133.2	2,244.9	2,396.1	2,537.9	2,681.8	2,829.4

Table 2.1 - Roll forward of the RCV from PC15

- 2.3 The opening RCV at £2,045.5m is consistent with the closing RCV published in the 2014-15 Regulatory Accounts and the closing RCV is consistent with NI Water business plan.
- 2.4 The second stage in establishing an RCV for PC21 is to apply a number of adjustments to the roll forward of PC21.





Logging Up and down

- 2.5 This deals with changes to the outputs associated with the investment programme since prices were last set at PC15.
- 2.6 Capital expenditure which is logged up is added to the opening RCV. These amounts are scrutinised and challenged by us to ensure the addition to the RCV reflects what would be expected from an efficient company.
- 2.7 The RCV is reduced by the amount of any logging down. Customers should not continue to finance services which they have not received.
- 2.8 The net logging down of capital expenditure is £93.3m in nominal terms.

PC15 Asset Disposals

- 2.9 The RCV is also adjusted for any asset disposals. When we set prices we do not know the actual disposals and this gets corrected at the following price review.
- 2.10 Assets disposals have been lower than forecast during PC15 and a positive adjustment of £4.3m in nominal terms is required.

Depreciation of Capital Grants

- 2.11 Since PC10 we have applied an adjustment to the RCV for the depreciation of capital grants. However this was not matched with a corresponding adjustment through revenues and therefore a one off adjustment to correct for this is required.
- 2.12 We have calculated a negative adjustments in nominal terms of £9.4m, £8.4m and £21.3m relating to PC10, PC13 and PC15 respectively.

Indexation and Return on Capital

- 2.13 The RCV is indexed by inflation (RPI) from one year to the next and the company also receive return based on the RCV value.
- 2.14 We have calculated a further negative adjustment of £32.8m is required to the opening RCV for PC21.

Opening RCV for PC21 Summary

2.15 Overall we have arrived at a slightly lower opening RCV for PC21 of £2,668.5m as shown in Table 2.2 compared to the NI Water figure of £2697.7m.



	£m
Roll forward of the RCV from PC15	2,829.40
Logging up / down	-93.3
Asset disposals	4.3
Depreciation of Capital Grants	-39.1
Indexation and Return	-32.8
Opening RCV for PC21	2,668.5
Note: Figures may not add due to rounding.	

Table 2.2 - Opening RCV for PC21

2.16 The third stage is establishing the RCV for PC21 is to establish the inputs for PC21.

The investment programme

2.17 The investment programme that NI Water will have to deliver during this regulatory control period is shown in Table 2.3.

Investment category	2021- 22	2022- 23	2023- 24	2024- 25	2025- 26	2026- 27	PC21
Maintenance Non Infrastructure	77.2	83.8	87.4	103.5	106.9	92.4	551.2
Enhancement Non Infrastructure	43.5	47.0	94.9	143.6	147.5	125.1	601.6
Maintenance Infrastructure	35.9	44.2	45.8	43.1	42.3	41.3	252.6
Enhancement Infrastructure	62.3	90.4	85.9	101.7	123.7	120.6	584.7
Capital Grants and Contributions	0.4	0.1	0.0	0.0	0.0	0.0	0.6
Gross Capex	219.3	265.6	313.9	392.0	420.4	379.4	1990.6
Capital Grants and Contributions	-0.4	-0.1	0.0	0.0	0.0	0.0	-0.6
Revenue Contributions - Infrastructure Charge	-5.2	-5.4	-5.4	-5.6	-5.6	-5.8	-33.0
Revenue Contributions - Other	-7.8	-8.2	-8.4	-8.7	-8.9	-9.2	-51.2
Net Capex	205.8	251.9	300.1	377.7	405.8	364.5	1905.8
Note: Figures may not add due to round	ling.						

Table 2.3 - Required investment programme (nominal prices) (£m)



Depreciation and infrastructure renewals charge

- 2.18 As well as being constituent parts of the buildings blocks approach to establishing allowed revenue, depreciation on non infrastructure assets and infrastructure renewals charges also form part of the RCV calculation.
- 2.19 Infrastructure assets are generally underground assets with long useful lives. These lives, however, tend to be difficult to assess accurately. This makes it difficult to use conventional accounting methods to calculate depreciation for infrastructure assets, as these methods rely on the concept of establishing an average asset life for each component of the asset base. Instead, we treat the whole infrastructure network as a single system. The complete asset will never become obsolete or require replacement at any one time. It is replaced in parts as different elements come to the end of their useful lives. The Infrastructure Renewals Charge (IRC) is intended to allow for this gradual replacement of the infrastructure asset over time.
- 2.20 In any one year the actual level of investment expended on the infrastructure assets is classed as the Infrastructure Renewals Expenditure (IRE). As in PC15 we intend to set IRC equal to IRE.
- 2.21 Since PC10 we have funded depreciation on non infrastructure assets on a cash basis using Mantenance non infrastructure as the driver. We refer to this as broad equivalence.
- 2.22 The current funding model funds asset maintenance expenditure without testing the medium term broad equivalence with depreciation. Existing consumers may be paying too little, transferring costs to future consumers.
- 2.23 The revenue requirement is expected to increase in the future as:
- Additional enhancement investment is made.
- Asset maintenance expenditure increases as the asset base ages.
- Return on capital / debt at historically low levels may increase.
- The combination of declining return on capital and opex efficiency which has limited tariff increases in the past may be limited in the future.
- 2.24 We have therefore assumed additional depreciation allowances during the PC21 period to offset any negative impact on prices in overall weighted average terms.
- 2.25 The figures assumed for both depreciation and infrastructure renewals charges are summarised in Table 2.4.



PC21

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	Depreciation category	2021- 22	2022- 23	2023- 24	2024- 25	2025- 26	2026- 27
	Depreciation	119.3	127.2	132.0	149.5	154.3	141.2
	Infrastructure renewals charge (IRC)	35.9	44.2	45.8	43.1	42.3	41.3
	Total depreciation and	155 1	171 /	177.8	102.6	196.6	182.5

Table 2.4 - Depreciation and IRC (nominal prices) (£m)

155.1

2.26 In arriving at the decision to adjust depreciation we also commit to a review of broad equivalence prior to PC27 so that we create a sustainable mechanism for the longer term.

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177.8

192.6

196.6

182.5

Assets Disposals

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IRC

2.27 Our assumption is based on the level of asset sales made by NI Water in its business plan submission as presented in Table 2.5.

Depreciation category	2021- 22	2022- 23	2023- 24	2024- 25	2025- 26	2026- 27	PC21
Asset disposals	0.7	0.7	0.7	0.7	0.8	0.8	4.4

Table 2.5 - Asset disposals (nominal prices) (£m)

2.28 This assumption is not material to overall RCV and is reviewed for the opening RCV at the next price control.



RCV for PC21

2.29 Table 2.6 summarises the notional RCV in each year of this PC21 period.

Nominal prices	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Closing RCV (previous year)	2,668.5	2,798.6	2,962.3	3,172.8	3,452.3	3,764.3
Indexation	80.1	84.0	88.9	95.2	103.6	112.9
Opening RCV	2,748.6	2,882.5	3,051.2	3,267.9	3,555.9	3,877.3
Capital expenditure	219.3	265.6	313.9	392.0	420.4	379.4
Grants and contributions	-13.5	-13.7	-13.8	-14.3	-14.5	-15.0
Depreciation	-119.3	-127.2	-132.0	-149.5	-154.3	-141.2
Infrastructure renewals charge	-35.9	-44.2	-45.8	-43.1	-42.3	-41.3
Disposal of Assets	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8
Closing RCV	2,798.6	2,962.3	3,172.8	3,452.3	3,764.3	4,058.5
Note: Figures may not add up due	to rounding.					

 Table 2.6 - Calculation of notional RCV (nominal prices) (£m)



3. The Allowed Rate of Return

- 3.1 In setting price limits we also need to consider the appropriate rate of return that NI Water should earn on its RCV.
- 3.2 We asked our advisers First Economics to recommend an appropriate rate of return for PC21 and have accepted and used it within this draft determination. First Economics report is included as Annex O.
- 3.3 In a shift from previous determinations we have provided for year specific costs of debt and therefore overall cost of capital as there was some confusion in the NI Water business plan about the point in time of its headline rate which was found to be the rate at 31 March 2027 and not the average for the period.

Components of the allowed rate of return	2021- 22	2022- 23	2023- 24	2024- 25	2025- 26	2026- 27
Gearing	50%	50%	50%	50%	50%	50%
Post-tax cost of equity	2.71%	2.71%	2.71%	2.71%	2.71%	2.71%
Cost of debt	1.08%	0.91%	0.76%	0.61%	0.48%	0.39%
Vanilla WACC	1.89%	1.81%	1.74%	1.66%	1.59%	1.55%

3.4 Table 3.1 summarises the determined rate of return.

Table 3.1 - Proposals on the weighted average cost of capital (WACC)

- 3.5 The report was prepared at the end of March 2020, when the draft determination was due to be published on 1 July and also pre COVID-19 lockdown. The analysis and assumptions would have been considered for the Final Determination in any case so we have used it unchanged at this stage for the draft determination and will revisit it along with consultation responses.
- 3.6 The proposed return of 1.89% declining to 1.55% compares to a rate of return of 3.53% used by the Utility Regulator in PC15. The circa 165-200 basis points reduction is attributable to both:
- a reduction in NI Water's actual cost of debt, driven by falling interest rates; and
- a reduction in NI Water's estimated cost of equity, attributable to the selection of a lower risk-free rate, a lower Rm and a lower beta
- 3.7 Our proposed return is below the return of 2.43% that NI Water sought in its business plan. Our calculation of NI Water's cost of debt aligns almost exactly to NI Water's own calculations, except that we have provided for year-specific





costs of debt rather than use the 2026/27 cost of debt to fix the return that NI Water receives throughout the PC21 period. Our estimate of the cost of equity is significantly lower than NI Water's calculation and is attributable to a lower risk-free rate, a lower Rm and a lower beta.



4. Operating Costs

- 4.1 Operating costs are considered in detail within Chapter 6 of this draft determination
- 4.2 The determined operating costs used in setting revenues are set out in Table 4.1.

	2021- 22	2022- 23	2023- 24	2024- 25	2025- 26	2026- 27	PC21
Total allowed for operating costs	180.3	183.2	184.3	186.9	189.0	194.6	1118.3
Note: excludes BIP and VER							

 Table 4.1 - Total allowed for operating costs (nominal prices) (£m)





5. Allowed Costs of Public Private Partnerships

- 5.1 The detailed assessment of PPP has been considered along with operating costs and can be found in Chapter....
- 5.2 In addition for PC21 we needed to consider that NI Water acquired the Alpha PPP contract in November 2017.
- 5.3 At the time of the purchase, NI Water had anticipated approximately £58m of cash benefits, largely receivable near the end of the contract via dividend contributions. They have proposed that to ensure that today's customer is not disadvantaged in any way, to distribute this early and evenly over the remainder of the contract.
- 5.4 In order to achieve this they suggested the investment be included within a separate ring fenced RCV earning an annual return and being depreciated over the remaining life of the contract.
- 5.5 The proposal mean that customers will receive a net saving of £13m during PC21 i.e. initial anticipated savings offset by financing costs of the investment.
- 5.6 Table 5.1 shows the allowed for PPP costs for PC21 including the Alpha adjustments.

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	PC21
PPP pre Alpha adjustments	53.3	55.2	56.1	55.2	56.0	59.4	335.3
Alpha allowed return	0.5	0.5	0.4	0.3	0.3	0.2	2.3
Alpha depreciation	3.0	3.1	3.2	3.3	3.4	3.5	19.5
Alpha initial savings	-5.1	-5.3	-5.4	-5.6	-5.8	-6.0	-33.2
Total	51.8	53.4	54.3	53.2	53.9	57.2	323.8

Table 5.1 - Allowed for PPP costs (nominal prices) (£m)





6. Taxation

- 6.1 NI Water has identified £19m of tax becoming payable during the PC21 period based on business plan assumptions.
- 6.2 This is the first time a requirement for tax funding has been required within a business plan submission and we note the amount is low and will be sensitive to the various building blocks assumptions when making a determination. For example reductions in capital expenditure will have an impact on capital allowances available for tax purposes and increase tax payable. A reduction in the cost of capital would reduce revenue and reduce tax.
- 6.3 This draft determination forecasts that £26.1m will become payable during PC21.

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	PC21
Cash tax	2.88	4.6	5.8	5.0	4.2	3.5	26.1

Table 6.1 – Cash Tax

- 6.4 In arriving at this forecast we have assumed a corporation tax rate of 19% and also updated capital allowance pools in line with the latest legislation.
- 6.5 We have used NI water proposals to allocate expenditure to capital allowance pools in line with the Chandler KBS report but would note that determined and actual expenditure may not follow the same profile. The financial model has also been rewritten since Deloitte completed its review of the tax computation for NI Water. However, the new model performs the same calculations in a new format and it was possible to reconcile the business plan tax charge using business plan inputs.
- 6.6 Ultimately tax payable will be an outworking of actual expenditure and allocation to capital allowance pools will also mean variations compared to forecast will arise. We will continue to monitor the taxation position of NI Water throughout PC21 and if the need arises make any necessary adjustments at either the mid-term review or at the next price control.



7. PC15 Over recovery

- 7.1 Actual demand in the first five years of the PC15 period surpassed the customer projections made at the time of the previous determination. As a result revenues generated exceeded inflation adjusted forecasts by £63.5m.
- 7.2 NI Water have proposed to return this to customers in PC21 less a small allowance for additional costs resulting from higher demand. This means that £57.9m (2018/19 prices), £68.1m (nominal) prices will pass back to customers during PC21.
- 7.3 We agree with this approach and also that the final year of PC15 once confirmed can be dealt with in the future price controls in a similar manner unless it is considered earlier at the PC21 mid-term review.
- 7.4 If an under recovery situation develops the above mechanism can also operate to increase customer charges.



8. Calculation of Allowed Revenue

8.1 Table 8.1 summarises the building blocks discussed above and calculates the allowed revenue to be used in setting price limits for PC21.

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	
Operating costs	180.3	183.2	184.3	186.9	189.0	194.6	1118.3
PPP	51.8	53.4	54.3	53.2	53.9	57.2	323.8
Depreciation	119.3	127.2	132.0	149.5	154.3	141.2	823.4
Infrastructure renewals charge	35.9	44.2	45.8	43.1	42.3	41.3	252.6
Return on the RCV	51.2	51.7	52.6	54.5	56.9	60.2	327.1
Тах	2.88	4.6	5.8	5.0	4.2	3.5	26.1
Revenue Requirement	441.2	464.4	474.9	492.3	500.6	497.9	2871.3
PC 15 Over recovery	-10.5	-10.8	-11.2	-11.5	-11.8	-12.2	-68.1
Revenue before smoothing	430.7	453.5	463.7	480.8	488.8	485.7	2803.3
Smoothing adjustment	-8.9	-12.2	-3.9	-3.8	6.0	27.2	4.4
Total revenue (smoothed)	421.8	441.3	459.8	477.1	494.8	513.0	2807.7
Note: Figures may not add up due to rounding.							

Table 8.1 – Calculation of Allowed Revenue (nominal) (£m)

Smoothing adjustment

- 8.2 We have considered overall revenues and PC21 in the round and consider that it is best to have a steady change in charges across the period instead of differences between years. This can be achieved by adjusting revenues in individual years while maintaining the same overall NPV (net present value) across the price control.
- 8.3 For PC21 this means that revenues are adjusted down at the start of PC21 and up at the end and enables consistent K factors for all years of PC21 in each revenue group. Further information on this can be found Annex B Sources of Revenue.





9. Monitoring Financial Performance

- 9.1 One of our primary duties is to ensure that NI Water is able to finance its functions and we believe that NI Water's financial strength should be appropriate to the governance framework within which it operates.
- 9.2 As a yardstick for financial sustainability we have adopted a series of ratios, an approach used by other regulators, the investment community and rating agencies. The requirement for NI Water to obtain a credit rating has been set aside in light of the absence of a secure revenue source, a consequence of the decision to defer domestic water charges. However, we still see merit in assessing NI Water's financial strength.
- 9.3 In Table 9.1 we set out the targeted value of each ratio and our calculation of the NI Water position based on this draft determination.

Financial Ratio	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
FFO Interest Cover	3.1	3.3	3.5	3.7	3.8	3.9
PMICR	0.8	0.8	0.9	0.9	1.0	1.3
FFO / Net Debt	9.9%	10.4%	10.9%	11.1%	11.1%	10.9%
Gearing	49.9%	49.9%	49.9%	49.9%	49.9%	49.9%
Gearing adjusted for PPP	56.2%	55.5%	54.8%	54.1%	53.3%	52.6%

Table 9.1 - Financial performance 2021-27

- 9.4 While observing that adjusted cash interest cover may cause some concern if NI Water was operating outside of Government, we consider the value along with other ratios achieved to be appropriate for the governance framework within which NI Water is currently operating.
- 9.5 We will continue to monitor any changes to the governance framework and associated implications for financeability in advance of PC27.



10. Other Financial Assumptions and Considerations

Inflation

10.1 We have updated NI Water's RPI inflation assumptions with a flat rate of 3.0% p.a. over PC21. We have used the NI Water business plan assumption for simplicity for the draft determination and will source the latest forecasts for the final determination.

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
FY Average	308.9	318.2	327.7	337.5	347.7	358.1
% increase	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

Table 10.1 – Retail Price Index (RPI)

Borrowing

- 10.2 NI Water has identified a risk in its PC21 the existing loan note facility which is due to expire in March 2021. The business plan assumes that a loan note facility, similar to the current arrangement on the current terms, will be put in place. Discussions with Dfl are progressing how this and a large element of embedded debt repayable at March 2027 is to be dealt with by DRD and DFP, to ensure stability of funding.
- 10.3 The Utility Regulator has also assumed that a similar arrangement will be put in place. Cost of debt calculations within the overall cost of capital have been based on this assumption.

Dividends

- 10.4 The actual level of dividend that NI Water pays in any one year is a matter for NI Water and we have not considered dividend levels as part of this draft determination. Condition F 6.12 of the licence states that:
 - The dividends declared or paid will not impair the ability of the Appointee to finance the Appointed Business; and,
 - Under a system of incentive regulation, dividends would be expected to reward efficiency and the management of economic risk.





Financial Modelling

- 10.5 We have revised the financial model used to make this draft determination and have attached a copy in Annex N.
- 10.6 Our information requirements were based on the old model as used in previous price controls. However, when untangling current cost figures which are no longer used and updating tax computations we found it easier to start with a blank page rather amend existing worksheets. The tariff tables remain largely unchanged.
- 10.7 We have taken the opportunity to simplify layouts and formulae where possible and introduce some shortcuts throughout the worksheets to create an easier model to navigate.

Public Expenditure reconciliation

- 10.8 NI Water is required to operate within Public Expenditure (PE) limits set by the NI Executive for the PC21 period due to its NDPB status.
- 10.9 Table 10.2 sets out the reconciliation of this draft determination to Public Expenditure Resource DEL.
- 10.10 This reconciliation has been established through discussion with NI Water and the Department during the PC15 and PC21 processes. It recognises the differences between the regulator's work in determining funding and accounting in public expenditure terms at Department level.

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Operating Costs - appointed	180.3	183.2	184.3	186.9	189.0	194.6
Non-PC transformation costs	1.8	1.9	1.5	1.5	0.9	0.9
Pension finance costs	0.0	0.0	0.0	0.0	0.0	0.0
Unappointed Costs	3.3	3.4	3.6	3.9	4.0	4.2
Non-appointed Income	-3.6	-3.7	-4.0	-4.5	-4.6	-4.8
PPP costs (UK GAAP)	27.2	27.8	28.4	27.3	28.0	28.6
Alpha cash DEL	11.6	11.5	11.4	11.3	11.2	11.0
Non-domestic income	-100.3	-106.1	-110.2	-112.7	-115.2	-117.9
Non-Infrastructure depreciation	63.9	67.0	72.1	80.7	91.6	100.9
Infrastructure depreciation	19.7	21.0	22.5	24.0	25.6	27.2
NIWAL depreciation charge	0.1	0.1	0.1	0.1	0.1	0.1
Alpha depreciation	4.2	4.3	4.4	4.6	4.7	4.8
Amortisation of capital grants	-0.4	-1.4	-3.6	-6.3	-9.7	-12.9
Amortisation of deferred credits	-1.0	-1.1	-1.2	-1.3	-1.3	-1.4
Total Resource DEL	206.6	207.9	209.5	215.5	224.1	235.4
Total Resource DEL - Cash only	120.2	118.0	115.1	113.7	113.2	116.7

Table 10.2 - Public Expenditure Resource DEL (£m)

10.11 The draft determination replaces lines such as operating costs and non domestic income with those found elsewhere in this determination. The determination may also have an impact on other lines and the Department will need to consider these along with NI Water to arrive at final numbers for PE purposes.