PC21 Information Requirements
Chapter 2 – Operational Costs and Efficiency
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Contents

Reporting Requirement Tables

Information Requirement Tables

Annex

Chapter 2 - Operational Costs and Efficiency

2.1. Efficiency Improvements

Outline

2.1.1. In developing its business plan the company should decide on the scope for it to improve its efficiency in the next price control period. Constraints on making the maximum use of this scope should be explained.

2.1.2. The company should:

- Set out its views on the scope for improvements in efficiency and the evidence on which they are based.
- Explain how they lead to its assumptions about cost reductions from current levels that it has included in its strategy.
- Describe how the assumed improvements have been incorporated in the business plan expenditure projections.

2.1.3. These judgements should be informed by the company's view of:

- Its expectation for improvements in efficiency which the best company could achieve year by year.
- Its relative efficiency or inefficiency to its peers within the regulated industry.
- The findings of any benchmarking studies it has carried out.
- The pace of improvements over the period.

2.1.4. The company should refer to any benchmarking studies it has conducted and explain how these and other studies have informed the assessments.

2.1.5. We suggest that the efficiency chapter should be divided into three sections:

Table 2.1 – Approach to Efficiency Chapter

Efficiency improvements	
Section 1	Overall approach to assessing the scope for catch-up improvements in efficiency during the PC21 period.
Section 2	Assessment of frontier shift efficiency improvements.
Section 3	Scope for efficiency improvements for PPP schemes[1].

2.1.6. The company should make any assessments of relative efficiency including 2018-19[2] as the base year for both output delivery and costs incurred.

2.1.7. The company should explain how it intends to meet its efficiency assumptions including where they will be made. The company should confirm that its efficiency assumptions can be met, without increasing the risk of service deterioration or quality compliance failure.

2.1.8. The company may wish to provide details of studies undertaken both to arrive at its relative efficiency assessment and also the scope for general improvement in efficiency[3].

Efficiency Assessment

2.1.9. The efficiency table asks for improvements in efficiency judgements to be set down for:

- Block A: Operating expenditure efficiency (base).
- Block B: Operating expenditure efficiency (enhancements).
- Block C: Operating expenditure efficiency (PPP schemes).

2.1.10. This assessment should reflect the total efficiency assumptions i.e. for both the water and sewerage service. An exception should be made for the PPP section where different efficiencies apply for water and sewerage[4] to the extent such efficiencies are deemed to revolve around productivity assumptions and GainShare pertaining to PPP/PFI

[1] PPP schemes for the moment to include both remaining Omega PPP and Kinnegar PFI as well as the PPP Alpha (recently bought out by NI Water).
[2] Including but not be limited to 2018/19 since Panel Ordinary Least Squares (POLS) is likely to be the preferred modelling approach compared to OLS (which uses a single year of cross-sectional company data).
[3] Such studies may include reference and replication, either in full or partial, of any initial draft RPE analysis made available to NI Water by the UR during the company's preparation of its business plan.
[4] Note: Improvements in efficiency should be entered as in the following example, 4.5% should be entered as 4.5, not 0.045.

schemes. Whether the same reasoning might be applied to both Omega PPP and Kinnegar PFI as well as to the Alpha PPP (recently bought out by NI Water) needs to be well articulated in the business plan.

Approach – minimum plus catch-up judgements

2.1.11. The approach is structured around five steps. The five steps are:

1. The view the company takes of its efficiency relative to its peers within the regulated water industry. The company is asked to band its assessment on the scale A to E as set down in the Ofwat efficiency reports 'Relative Efficiency Assessment'. This view will be informed by NIAUR's work on comparative efficiency as well as the company's own analysis.

Table 2.2 – Relative Efficiency Bandings

Relative efficiency banding	
A	Most efficient
B	Above average efficiency
C	Average efficiency
D	Below average efficiency
E	Least efficient

2. Following this view the company would be in a position to reach a conclusion on the scope for it to catch-up with the best in the industry and the proportion of the catch-up that it is prepared to include in its expenditure forecasts.

3. The company then sets down its decisions on the rate of catch-up that it has assumed over the period (either applied from 2018-19 or across the PC21 period only).

4. The company then makes an assessment of the minimum level of improvements in efficiency, year on year that it is reasonable to assume in price setting for even the most efficient companies. These judgements could be applied from the 2018-19 base year costs or from the first year of new price limits.

5. The final step calculates the aggregate improvement year by year from the separate judgements of minimum level of improvements (step 4) and the rate of catch-up (step 3). The particular percentage reductions in costs are compounded in the final line in each year.

Table 2.3 – Worked Example from Ofwat of Base Opex Efficiency Application

Line description		Units	Assessment AMP 4	AMP 3		AMP 4					AMP 5
				2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
A	**OPERATING EXPENDITURE EFFICIENCY (BASE)**										
1	Assessment of relative efficiency	Band	D								
2	Assessment of scope for catch-up(base)/ assumed Profile year on year	%	30	0	0	6.9	6.9	6.9	6.9	6.9	0
3	Assumed minimum level of efficiency improvements/assumed profile year on year(base)	%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
4	Opex – Overall compounded assumed profile (base)	%		1.0	2.0	9.7	16.7	23.2	29.2	34.8	35.4

Worked Example - step-by-step approach

- Step 1 – The company reaches a judgement that its current performance is below average hence enters a D banding in line 1.

- Step 2 – After reviewing all the evidence the company concludes that it would need to improve its efficiency by 30% to catch-up with the best in the industry.

- Step 3 – The company considers that they will achieve this catch-up evenly over the period. The entries in line 2 are 6.9% p.a. for years 3 to 7, such that the 30% is shared out geometrically.

- Step 4 – The company reaches a judgement that 2% per annum improvement in efficiency is what an efficient company might reasonably be expected to achieve as a minimum. However the company considers it needs an incentive to drive through these improvements such that only part of the level of improvements should be assumed up front for customers in price limits in 2004.

  The company decides to divide the scope 50/50 between customers and the company hence enters a 1% per annum improvement year on year. Of course any out-performance of this figure would be passed through to customers at the subsequent price control. The company has based its forward projections of expenditure on the 2002-03 level so the 1% p.a. applies from that base.

- Step 5 – The per annum improvements from steps 1 and 4 are compounded to produce the overall assumed cumulative improvement profile in line 4[5].

2.1.12. The following table illustrates how catch-up efficiencies would be shared on a geometric basis over 2, 4 or 5 years. The table gives the p.a. catch-up figure for each of the years.

[5] *Positive figures are shown in the table as these represent improvements in efficiency. Costs would reduce by these figures to reflect the delivery of the improvements.*

Table 2.4 – Geometric Mean Calculations

Geometric Mean Calculations			
Total catch-up (%)	2 years p.a. (%)	4 years p.a. (%)	5 years p.a. (%)
3	1.5	0.8	0.6
4	2.0	1.0	0.8
6	3.0	1.5	1.2
8	4.1	2.1	1.7
9	4.6	2.3	1.9
12	6.2	3.1	2.5
16	8.3	4.3	3.4
20	10.6	5.4	4.4

Reporter Guidance (Efficiency)

2.1.13. The Reporter will:

- Provide further detail where necessary on how the company has derived its efficiency targets, including PPP efficiencies[6]. This could include information on, for example, whether the company has a rolling program of efficiency initiatives, whether it has processes in place to improve procurement or how it uses business management or energy management techniques to make efficiencies.
- Confirm that the process undertaken by the company to include the assumed efficiency forecasts into the projections of operating expenditure is appropriate and has been applied consistently throughout the plan.
- Confirm the stage at which the company has applied its efficiency targets to its future costs.

2.1.14. With respect to operational efficiencies the Reporter will:

- Verify and confirm or otherwise that the table has been completed in accordance with the company guidance.

[6] *To include both Omega PPP and Kinnegar PFI as well as Alpha PPP (recently bought out by NI Water).*

- Review the assumptions the company has made for both its continuing level of efficiency and catch-up efficiency. In particular the Reporter should comment on whether the process used to derive them was robust.

2.2. Water and Sewerage Opex Expenditure Projection

Outline

2.2.1. In Block A the company is required to input the operating expenditure for 2018-19 (excluding PPP costs). This should be consistent with the relevant data reported in the Annual Information Return 2018-19.

2.2.2. In Block B the company should report the net adjustments to the Block A number that it regards as being above (positive number) or below (negative number) normal continuing expenditure for the base service. Full explanations of these adjustments should be included in the text. If this area includes any changes in pension provision or methodology from PC15, this should be fully explained in the text with appropriate justifications.

2.2.3. Unusually low expenditure, for example arising from a temporary reduction in pension contributions, should also be quantified and explained. Such adjustments will generally reflect exceptional, atypical and un-appointed activities. It may be the case that there are pension considerations in other blocks and any change in cost or methodology from PC15 should be highlighted in the relevant block with appropriate justification provided.

2.2.4. However, certain cost elements which have been excluded from the efficiency analysis should still remain part of the baseline cost in these tables as they are (at least in part) of a controllable nature. Therefore no adjustment should be made for rates, third party costs or doubtful debt.

2.2.5. Block C provides for the company adjustments (up or down) to the adjusted base year to reflect its assessment of its **base service needs** for the PC15 period.

2.2.6. The company should quantify and explain the components of these adjustments in the supporting text, providing supporting information where appropriate. NI Water should detail the base year cost (in 2018-19) for particular opex lines and provide reasons and justification for any change in PC21.

2.2.7. Block D brings forward the company assumptions on efficiency improvements from the efficiency table. This facilitates the calculation of a forecast for base service operating expenditure.

2.2.8. Block E details the costs set aside for business transformation. This includes expenditure associated with Voluntary Early Retirement / Voluntary Severance (VER/VS) packages and Business Improvement Plan projects. How these costs are allocated between tables 2.2 and 2.3 (water and sewage) is of little importance, but should be detailed in the chapter.

2.2.9. The current table format does not include an efficiency challenge for these costs as a final decision has yet to be reached. However, the Regulator is 'minded to' impose a challenge on the business improvement expenditure (not VER/VS) deemed business-as-usual.

2.2.10. Within the Business Plan commentary, NI Water should include a short chapter on progress to date. This should include a summary of:

- BI opex spend in the SBP, PC10, PC13 and PC15 years.
- Summary of projects, deliverables and realisation of benefits by year.
- VER/VS spend since 2007-08.
- Numbers impacted by schemes and overall changes to staff levels.

2.2.11. The company must provide justification for any PC21 proposed transformation expenditure, consisting of an analysis of costs, benefits and their timings. Business cases to support expenditure ought to be linked to the company's strategic direction and be informed by company analysis of its scope to deliver improved services, value and compliance on behalf of consumers.

2.2.12. As a minimum such business cases should include the basic steps of an economic appraisal (most all of which might be expected to have already been included within an economic appraisal or business case prepared to Northern Ireland Guide to Expenditure Appraisal and Evaluation standards):

- Explain the strategic context – how does the project fit/link with the company's overall strategic direction.
- Establish the need for the expenditure – well defined terms of reference or scope of project is required, along with supporting arguments.
- Define the objectives and constraints – how does the investment link to outputs such as service(s) and/or compliance? What are the limiting factors on the development of this project?
- Identify and describe the options – as a minimum, the options list must include the "do something" option with maintaining the *status quo.*
- Identify & quantify the monetary costs and benefits of options – detailed costs and supporting calculations must be appended, adopting a proportionate approach.
- Appraise risks and adjust for optimism bias – to include the risks from over-optimistic estimation of costs and benefits.
- Weigh up the non monetary costs and benefits – compare each option's expected impacts upon outputs and outcomes for consumers, including service and/or compliance.
- Calculate Net Present Values and assess uncertainties – establish the project's whole life costs.

- Assess affordability and record arrangements for funding, procurement, benefits realisation, monitoring and Post Project Evaluation – this is especially important where the project may be reliant upon external funding.
- Assess the balance of advantage between options and conclude.

2.2.13. NI Water should provide assurance that any claimed transformation expenditure does not represent double funding. VER/VS costs should be supported by details of headcount reduction, both on an individual basis and on the total company staff levels.

2.2.14. A detailed analysis of proposed headcount reduction and the cost of release are required on a year-by-year basis, profiled against the company's previous track record for the 2007-08 period onward. The company must produce evidence that its human resources plans support any planned headcount reduction for PC21 and, regardless of any absence of any planned reduction, that overall headcount is being actively managed to achieve the company's overall strategic direction.

2.2.15. Block E includes Line 9a. This line represents the atypical adjustments made in Line 2. These costs should be added back for the **base year only** in order to provide an appropriate total opex figure for 2018-19.

2.2.16. Block F details the opex costs arising from capital expenditure throughout the PC21 period. These lines are split along the traditional enhancement allocations i.e. quality, enhanced service level and growth.

2.2.17. The company should provide detail as to how these figures have been arrived at. NI Water should further detail where opex costs are expected to decrease as a result of capital expenditure.

2.2.18. Block G brings forward the company assumptions on efficiency improvements from table 2.1 to calculate a forecast of enhancement operating expenditure.

2.2.19. Block H reflects the total PPP unitary charge expenditure including PPP interest, performance deductions, atypicals and capital repayments. The PPP opex element is subject to the assumed efficiency profile as detailed in table 2.1.

2.2.20. Block I provides a sum total of all the elements of opex costs. This should align with the comparable costs in the financial model.

Reporter Guidance (Water and Sewerage Opex)

2.2.21. The Reporter shall:

- Confirm or otherwise that the operating expenditure figures for the base year agrees with comparable figures reported in tables 21 and 22 of the 2018-19 Annual Information Returns.
- Consider the appropriateness of the information provided to support changes in base operating expenditure including any benchmarking that has been undertaken.

- Comment on any steps the company has taken to mitigate against increasing costs to ensure that the additional opex is the minimum required.
- Confirm that the opex from capex aligns with data provided in the capital investment section.
- Comment on the reasonableness of future forecasts of PPP[7] expenditure (more detailed commentary on PPP should be provided in the Financial Model section).
- Verify if the table has been completed in line with table guidance.

[7] *To include both Omega PPP and Kinnegar PFI as well as Alpha PPP (recently bought out by NI Water).*

2.3. Total Operational Expenditure

2.3.1. The final table simply provides an overall sum of water and sewerage opex split by:

- Base opex.
- Transformation costs.
- Opex from capex.
- PPP costs.
- Total operational expenditure.

Reporter Guidance (Total Opex)

2.3.2. The Reporter shall confirm that the table has been completed in line with the reporting guidance.

2.4. Special Factors and Atypical Expenditure Claims

2.4.1. This section outlines our intended approach to the above for PC21 which is largely unchanged from our PC15 approach based upon our regulatory letter "WR18" issued to the company on 27th Oct-11 for PC13, which in turn followed in general terms our approach to these matters at PC10.

2.4.2. We feel it important to outline at an early stage the process and timeline for submissions, despite the fact that in providing a discussion paper on PC21 Approach to Efficiencies at the same time as publishing PC21 Information Requirements, we have not so far decided upon the precise path we shall travel when establishing NI Water's efficiency gap and targets for PC21.

2.4.3. Atypical expenditures will remain an important consideration for the company's submission of its operational expenditure baseline for 2018-19 whatever our decision on approach to efficiencies.

2.4.4. The criteria we shall apply in determining their applicability and timeline to the setting of new efficiency targets are set out below:

Special Factor Assessment Criteria

2.4.5. The means by which the Regulator shall assess the company's submission will include examination of each claim against the following criteria:

1. What is different about the circumstances that cause materially higher costs ("material" claims have previously been agreed by company and Regulator as those individual claims which amount to greater than 1% of total modelled opex[8])?

2. Why do these circumstances lead to higher costs?

3. What is the net impact of these costs on prices over and above that which would be incurred without these factors? What has been done to manage the additional costs arising from the different circumstances and to limit their impact?

4. Are there any other different circumstances that reduce the company's costs relative to the industry norms? If so, have these been quantified and offset against the upward cost pressures?

Treatment of Atypical Operating Costs

2.4.6. NI Water may wish to declare such "one-off" expenditure as "exceptional" within their accounts. Alternatively, our approach to the Annual Information Return allows NI Water to flag specific cost items you consider atypical. We can then consider making adjustments to exclude them from our modelling and benchmarking analysis.

2.4.7. Some examples of such costs taken from Ofwat might include:-

- Extreme climatic events.
- Unusual compensation payments to customers.

2.4.8. If any changes are as a result of pension costs or provisions, this should be fully identified with appropriate explanation and justification provided.

Timeline

- 15 March 2019 – Regulator publishes its Approach to Efficiencies.
- end March 2019 – target date for initial opex efficiency analysis, including opex modelling suite as well as initial analysis of any efficiency gap for opex.
- April 2019 – NI Water begin preparation of draft special factors claim.
- 16 September 2019 – NI Water submit draft special factors claim for early "comprehensibility" testing and feedback on areas where additional company

[8] The adoption at PC21 of previous price controls approach to constructive engagement between Regulator and NI Water is continuing. The regular Cost Assessment Working Group (CAWG) process is expected to agree any new materiality threshold to apply to the emerging suite of new efficiency models.

information might provide greater clarity for the Regulator in coming to its determinations.

- 11 November 2019 – Regulator provides feedback on draft special factors for subsequent consideration by NI Water in its business plan.
- 1 February 2020 – NI Water submits PC21 business plan, including final special factors submission.

Reporter Guidance (Special Factors and Atypical Expenditure Claims)

2.4.9. The Reporter is not asked to comment on or otherwise confirm a special factor exists prima facie as this will be the decision of the Regulator. The audit is however expected to cover a number of issues. Consequently, the Reporter should focus on two main areas:

(A) Background to the claim and reasoning

2.4.10. Within this section the reporter should:

- Draw on industry knowledge and experience to evaluate the information provided. You should include a review of any offsetting factors the company may benefit from.
- Comment on the nature and reasonableness of the circumstances that have given rise to a special factor.
- Comment on whether the special circumstances were unavoidable or have wholly or in part arisen from management decisions.
- In relation to modelling issues, the Reporter must confirm the importance of the explanatory variable and the model it affects, as well as the reasons which make the variable significant to the company.
- If an accounting issue, the Reporter should investigate the reason why costs have been treated this way and the likely impact this will have on efficiency assessments.

(B) Monetary impact of the Special Factor

2.4.11. As part of the audit the Reporter will have to advise on the nature of the monetary impact of the claim. Specifically, commentary might focus on:

- Where financial calculations have been used, the Reporter must verify that explanations are robust and underlying base data has been properly extracted.
- Provide comments on the appropriateness of the choice of data i.e. its independence, reliability, comparability etc.

- Analyse the appropriateness of any choice of benchmarking information.
- Comment on the appropriateness of any judgements or assumptions the company has made in their calculations.
- Assess any claims the company has made in relation to actions taken by the company that have limited the financial impact of the special factor.
- Provide opinion on whether you feel all appropriate mitigating actions have been taken.
- Comment on whether the company has taken account of any other obvious special factors that reduce their costs relative to industry norms.