# PC21 Opex 'Minded To' Methodology

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## Contents

# Chapter 1 - Background

## 1.1. Context

1.1.1. The purpose of this document is to detail the expected approach for determining both the efficiency gap and the PC21 opex targets for NI Water.

1.1.2. It is important to stress that the Regulator cannot fetter its discretion at this stage. This means that methodologies or decisions cannot be finalised until receipt of NI Water's PC21 submissions and our determinations. To do so may result in adopting a suboptimal approach. This could in turn have a harmful impact on either consumers or NI Water.

1.1.3. However, the Regulator does see benefit in providing detail to NI Water concerning the 'minded to' approach for opex efficiency. This means detailing the various approaches under consideration or the methods expected to be employed. We have taken into consideration NI Water's response to our paper setting out the Regulator's initial thoughts on options to determine opex efficiencies

1.1.4. Provision of this information ought to give more certainty to NI Water. In particular, this annex should:

i. demonstrate that the UR is accountable by ensuring that decisions are open to public scrutiny and are able to be justified.

ii. show that the UR is being consistent with previous price controls and accepted regulatory practices; or detailing why it is appropriate to deviate from such practices.

iii. display the Regulator's commitment to transparency and openness.

1.1.5. Although no final decisions are made, this 'minded to' document gives all stakeholders an idea of the PC21 approach to opex efficiency and target setting.

# Chapter 2 - Opex Modelling

## 2.1. Calculating Relative Efficiency

2.1.1. It is the Regulator's legal duty to promote economy and efficiency in NI Water. This is done by benchmarking the company against other relevant comparators. The analysis generates a measure of relative efficiency against which opex targets can be set.

2.1.2. The purpose of this chapter is to detail the expected process for assessing catch-up efficiency. Like most economic modelling, there are a variety of techniques available. There is also an element of judgement, estimation and uncertainty

2.1.3. Of the econometric modelling options available, the UR is 'minded to' adopt COLS (Corrected Ordinary Least Squares) models and will aim to do so, in the interests of simplicity and replication, at PC21.

2.1.4. The Regulator is currently using the expertise of CEPA consultants and has engaged with NI Water and its specialists at Cost Assessment Working Group (CAWG) level. The work of the CAWG is expected to continue throughout the PC21 process, in the lead up to both company PC21 Business Plan submission and our own determination stages.

2.1.5. Building on our engagement to date, CEPA drafted up two important short papers with the Regulator. These are included along with this 'minded to' approach document as separate Annexes:

- UR PC21 Opex efficiency modelling strategy - Short Paper (January 2019) - Approach to Opex Efficiencies
- UR PC21 Opex model assessment criteria - Short Paper (January 2019) - Approach to Opex Efficiencies

2.1.6. These 2 papers will form the building blocks to our initial draft opex modelling workstream for early 2019 and which we intend to complete April 2019.

2.1.7. COLS modelling at SBP, PC10, PC13 and PC15 price controls undertook cross-sectional COLS modelling[1], excluding NI Water data from econometric modelling. In PC21 we see no obvious reason why NI Water's data ought not to be included alongside their peers and we intend to include it within our modelling.

[1] The last occasion we properly tested NI Water's opex efficiency gap was at PC15 when we used 2012-13 base year data.

2.1.8. In addition, PC21 COLS modelling will use a pooled dataset, including a number of years rather than a single base year of comparable data from the E&W companies[2]. To this end the Regulator has already provided NI Water with a spreadsheet through the auspices of the CAWG. We now have a comprehensive dataset (CD) which includes a number of years historic data. Our CD has facilitated opex efficiency modelling to commence well in advance of the company's Business Plan submission.

2.1.9. Such prior modelling will usefully inform NI Water's PC21 Business Plan. Subsequent engagement at CAWG meetings will allow company and Regulator to discuss the key assumptions and differences of approach to their respective models.

2.1.10. As in previous price controls across the various sectors the Regulator determines efficiencies, a special factors and atypical expenditure process will apply to PC21. Through the CAWG, a separate timeline for submissions of special factors claims is being developed to include the following two stages:

- **draft special factors** submission from NI Water to the Regulator for initial "comprehensibility" feedback; prior to
- **final special factors** submission by NI Water on submission of its PC21 Business Plan

2.1.11. In order to be awarded a special factor, NI Water must as in previous price controls, adequately demonstrate:

- 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% modelled opex[3])?
- Why these circumstances lead to higher costs?
- What the net impact of these costs is for prices over and above that which would have been incurred without these factors?
- What the company has done to (i) manage the additional costs arising from such different circumstances and (ii) limit their impact?
- Are there any other different circumstances that reduce the company costs relative to industry norms? If so, have these been quantified and offset against the upward cost pressures?

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[2] Whilst our PC21 Information Requirements utilise much the same approach as in previous price controls to the roll forward of the base year opex, subject both to (i) any increases and decrements over PC21 period and (ii) the efficiency discount (catch-up plus frontier shift), our modelling is expected to use more than just a single year or PC21 base year of data.

[3] Modelled costs may be a single year or include multiple years. Whatever combination has been adopted for modelling would decide the total modelled opex denominator for the calculation of this 1% materiality threshold for special factors.

2.1.12. Subsequent to our initial draft opex models and discussion at CAWG meetings, the company is then expected to draft its special factors submission during the first half of 2019. Regulator feedback on the draft special factors claim is then expected to inform the company's final special factor claim along with its PC21 Business Plan submission 31 January 2020.

2.1.13. Table 1 collates the key milestone for opex efficiencies and special factors for PC21.

**Table 1 – PC21 key milestones**

| **Key Milestone** | **Date** |
|---|---|
| CAWG meetings progress engagement and development of *initial draft* opex models | January to March 2019 |
| Approach to opex efficiencies details (i) materiality thresholds (ii) agreed timeline | 15 March 2019 |
| AIR19 (2018/19 data) submitted by NI Water | 11 July 2019 |
| Latest date for draft Special Factors submission | 16 September 2019 |
| CAWG meetings progress engagement and development of *indicative* opex models | 7 October 2019 |
| Regulator provides feedback to NI Water using "comprehensibility test" | 11 November 2019 |
| NI Water submits finalised Special Factors claim with PC21 Business Plan | 31 January 2020 |
| Regulator publishes *draft determination* opex models | 1 July 2020 |
| NI Water submits final Special Factors submission by close of draft determination consultation | 18 September 2020 |
| Regulator publishes *final determination* opex models | 11 December 2020 |

2.1.14. As in previous price controls of NI Water where the Regulator has determined efficiencies for opex and triangulated future capital maintenance via an efficient forecast of capital maintenance, a different approach to how we account for regional wage differentials is expected to apply.

2.1.15. Specifically, where we apply opex econometric modelling to establish any efficiency gap of NI Water to the frontier company (assuming we have not included a regional wage variable, whether explicitly or implicitly, within such model specifications) we shall progress an explicit treatment of regional wage differentials for NI Water as part of the special factors process[4].

2.1.16. For capital maintenance, we intend as previously to calculate a Regional Price Adjustment (RPA) which shall include a weighted regional price differential of the material cost inputs to capital maintenance costs. Specifically, regional labour rates will be included alongside other BCIS relativities to account for the comparative advantage enjoyed locally in aggregates and construction wages, for example. This again assumes we have not included a regional wage variable, whether explicitly or implicitly, within such model specifications.

[4] In previous determinations of NI Water from PC10 onward we have included separate analysis of what was a negative special factor treatment of regional wages within our opex efficiency modelling of NI Water. This included an assessment of the company's own negative special factor analysis prior to our determinations on this and the other special factors we applied when calculating the eventual efficiency gap.

# Chapter 3 - Setting Targets

## 3.1. Opex Targets

3.1.1. The scale of the efficiency gap is a key aspect in setting opex targets. However, a number of other factors are important. The rate of catch-up, application of targets and then frontier shift will all play a part.

3.1.2. In relation to the opex catch-up target, the Regulator is 'minded to':

- **Rate of Catch-Up** – reserve judgement on the specific rate. In previous price controls the Regulator did not deviate far from Ofwat precedent and 60% catch-up to frontier performing company over five years.

  This represents a starting position and would equate to a higher catch-up across a six year price control such as PC21. However, a number of other factors will have an influence on the chosen rate. These include:

  - size of remaining efficiency gap
  - NI Water's Business Plan
  - regulatory precedent for catch-up rates and choice of frontier company (whether upper quartile, decile or other)
  - what other utilities have achieved at similar stages of development
  - levels of transformation funding
  - what efficiency the Regulator believes is achievable

  There are a good deal of unknown factors at present. The Regulator will consider any representation by NI Water, but emphasises the need for supporting empirical evidence.

- **Target Application** – apply the efficiency discount or target to all costs excluding PPP and VER/VS. As with previous price controls of NI Water, this effectively meant including the same level of challenge for any non-modelled costs (previously business rates and business activities costs), opex from capex, additional opex and business improvement spends.

  At PC21 the Regulator intends to at least reconsider its approach with regard the following:

  - Business Improvement – whether to continue the approach announced at PC13 and brought into being at PC15, whereby BI opex is included in modelled opex and any resulting efficiency discount is then applied to BI since it has become an annual cost.

- PPPs – whether a nil catch-up efficiency is applied to the PFI/PPP works (dependent upon continued evidence NI Water is managing its PFI/PPP contracts effectively, taking advantage of any change control for cost efficiencies) and whether the new contractual arrangements surrounding PPP Alpha warrant a different approach at PC21[5].

  Previously just 50% of our assumed productivity discount was applied to the PPPs given the 50:50 GainShare applied any subsequent cost efficiencies. In 2018 NI Water decided to buy-out the PPP Alpha works (water only) and constructed a new business model whereby the PPP Alpha was brought under the same umbrella company as NI Water.

  The most obvious interaction with our application of efficiencies is the likely removal of the 50:50 GainShare constraint on our productivity assumption for the PPP Alpha unitary charge[6].

  We intend progressing with NI Water our PC21 approach to PPPs through CAWG meetings and engagement.

- Business rates – where the Regulator already signalled to NIE Networks at RP6 its intended review of approach to business rates. This is necessary to establish a more consistent and streamlined approach to such costs in the seventeen different licences and price controls we undertake, all of which include some element of cost for business rates.

  We intend progressing with NI Water our PC21 approach to Business Rates through CAWG meetings and engagement. This will include both our efficiency treatment of business rates, whether to apply or dis-apply any efficiency discount, as well as any movement in quantum of business rates across the PC21 period.

- Retail related costs – similar to previous price controls NI Water's Business Activities or "retail related costs" are excluded from modelled opex since they are not expected to be comparable to comparator E&W companies[7]. In the past Business Activities costs were then

[5] In our PC21 Approach Document we stated the, 'buy-out of the Alpha PPP,...will [necessitate] examin[ation of] whether it remains appropriate to examine PPP costs separately, applying only a proportion of frontier shift to such costs over a price control period.'
[6] In our, "Regulation of the Northern Irish water and sewerage industry: Statement of Regulatory Principles and Intent" (April 2007) we stated, 'The NIAUR expects new contracts, or substantial variations to legacy contracts, which NIW should be capable of managing efficiently, will be subject to normal efficiency review processes.'
[7] NI Water's retail costs do not include the costs of metering and billing domestic customers compared to their E&W comparators. They do however include the costs of dealing with customer contacts from domestic and non-domestic consumers, including metering and billing all non-domestic customers.

subject to the overall opex efficiency challenge derived from the benchmarking of the remainder of opex.

We shall examine the arguments in favour of a similar application of any efficiency discount at PC21 to NI Water's retail costs, including whether alternative benchmarking comparison(s) might provide enhanced transparency on the companies' relative costs of retail services.

- **Steps to setting an opex efficiency target** - determine the efficiency challenge using the steps we used at PC15 to establish as a foundation for ensuring it is appropriate going forward. These include:
  - ❖ establish NI Water's baseline opex;
  - ❖ adjust for additions / (reductions) to base costs;
  - ❖ assess transformation costs, including plans for Business Improvement (BI) and Voluntary Early Retirement / Voluntary Severance (VER/VS);
  - ❖ assess treatment of sludge separately from comparator companies[8];
  - ❖ assess opex from capex requirements;
  - ❖ determine allowances for special factors and atypical expenditure;
  - ❖ ascertain the relative efficiency gap between NI Water and the benchmark company;
  - ❖ make assumptions on the frontier shift;
  - ❖ consider how public private partnerships / private finance initiative (PPP / PFI) costs should be treated;
  - ❖ review NI Water proposals; and
  - ❖ set efficiency targets[9].

[8] Further information on this approach is set out further in section 3 of the PC21 - Opex efficiency modelling strategy - short paper (January 2019)
[9] In setting PC21 efficiency targets relating to both opex and capital maintenance we may, as previously stated in Our Approach to PC21 document, "consider the application of more recent Ofwat modelling which combines operational expenditure with base or capital maintenance (botex modelling)".

## 3.2. Frontier Shift

3.2.1. Besides the catch-up element, utility companies are expected to achieve improvements in line with the general economy. This is known as frontier shift. The Regulator continues to presume there is scope for continuing efficiencies on behalf of consumers.

3.2.2. In PC13 the Regulator adopted a common method. This involves combining productivity with real price effects for the water industry, combining nominal input price forecasts with productivity expectations and RPI inflation.

3.2.3. Frontier shift in real terms = Input prices *minus*

Productivity *minus*

Forecast RPI inflation

3.2.4. If the real price effects (RPEs) are greater than projected inflation and productivity, the company will benefit from an extra cost allowance. If less, this becomes an addition to the catch-up opex target.

3.2.5. It is important that the frontier shift is estimated against a cost input mix as closely aligned as possible to a typical company, and the expected change in industry costs at the frontier. At PC15 and PC13, the Regulator amended cost proportions in order to allow for special factors in Northern Ireland, specifically those related to labour and power.

3.2.6. For PC21 the Regulator is 'minded to' adopt the following with regard to frontier shift:

- **Frontier Shift** – adopt the same approach as PC13 and PC15, including (i) application of *frontier shift* to baseline opex in the years prior to the first year of PC21 alongside (ii) consistent approach to special factors with real price effects' cost category weightings.
- **PPPs** – apply a separate challenge to PPP opex. NI Water does not carry a *real price effect* risk for these works as unitary charges increase by an RPI related index of inflation. In the absence of such risk we are 'minded to' apply some form of productivity assumption to encourage further savings from good contracts management, as was the case at previous price controls.
- **Application** – apply *frontier shift* to almost all opex. Separate and further consideration of whether to apply frontier shift to the PPPs, VER/VS and business rates costs, for example, will inform our determinations.

- **RPEs** – apply input mix proportions based upon a broadly representative OFWAT regulated company, adjusted to reflect any special factors treatment of labour and power costs at PC21, for example, which are materially different to those costs faced by OFWAT companies within the GB marketplace (see UR PC15 FD Annex S – Opex Frontier Shift).

  The PC15 weights and cost categories are repeated below in Table 1 for transparency:

  **Table 1 – Hypothetical input mix for an efficient water company**

| Input | % of Expenditure |
|---|---|
| Labour | 47 |
| Materials and Equipment | 10 |
| Chemicals | 2 |
| Power | 17 |
| Rates | 10 |
| Environment Agency Charges | 5 |
| Bad Debt | 5 |
| Other | 5 |
| **Total** | **100** |

  *Weights may not sum due to rounding*

3.2.7. It is therefore anticipated the frontier shift methods employed at PC21 will not differ much from PC15 and PC13 price controls. These were previously based upon established processes, in line with regulatory practice.

# Chapter 4 - Conclusions

4.1.1. This document and annexes detail the 'minded to' approach to opex efficiency at this early stage. The Regulator reserves the right to change its approach as the PC21 process develops.

4.1.2. The options detailed above refer to the calculation of the efficiency gap and frontier shift. Whilst decisions remain to be made, the 'minded to' approach provides the company with information on the options being considered and methodology we intend to progress through the CAWG engagement process.

4.1.3. Our final test of the reasonableness of the efficiencies we apply to NI Water, from the amalgamation of the above considerations and adjustments to NI Water's various opex elements is the calculation of the "net efficiency challenge" at each price control.

4.1.4. The "net efficiency challenge", is calculated on an annualised basis across the entire price control period, taking the total projected efficiency savings as a percentage of prior year baseline.

4.1.5. All the preceding ought necessarily to be read in conjunction with our PC21 Approach Document.