

PC15 Opex ‘Minded To’ Methodology

Issued 15 May 2013 – Version 02

Contents

Chapter 1 -Background	2
1.1. Context	2
Chapter 2 -Opex Modelling.....	3
2.1. Calculating Relative Efficiency	3
Chapter 3 -Setting Targets	6
3.1. Opex Targets.....	6
3.2. Frontier Shift	7
Chapter 4 -Conclusions.....	8

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 PC15 opex targets for NI Water.

1.1.2. It is important to stress that the UR **cannot fetter its discretion** at this stage. This means that methodologies or decisions cannot be finalised until receipt of NI Water's PC15 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 UR 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 PC15 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 options available, the UR is 'minded to' to take the following approach to:
- **Modelling** – Adopt the COLS (Corrected Ordinary Least Squares) models of PC13 as the principal method of assessing relative efficiency. This is the same approach previously referred to as our “primary approach”, included within our letter to NI Water of 15th Mar-13 where we outlined our possible approach to efficiencies.
 - **Triangulation** - We retain our over-arching triangulated approach to determining efficiencies. The distinction we draw between methods reflects the fact that the COLS approach is a tried & tested approach, our *principal* approach, compared to *alternatives* whose adoption we shall subject to further tests using our key modelling criteria (*see below*). Our choices over the latter will then necessarily emerge during the determination process.
 - **Base year** – Use 2012-13 NI Water data as the base year for efficiency comparisons. This will be compared against the 2010-11 real costs for English and Welsh water utilities.
 - **Business Activities** – Exclude the business activity models from the analysis. Comparison of debt levels, metering and complaints costs is not appropriate when domestic charging has yet to be applied.
 - **Water distribution** – Consider different models to the current regression as it fails to give good statistical results. This will include CSV¹ and least absolute deviation methods.

The Regulator acknowledges that a number of issues remain to be resolved with respect to the construction of a composite variable. The

¹ Composite Scale Variable.

model used in PC13 will be reviewed, when the removal of winter population will be considered.

- **Adjusted or Unadjusted Models** – Exclude NI Water observations from the regressions (as per PC10 / PC13) given that they represent an outlier.
- **Special Factors and Atypical Costs** – Consider any updated special factor claims² and atypical costs for the base year in question.
- **Residual Adjustments** – Continue to use 10% (water) and 20% (sewage) changes to residuals. This amendment reflects uncertainty and the fact that not all of the gap will be due to differences in efficiency.

Sensitivity around these adjustments will also be considered given that up-to-date E&W data is no longer available. This may include Cubbin discounts, bootstrapping and confidence intervals.

- **Benchmark Companies** – Reserve judgement on the choice of the frontier companies. This choice will depend upon the change in total opex from 2010-11. The UR intends to make frontier adjustments if costs rise above inflation by material amounts.
- **Business Improvement** – No longer treat Business Improvement spending as atypical. Given that it is an annual occurrence and funding was provided in PC13 to deliver such projects, this expense should not be considered atypical.
- **PPP's** – Assess the level of efficiency separately in PPP's and at a company level to ensure an appropriate efficiency target for NI Water.
- **Alternative Modelling** – Compliment the principal efficiency findings by using alternative methods. These can range from the use of unit costs, international benchmarking, topex models, panel/pooled models, data envelope analysis (DEA) or stochastic frontier regressions. Some of these alternatives have been shared with NI Water already.

Consideration of our secondary means of informing NI Water's efficiency challenge will include assessment against the following criteria:

- i. Accuracy
- ii. Reliability
- iii. Robustness

² 20th December 2013 is the deadline for submission of any draft Special Factors claim which we shall subject to our "comprehensibility test" and feedback to company during January 2014.

The alternative models may have an impact on the relative efficiency analysis. Whilst these models are still under development, it should be noted that a unit cost analysis is not the preferred option.

- **Combining results** – Consider adopting a weighted average where different modelling methods give materially diverse results. As COLS represents the principal method, it will be given a higher weighting than other methods. Relative weights would inevitably reflect the degree of compliance with the assessment criteria.

2.1.4. The options detailed above refer to the calculation of the efficiency gap. Whilst decisions remain to be made, our 'minded to' approach provides the company with information on options being considered and our intended methodology.

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 UR has not deviated far from the Ofwat precedent of 60% over five years. This represents a starting position and would equate to a higher catch-up over the six years of PC15. 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.
 - What other utilities have achieved at similar stages of development.
 - The evidence provided by NI Water to support any case made regarding the influence of NDPB status.
 - Levels of transformation funding.
 - What efficiency the Regulator believes is achievable.

There is 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 targets to all costs excluding PPP and VER/VS. This would mean including the same level of challenge on un-modelled costs (such as rates and business activities), opex from capex, additional opex and business improvement spends. The UR does intend to consider:
 - Analysis of efficiency for the business activity models to see if there is a large enough difference to merit an alternate target. This might include comparisons of:
 - Cost per complaint;

- Cost per number of contacts/telephone calls;
- Comparison of bad debt levels etc.
- Company views on opex from capex efficiency.
- **Business Improvement** – Include BI opex in the efficiency calculation and target setting as it has become an annual cost. This follows the approach proposed in PC13.
- **PPP's** – Not apply catch-up efficiencies to the PPP works.

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. In PC13 the Regulator adopted a common method. This involves combining productivity with real price effects for the water industry.
- 3.2.2. If the real price effects 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. For PC15 the Regulator is 'minded to':
- **Frontier Shift** – Adopt the same approach as PC13 (including application of frontier shift to baseline opex in the years prior to the first year of PC15 alongside a consistency of approach to special factors with real price effect cost category weights).
 - **PPP's** – Apply a separate challenge to PPP opex. NI Water does not carry a real price effect risk for these works as costs increase by inflation. In the absence of such risk we may apply a different challenge to PPP's to encourage further savings with good project management, as occurred at previous price controls.
 - **Application** – Apply frontier shift to all opex, except PPP opex which will be subject to a separate challenge and VER/VS which has no efficiency challenge.
- 3.2.3. It is not anticipated that the frontier shift methods employed at PC15 will differ much from the last price control. This is a well established process and in line with regulatory practice.

Chapter 4 - Conclusions

- 4.1.1. This annex details the 'minded to' approach to opex efficiency at this early stage. The Regulator reserves the right to change its approach as the process develops.
- 4.1.2. The options detailed above refer to the calculation of the efficiency gap. Whilst decisions remain to be made, the 'minded to' approach provides the company with information on options being considered and our intended methodology.