Utility Regulator
ELECTRICITY GAS WATER

Water and Sewerage Service
Price Control 2013-2015

PC13 Annex L

Responses to NI Water Consultation Views on Operational Efficiency Challenge

Final Determination

December 2012

Water and Sewerage Service
Price Control 2013-15
Final Determination Main Report
Annex L – Responses to NI Water's consultation views on operational efficiency challenge

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1 Background Information

1.1 Background

1.1.1 As part of the Price Control process, stakeholders were given the opportunity to voice their opinions on the proposed decisions of the Utility Regulator at draft determination stage and respond formally by the close of the consultation period.

1.1.2 In their consultation response, NI Water made substantial representations on a variety of areas. A key issue of specific focus was operational efficiencies.

1.1.3 As a consequence of the numerous issues raised a summary of our responses is provided below.

2 Issues and Responses

2.1.1 The following table details key issues alongside the Utility Regulator's rationale for certain decisions and views.

Issue 1	***NI Water Response, Page 16, para 3.4.5*** In our view, the draft determination has failed to grasp the impact of the NDPB status on the company. Whilst dual status does add cost, more importantly it places restrictions on how cost reduction and transformation activity can be undertaken.
Response 1	1. There was insufficient evidence to support a move to a 60% catch-up over 10 rather than 5 years. 2. No regulatory precedent has been offered in support. 3. The company expressed concern that we had not funded the 'toolsets' to deliver efficiencies ie Voluntary Early Retirement / Voluntary Severance (VER/VS) and Business Improvement (BI) projects. This is not the case as we remain funding business improvement staff in PC13 and support both this and VER/VS related initiatives for PC13. However to ensure consumers were not charged twice, we stated that funding of these activities would have to come from public expenditure to compensate for under spend in these activities during the previous price control. We have engaged with officials from the Department for Regional Development (DRD) and the Department of Finance to clarify this position. The Department of Finance has stated they are, "very keen to support VER/VS schemes or any other 'invest to save' proposals", and have issued a letter to this effect to the DRD, the company shareholder. 4. The majority of opex is repetitive in nature and largely unaffected by NDPB status i.e. chemicals and power costs etc. 5. NI Water has evidenced outperformance and significant opex efficiency gains in PC10 in spite of their current corporate structure. This outperformance excludes underspends on BIP and VER/VS, which we do not view as an efficiency. 6. Many of the NDPB restrictions on procurement, financial and terms & conditions of employment have helped support NI Water's drive to lower its cost base and meet the efficiency challenge. Other additional governance costs the company attribute to NDPB status would also likely be replaced by alternative requirements attributable to alternative operating models. 7. Evidence from evaluative studies of other utility price controls shows that bigger efficiency challenges are achieveable from the 2nd and subsequent price controls rather than the first such price control applying. (See: http://www.rail-reg.gov.uk/upload/pdf/pr08-oxeraeffic-160408.pdf).

Issue 2	***NI Water Response, Page 17, para 3.5.1*** NI Water agrees that the NDPB status provides challenges in terms of incentivising and delivering efficiency savings. However, the solution to this problem is not to impose higher, and unrealistic, targets, but instead to work to introduce meaningful and effective incentives.
Response 2	We agree the current operating model is not optimal, no financial incentives exist to encourage out performance of the regulatory contract. The strongest incentive within the current dual status model is for the company to spend to budget. We have listened to the company and have reduced the rate of challenge for reducing the remaining operational efficiency gap. We believe that the challenge set is realistic and that it is important for NI Water to now focus its energies to deliver a better value service to the consumers (and taxpayers) of N Ireland. Strong reputational incentives remain for NI Water and we have discussed with the department and the company the development of additional incentives, such as the transfer of operational outperformance to capital at the year start. We would be pleased to continue to discuss the development of incentives which will be operable and acceptable by the company in the current dual status.
Issue 3	***NI Water Response, Page 18, summary box*** Our analysis shows a significant slowdown of the efficiency performance in 2012/13. There is no evidence to suggest this trend will not continue through PC13.
Response 3	Whilst NI Water's Business Plan indicates a slowdown in performance for the last year of PC10, the scale of the efficiency gap remains substantial at over 30% (31% as benchmarked to the average comparator ; 38% to the frontier and 34% as measured by NI Water). This significant gap supports the need and achievability for delivering the reduced 5% per year savings included within the final determination. We also note that the latest Quarterly Shareholder Report (QSR) indicates the possibility of some further outperformance below the 2012-13 budget which we have not taken into account in this final determination.
Issue 4	***NI Water Response, Page 21, para 4.3.3*** Much of the out-performance cannot be assumed to be repeatable due to the following factors: • Out-performance in the power price is linked to market volatility – this cannot be relied on going forward and requires a suitable risk allowance to be in place due to this largely uncontrollable major cost; • Out-performance in staff costs is due to an externally driven two year pay freeze which cannot be sustained indefinitely. In addition we had a pension credit following actuarial valuation which is linked to market volatility and cannot be relied on going forward;

	• We have seen reductions in regulatory costs in the current financial year based on receiving a credit from regulators for unused funding previously paid by us – we have had no commitment / indication from our regulators that these can be sustained particularly as we move into a more strategic PC15; • Land and Property Service (LPS) costs continue to be reviewed but rates are largely outside our control; and, • We have seen efficiencies in consultants, materials and chemicals, some of which should be able to be sustained, but the scope for further efficiencies in these areas is much diminished.
Response 4	NI Water are the experts in the industry and we would note that the efficiency journey we are requiring NI Water to follow is not unchartered as others within the industry have already transformed their operations and can act as role models for NI Water. It is also important that the Regulator does not micro manage NI Water. It is for the company to decide how it will meet its efficiency challenge. An absence of any outperformance going forward does not translate into a restriction on NI Water delivering their efficiency challenge for PC13. The Regulator has recognised NI Water's good performance during PC10 in reducing their efficiency gap and has reduced the PC13 final determination efficiency challenge to 5% per annum compared to the 6.9% per annum efficiency challenge being delivered for PC10.
Issue 5	***NI Water Response, Page 22, para 4.4.1*** In the PC13 draft determination, a £5.2m opex reduction which was surrendered to the Department in the October 2012 monitoring round has been classified as efficiency savings. This would suggest the opex reduction is repeatable in the PC13 years. We do not agree with this view.
Response 5	The Regulator has amended the approach to 2012-13 in the final determination. The proposed figure (£180.5m 2010-11 prices) has been accepted but some credit has been given in the efficiency line by virtue of the fact that the UR baseline is larger than NI Water's submission. By adjusting NI Water's efficiencies upwards in 2012-13 from 2.3% to 3.8% in 2012-13, we have accepted the company's operational expenditure projection for 2012-13 of £180.5m submitted within its revised opex figures. The Regulator considers this approach to be conservative. NI Water accepted that a proportion of the £5.2m reduction was sustainable. More opex reductions have been identified in QSR2 for 2012-13, over and above the company's previous £5.2m surrender to DRD, for which we have chosen not to make any further efficiency amendment.

Issue 6	***NI Water Response, Page 24, para 4.4.4*** Through the draft determination query process, we have revised our rates projections with no significant difference to the PC10 projections contained within the draft determination. This revision includes a correction to the base year of £2.5m, relating to a significant credit received from LPS for overpayment in previous years. In the draft determination, this was reduced by £0.9m on the basis that the charge in the following year, 2011/12, did not show an increase of £2.5m. We do not agree with this approach and it is inconsistent with the Utility Regulator's Cost and Performance report for 2010/11 where £2.7m was accepted as a valid figure for the rates credit and was deducted when calculating outperformance for the year. This has been discussed with the Utility Regulator in a meeting on 17 October 2012.
Response 6	The final determination has amended the approach and increased the base year allowance by £0.9m. The Regulator has accepted proposed rates reductions of £0.8m in the PC13 years in line with NI Water views.
Issue 7	***NI Water Response, Page 27, para 5.2.3*** Annex D to the draft determination: *'The Rate of Frontier Shift Affecting Water Industry Costs'* sets out the calculation of the frontier shift and implies a price rise of 4% per annum is applied to energy costs. We have reviewed the calculation and note that the proportion of power costs to total opex for an average water and sewerage company (WaSC) is assumed as 12.5% compared to an actual figure of 23% calculated from our 2012 October monitoring round position.
Response 7	It is accepted that the cost composition is different for NI Water than the average WaSC. This is not considered to be an issue by the Regulator since the analysis is designed to model cost shifts at the frontier. Recognition has however been given to the fact that NI Water has a special factor in relation to power and regional wages. Figures have therefore been amended accordingly to encompass the effect of our special factors. This results in adjusted weightings for power and wage costs.
Issue 8	***NI Water Response, Page 28, para 5.2.4*** It is also worth noting that Department of Energy and Climate Change (DECC) recently (October 2012) updated their assumptions on retail energy prices and are now forecasting a 38% increase in the period 2011-2015 as shown in the table below. This increase is significantly higher than that assumed in Annex D and compares to DECC's previous forecast in October 2011 of a 13% rise over the same period.
Response 8	The Regulator investigated market forecasts of both future electricity prices and wholesale gas costs. The findings indicated results broadly in line with the 4% rise predicted in the draft determination. Wholesale gas prices over the next two years are forecast to remain stable. Current electricity forecasts suggest increases of around 5% per annum. Findings therefore indicate that the current position remains in line with market expectations.

Issue 9	***NI Water Response, Page 28, para 5.2.6*** We note in the PC10 final determination that the Utility Regulator intended to develop a methodology for indexing the price element of the energy component of the end-user price to de-risk the company. The need for such a mechanism is more relevant now than ever and we would welcome the opportunity to work with the Utility Regulator to agree this for PC13 and beyond.
Response 9	The Frontier Shift approach is a way of trying to account for cost pressures which RPI may not fully consider. The Regulator no longer sees the relevance of a specific indexation for power costs at the present time given that: 1. A 4% per annum power allowance has been included within frontier shift assumptions; 2. Subsequent shifts on power prices will enter RPI (which is used to inform yearly price limits); 3. The company's NDPB status does not lend itself to such an approach; and 4. The Company has access to relevant items bids under the Consequent Written Agreement in the event of further fluctuations.
Issue 10	***NI Water Response, Page 28, para 5.3.1*** In the PC13 Business Plan, NI Water claimed opex from capex of £6.8m over the PC13 period. The draft determination has disallowed £2.2m of this. NI Water sought further clarification from the Utility Regulator on this and the matter was discussed at a workshop between NI Water and the Utility Regulator on 17 October 2012.
Response 10	The Regulator has amended the opex from capex approach on the basis of NI Water representation. The allowance now stands at 94% of the amount claimed. The current level of deductions reflects Castor Bay, Ballydougan and Killyhevlin allowances. Uplifts to the opex from capex allowance have been made for M&G, baseline costs, and indexation misunderstandings.
Issue 11	***NI Water Response, Page 31, para 5.4.8*** We note that the Utility Regulator does not anticipate that transformation costs will be treated as a-typical in the next price review. We would have concerns with this proposal since these costs relate to on-going transformation and restructuring activity and cannot be considered as part of the on-going business cost base.
Response 11	The basis of treating transformation costs as atypical follows the example of the Water Industry Commission in Scotland (WICS). In their first price control Scottish Water were allowed £200m (opex and capex) over four years to implement business changes. However, the transformation programme was designed for only one price review. In SR02 WICS stated, *"It is important to note that Spend to Save is additional to any ongoing spending within the authorities to achieve efficiency. The Spend to Save allowance should therefore* ***be used to meet one-off costs of change rather than the continuing costs of performance improvement."*** (SR02, Section 4, p223)

	NI Water has had access to transformation funding since 2007-08 with further funds being provided for business improvement in PC13. The Regulator cannot consider these costs as atypical indefinitely. As the company states, the costs relate to on-going annual expenditure. By their nature therefore such costs are not atypical.
Issue 12	***NI Water Response, Page 32, para 5.6.1*** Within the draft determination, the Utility Regulator has disallowed NI Water's bids for BI and VER/VS funding in PC13. The Utility Regulator argues that to allow these costs in PC13 would result in customers 'paying twice' due to under spends in these cost categories in PC10 (see section 4.2 above). NI Water believes that to retrospectively ring-fence two cost categories in this manner is unfair. We also believe it is not consistent with the treatment agreed in the CWA which underpins the Memorandum of Understanding (MoU) between the Department and the Utility Regulator. When assessing the extent to which customers may be 'paying twice', variations in revenue recovered must also be considered. Table R.11 below demonstrates that in the same period NI Water's customer revenue was £33m lower than that assumed in the PC10 final determination.
Response 12	Whilst there was no ring-fencing of funds in PC10, the Regulator does not believe that the treatment is inconsistent with the CWA. The Agreement stipulated that; *"outperformance in these areas can be applied against under-performance in other areas when measuring delivery against overall opex efficiency targets."* The company outperformed its PC10 challenge to date and therefore the need to utilise outperformance of VER/VS and BIP to supplement under performance elsewhere is not an issue. We also note that the PC10 plan was to deliver 240 FTE post reductions. Company query responses to this office detailed that a significant proportion of these reductions did not occur. We do not accept that the under recovery of revenue can be offset against under spend in transformation projects. The Regulator does not consider the two issues to be related. Furthermore, unused K from PC10 can be recovered as part of PC13. Were the Regulator to also allow full BIP and VER/VS costs, then customers would inevitably be 'paying twice'.
Issue 13	***NI Water Response, Page 39, para 6.2.3*** The efficiency models used by the Utility Regulator, which were developed by Ofwat, have not been updated since 2008/09. Whilst the Utility Regulator has re-estimated the models using available 2010/11 data, they have not replicated the data validation and refinement process used by Ofwat. This introduces the risk that the models are increasingly out of date and are less robust at predicting real efficiency. It is worth noting that model coefficients estimated by the Utility Regulator have in some cases deviated materially from those used by Ofwat in 2007/08.

Response 13

The Regulator is not in a position to fully replicate the data refinement processes used by Ofwat. However, it is not believed that this introduces a level of risk which undermines the assessment of efficiency. The same approach to data validation has been undertaken by the Regulator for a number of years.

With respect to model variables, it is to be expected that coefficients will change from year to year with changing cost profiles. This is demonstrated below, even in Ofwat years. For the most part there has been significant consistency between years as illustrated in the table:

Variable	Ofwat 2007-08 Coefficient	Ofwat 2008-09 Coefficient	UR 2009-10 Coefficient	UR 2010-11 Coefficient
Main per property	-0.713	-0.573	-0.383	-0.376
Sources per DI	25.136	28.573	18.123	14.989
Borehole %	-7.165	-7.279	-7.699	-7.155
DI * pumping head	0.907	0.949	0.939	0.930
Billed properties	0.918	0.879	0.859	0.846
Sewer district / km	0.199	0.186	0.169	0.184
Res pop / sewer km	0.961	0.924	0.691	0.935
Holiday pop %	1.253	0.562	1.794	2.150
Total load (COD/day)	0.766	0.768	0.767	0.733
Activated sludge	0.326	0.353	0.414	0.248
Tight consent	0.110	0.116	0.115	0.114

A more pertinent statistic with respect to the reliability of the model variables is the t-stat for significance of each explanatory variable. Analysis of the t-stats in 2008-09 and the 2010-11 years illustrates the following:

Variable	Ofwat 2008-09 T-stats	Utility Regulator 2010-11 T-stats
Main per property	-1.86	-0.45
Sources per DI	3.55	3.29
Borehole %	-3.02	-3.95
DI * pumping head	32.72	54.71
Billed properties	24.41	18.8
Sewer district / km	5.17	4.38
Res pop / sewer km	4.34	3.86
Holiday pop %	0.47	1.49
Total load (COD/day)	28.44	27.15
Activated sludge	6.79	4.70
Tight consent	2.52	2.49

Aside from the water distribution variable, which has been dealt with in PC10 and PC13 by a special factor adjustment, the results illustrate no material changes in the predictive power of the variables. In certain cases predictive power has improved.

This illustrates that there are no major concerns around using the 2010-11 efficiency results. It further demonstrates that the loss of Mid-Kent as a comparator for the purposes of econometric regressions did not raise further concerns about model robustness.

Issue 14	***NI Water Response, Page 40, para 6.2.6*** Whilst the Utility Regulator may have legitimate concerns about the validity of the business activity modelling results for NI Water, there are aspects of the Utility Regulator's approach which raise concerns for us: • Essentially the Utility Regulator is excluding a model where there is a factor that operates in NI Water's favour. However, there may be factors in the other models that act in the other direction e.g. sewerage networks. This introduces the risk that the Utility Regulator's approach is perceived to be one-sided. Exclusion of this model also means NI Water has not benefitted from the significant reductions in business activity costs resulting from management's decision to in-source the customer billing back office function. • A more direct concern is that the Utility Regulator has estimated the efficiency target based on the models excluding business activities but has then applied the targets to operating expenditure including business activities. The Utility Regulator is implicitly assuming that NI Water's underlying efficiency in business activities is the same as its measured efficiency in the other models. This is a dubious assumption that does not appear to be supported by any evidence. In fact, the analysis in Table R.13 shows that business activity expenditure has nearly halved since 2008-09.
Response 14	Exclusion of the business activity models has been an established part of the NI Water efficiency analysis for a number of years. The process has not been questioned by NI Water at PC10 or in earlier modelling. There is recognition that excluding the models avoids having to construct negative special factors around artificially low business activities expenditure with the continued deferral of domestic charging/billing. The Independent Water Review Panel recognised this very issue in their analysis of DRD Water Service efficiency. They stated: *"it is not really credible for ICS to expand to the denominator in the Business Activities unit cost model to the full level of connected properties without amending or adjusting the level of costs for 2003/04 – otherwise Water Service would be artificially portrayed as being much more efficient. The level of costs would need to be amended to reflect the fact that an additional 600,000 odd customers brings with it substantial additional costs that are not reflected in Water Service's costs for Sewerage Opex Business Activities in 2003/04 – costs around the billing system (the introduction of the Crystal Alliance contract) and of course a step change in Bad Debt."* (IWRP – Strand One Technical Annexes, p7, October 2007) Given these issues, the Regulator has excluded the models. Otherwise significant negative special factors would be required. The Regulator does not consider the exclusion of the business activities models to be one-sided given the difficulties for comparison.

The scale of difference in 2010-11 activity levels is highlighted in the unit billed water property comparisons below.

	Written Complaints per Billed Property [Complaints /	Telephone Calls per Billed Property [Calls / 000]	Meter Readings per Billed Property [Readings / 000]	Billing Contacts per Billed Property [Contact /
Anglian	9.84	1,407	686	887
Dwr Cymru	8.37	982	355	726
United Utilities	12.92	994	327	806
Northumbrian	5.19	780	363	630
Severn Trent	7.25	936	347	805
South West	7.94	1,711	708	1,331
Southern	12.27	1,822	449	1,234
Thames	8.65	1,257	310	1,075
Wessex	8.27	1,291	518	1,391
Yorkshire	4.57	884	405	783
E&W Average	**8.55**	**1,120**	**405**	**898**
NI Water	5.80	457	87	141
Difference from	**-32.2%**	**-59.2%**	**-78.4%**	**-84.3%**

Compared with average WaSCs, on a per property basis NI Water deals with:

- 32% less written complaints;
- Almost 60% less telephone calls;
- 84% less billing contacts; and
- Undertakes 78% less meter readings.

Much of this difference is to be expected given the lack of domestic charging/billing. Whilst companies' activities in these areas will vary depending on efficiency, the scale of the differential for NI Water illustrates the difficulty of comparison for these models. These findings support exclusion of the models.

NI Water has cited more direct concerns with applying the efficiency targets to business activity costs. The company contend that a significant cost reduction in business activities renders it inappropriate to apply the same level of challenge on this cost area. NI Water is of the opinion that the Regulators assumptions on efficiency levels are dubious and not supported by fact.

	Whilst there is recognition of cost reductions in this area, the Regulator is still of the opinion that efficiencies remain to be achieved. This contention is based on the following findings: • The Regulator undertook analysis of the remaining business activities costs using a composite variable. The variable is made up of business activity components i.e. dealing with written complaints, calls received, meter readings and billing contacts. • It is unclear how each component will impact on costs so each was been given an equal weighting (30%) except calls received (10%) which is thought to cost somewhat less on a per unit basis. • For NI Water the findings suggest they should be completing these activities for £9.7m compared to actual costs of £12.1m (20% cost reductions to average). The analysis in this case is somewhat difficult given the difference in the scale of activities undertaken. The findings do however support the requirement for further efficiency on NI Water's part. The Regulator does not consider it unreasonable to assume that efficiency levels are similar in non-benchmarked areas. Furthermore, our approach follows Ofwat precedent where the same rate of catch-up is applied to rates as to the rest of a company's business costs. This is in spite of such costs not having been included in the modelling.
Issue 15	***NI Water Response, Page 41, para 6.2.6*** The Utility Regulator has also chosen to apply a reduction to allowed special factors and a-typical claims. This reduction was based on the proportion of business activity expenditure to total modelled expenditure. This approach assumes that the same proportion of special factor and atypical costs also relate to business activities. We have carried out an analysis of these costs which provides a more accurate basis for making this adjustment. Table R.14 and R.15 demonstrate that the actual adjustment is significantly lower than that applied in the draft determination.
Response 15	The point the company makes has some merit. The Regulator has decided to maintain its approach at draft stage as this methodology is consistent with previous years and easily understood by stakeholders. The process is also the same for that undertaken on the frontier company. To make specific adjustments to NI Water but not the frontier might then appear 'one-sided'. Such an adjustment would also be inconsistent with NI Water's approach in the business plan. For the most part these atypical cost categories were excluded by NI Water for the purpose of calculating the efficiency gap. Were the approach to have changed the difference to catch-up targets would be relatively small. Assuming a 62.5% catch-up rate (as used under Scenario 2 in the final determination) the PC13 per annum target would otherwise have been 4.6% compared to the 5.0% in the final determination.

Issue 16	***NI Water Response, Page 42, para 6.2.8*** It is also worth contrasting the Utility Regulator's approach with that of WICS at SR02, when they set a catch-up target of 80% over five years. Whilst the overall catch-up was higher than that proposed by the Utility Regulator, there were a number of aspects of their approach which suggests their approach was more cautious, namely: • 80% catch-up was predicated upon both the merger of the three water authorities going ahead and a spend to save allocation of £200m being made available to Scottish Water over the period; • WICS assessment of the efficiency gap was based on three comparable companies from the E&W industry, not the frontier companies. In fact WICS assessment of the efficiency gap was based on the lowest ranked of the comparator companies, thus reducing the size of the efficiency gap further; • WICS carried out an alternative assessment of the efficiency gap to validate the efficiency modelling results; • WICS made a number of adjustments to Ofwat models to better reflect local issues. For example they amended explanatory factors in the water resource and treatment model (WICS included different source types) and in the small wastewater treatment works model (WICS extended banding to include many small WwTW and gave these works a higher unit cost); and • Benchmarking included the full costs incurred by the companies for leakage targets, domestic metering and other imposed costs not faced in Scotland.
Response 16	Recognition has been given to NI Water's representations with respect to the rate of catch-up. As a consequence the Regulator has reduced the efficiency target to 5% per annum, resulting in a cumulative catch-up of 62.5% across 5 years. In relation to the individual points raised: • It is accepted that a proportion of the 80% consisted of merger savings. However NI Water has been allowed transformation funding since 2007-08, will be allowed further business improvement funding in PC13 and has the opportunity to access PE funds from DFP on the provision of an approved business case. • The frontier companies used in the Regulator's analysis are not actually the best performing of NI Water's peers. In 2010-11 the chosen frontier water company is ranked 6th out of 21 companies and ranked 2nd of 10 sewerage companies respectively. • The Regulator has carried out validity checks on the scale of the gap in 2010-11. This included different topex models for water and sewerage costs. Whilst likely to be less robust, the findings confirm significant levels of inefficiency.

	• The scale of the special factor allowance for NI Water indicates that local circumstances have been taken into consideration. The company has also had opportunity to raise further issues which it considers to be a special factor. • The benchmarking for PC13 includes comparison to companies who deliver to higher cost obligations and service levels which NI Water do not deliver to at the present time. Thus, the Regulator has mirrored the lenient approach adopted by WICS. A more stringent approach would try and estimate further negative special factors for NI Water's lower levels of service compared to its comparators i.e. its remaining OPA gap to the 290 point industry average (2009-10). The resulting NI Water efficiency gap would be materially higher than currently reported.
Issue 17	***NI Water Response, Page 43, para 6.3.2*** As part of this Determination, the Competition Commission considered whether E&W comparator companies have managed to achieve the 60% catch-up assumption that Ofwat has applied at successive price controls. The Competition Commission's analysis revealed the following: • In the majority of cases (two-thirds) the company did not achieve the target based on 60% catch-up; and • This result did not vary depending on the starting point. In other words, companies with a high degree of assessed inefficiency were just as likely to fail to achieve the target.
Response 17	Whilst their own findings questioned the achievement of companies performance against target, within the same report the Competition Commission states that: • They place more weight on the findings of Reckon (2008) and therefore accept that the industry had on average met the 60% targets. • They find no justification for a lower than 60% catch-up target over 5 years. • A 100% rate of catch-up would not be an unreasonable target for opex if there was no noise in the data i.e. certainty around inefficiency levels.
Issue 18	***NI Water Response, Page 43, para 6.3.4*** In 2008 Reckon undertook a study on the econometric models for UK Water Industry Research (UKWIR). They concluded that 65% represented an upper bound for the efficiency catch-up factor. However, this conclusion was based on the assumption that the cost differences identified by the models were genuine inefficiencies. This is an unrealistic assumption because not all systematic cost differences have been accounted for and which, if relaxed, implies a lower catch-up factor.

Response 18	The figures quoted in the NI Water response misrepresent Reckon (2008) findings. Their analysis indicates that the 65% catch-up may relate to an individual model rather than the overall business. That said, Reckon did not and would not have suggested there was any upper bound to catch-up efficiency based on their research for UKWIR (2008). Reckon further note that the Regulator's catch-up and their own findings are not comparable as the Regulator has undertaken residual adjustment (10% / 20%) discounts to water and sewerage models respectively before calculation of NI Water's efficiency gap. Without such residual adjustment NI Water's efficiency gap would be materially higher than currently reported. On a comparable basis the catch-up challenge would be 54.9% for the PC13 final determination as per Reckon (2012).
Issue 19	***NI Water Response, Page 45, para 6.3.11*** The relevant features of this approach are as follows. • The efficiency target was set as a catch-up towards the upper quartile performance as opposed to the frontier performance; • ORR identified the relevant efficiency benchmarks based on an extensive analysis considering a variety of sources of evidence. This included top down and bottom-up assessments of efficiency, separate studies for different components of operating and maintenance expenditure. This focus on multiple sources of evidence would help to improve the reliability of the efficiency assessment; and • The efficiency target imposed by ORR on Network Rail was 4.9% per year, compared to NI Water's draft determination target of 6% per year. The assessed efficiency gap of 35% was broadly similar to the Utility Regulator's assessed gap for NI Water of 38%. •
Response 19	By way of comparison, the Utility Regulator assessed the sensitivity of efficiency targets resulting from adoption of an approach seeking efficiency gains to upper quartile performance. The upper quartile can be defined differently so two options were chosen. The first used the company closest to the 25th percentile. This resulted in the 6th ranked company for water and the 3rd ranked company for sewage being chosen. The second methodology followed that of WICS in SR10 and used the average of the 2nd and 3rd ranked WaSCs[1].

[1] Details of the WICS approach at SR10 can be found on page 4 of:
http://www.watercommission.co.uk/UserFiles/Documents/Staff%20paper%206.pdf

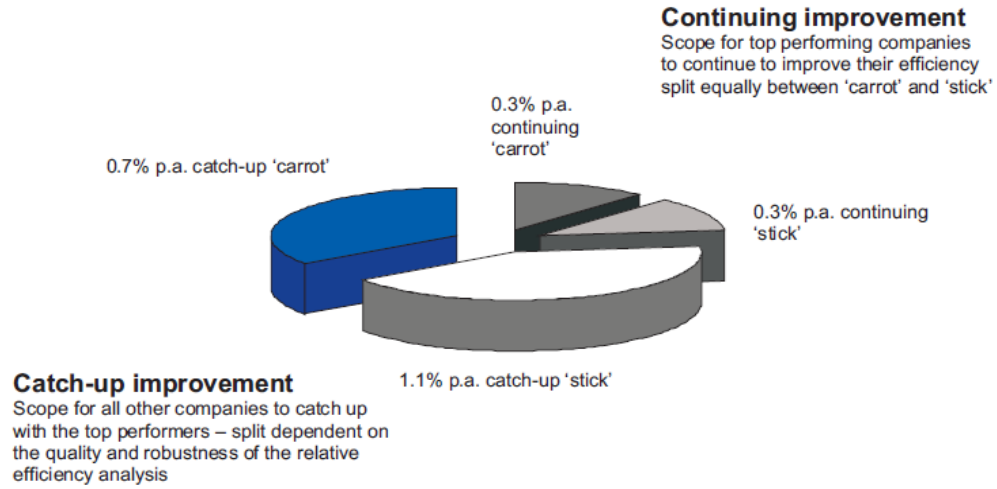
	The efficiency gap sensitivity findings were: • Option 1 – 34.8% gap = 5.1% p.a. targets based on ORR 66% catch-up over 5 years on a geometric mean basis. • Option 2 WICS approach = 36.0% gap = 8.5% p.a. targets using 100% catch-up over 5 years on a geometric mean basis. In either case the catch-up targets are higher than the 5% per annum targets as determined by the Regulator in this PC13 final determination. The Regulators final determination target for PC13 is also very similar to that set by ORR for Network Rail who had a similar level of inefficiency to NI Water.
Issue 20	***NI Water Response, Page 47, para 6.4.7*** The Utility Regulator's approach assumes that the 60% catch-up figure used by Ofwat is based on a view that the E&W companies can, on average, achieve more than the 60% but that the additional element is left as outperformance for shareholders. This view of Ofwat's approach is not supported by regulatory precedent. The Ofwat approach clearly allows the companies to retain a share of any additional efficiency beyond the 60%, in the same way that the companies would have to absorb the impact if they fail to achieve the 60% catch-up. However, the Ofwat approach is not based on an expectation that companies will achieve more than 60%. There is no basis for this in Ofwat's price control documentation.
Response 21	Whilst Ofwat do not explicitly state that they believe companies will outperform targets, it is clear from their publications that the scope for improvement is greater than the targets they set. The incentive to achieve cost reductions beyond opex targets is considered to be a 'carrot' for shareholders to drive performance. In the PR04 final determination Ofwat stated the following[2]:

[2] It should be noted that the scale of the Ofwat challenge is much less than NI Water's as it represents a much more converged industry where much of the relative catch-up has already been achieved.

Figure 9 shows how our assessment of efficiency improvements for base operating costs for the water service build to an assumption on the overall scope for operating efficiency improvements of around 2.4% each year, the overall size of the 'pie' is our example. This is split into 0.6% each year for continuing improvement and 1.8% for the catch-up. We have included only half of the scope for continuing efficiency in price limits 0.3% and just over half of the scope for catch-up 1.1%. The balance represents the potential for outperformance for the companies.

Figure 9 Improving efficiency – the 'carrot and stick' model

Example: scope for improvements in efficiency – water service base operating expenditure



It would not be considered much of an incentive if Ofwat believed that no company would be able to outperform the efficiency target set. It would furthermore raise concerns about the scope for efficiency analysis if no company could make gains beyond the 'stick' targets.

Ofwat further quoted evidence to the Competition Commission that Reckon (2008) had found that on average companies met the 60% target. This view was accepted by the Commission.

Issue 21

NI Water Response, Page 51, para 6.6.4

Assuming an average staff cost of £40k, the draft determination efficiency equates to almost 160 headcount reductions in the two-year period of which 80 would be required in 2013/14. This equates to a 12% reduction in staff numbers within 18 months, just to deliver this element of the required opex efficiency. Our PC13 Business Plan projected a headcount reduction of 75 over the two year period, which we regarded a challenge to achieve.

Response 22	The Regulator does not micro manage NI Water and it is for the company to decide how it will meet the efficiency challenge for PC13. The Regulator does not prescribe where efficiencies should be made although a significant element of their cost base is made up of labour. If the company wish to reduce its materially large efficiency gap it is highly likely that headcount reductions will form a significant element of its plans. NI Water has stated that the draft determination would require headcount reductions of 160 staff. This is a much enhanced target from their planned reduction of 75 across PC13. Company query responses to this office indicate that NI Water had planned to reduce staff by 240 by the end of PC10. The company have under spent against budget and are currently projecting a much lower level of staff reduction through VER/VS. This indicates that even by PC10 company plans, significant scope for additional headcount reductions remain.
Issue 22	***NI Water Response, Page 52, para 6.7.1*** We have a number of issues with the manner in which the Utility Regulator has implemented the CSV approach: • Whilst the Utility Regulator notes correctly that all these variables are highly correlated, they partially dismiss length of main because the simple correlation to opex is not as high as with the others. This is used as the basis for setting the weights in favour of connected properties and winter population (the variables that give the lowest estimate). We would have concerns with using the highest simple correlation to attribute causality. • We would question whether the connected properties and winter population variables capture different attributes of the network configuration. If not the CSV would be assigning a weight of 60% to the lowest possible estimate. • The sample size is still 21 and even with only one regressor, the standard error is fairly high.
Response 22	It is recognised that the CSV approach is open to some debate in terms of weighting. However, in relation to the specific points raised: • High correlation is an obvious selection criterion when choosing weights given the requirement for explanatory variables exhibiting some degree of causality (using the general to specific approach to modelling). • The company raises a reasonable point about the connected properties and winter population weighting. However, the Regulator investigated a variety of other models including: (a) Equal weightings; (b) Removing outliers such as Thames; and (c) Equal weights including an additional measure for the proportion of large mains.

	The findings indicated that there was not much difference in the predicted costs between the different options. In fact the special factor would have been lower by £0.4m if the large mains variable was included. Our decision in this regard is in favour of the company. • The standard error of 0.05 is not considered high. When modelling, a key criterion is significance of variables as measured by their t-stats (anything above a value of 2 is generally considered statistically significant within the literature). The size of the t-stat indicates that the composite variable is a reliable predictor of costs.
Issue 23	***NI Water Response, Page 52, para 6.7.1*** NI Water strongly believes there are other special factors which have yet to be determined, a point which was acknowledged by the Utility Regulator in the draft determination.
Response 23	It is accepted that other special factors may exist. However the Regulator believes that the final determination position is robust on the basis that: • Residual adjustments have been made (10% / 20% respectively for water and sewerage models). • Special factors, where known, have been accounted for. • No negative special factor has been applied for the lower levels of service that are achieved in Northern Ireland. • The challenge in the final determination has been revised downwards from the 72.5% catch-up. • NI Water was allowed free scope to submit whatever special factors claim it would wish the Regulator to consider at PC10 and PC13.
Issue 24	***NI Water Response, Page 53, para 6.7.2*** The assessment of input price inflation is based on an industry standard input mix. We believe NI Water's mix is materially different for several cost categories. Table R.19 below compares the assumed mix with NI Waters actual (calculated from our 2012/13 October monitoring round position). It is worth highlighting that the proportion of power costs to total opex for an average WaSC is assumed as 12.5% compared to an actual figure of 23%. NI Water would recommend the actual input mix is used in the final determination.
Response 24	See response to Issue 7 above.
Issue 25	***NI Water Response, Page 53, para 6.7.2*** However it does not appear that First Economics used a time period that represents a full economic cycle. For example CEPA, in its analysis for ORR, used a period 1997-2006. It is not clear what the impact of these different time periods is. We note that the CEPA study estimates that the whole economic TFP for the period 1997-2006 was 0.1%. The whole economy TFP for the First Economics period 1990-2007 was 0.07%. This might suggest the First Economics have overstated the TFP improvements.

Response 25	Defining the term of a full economic cycle is open to debate. Different results may be found by selecting more recent years for analysis. The Regulator does not see any basis for changing its position in the final determination as its frontier analysis (see Annex D – The Rate of Frontier Shift Affecting Water Industry Costs) already includes sufficient years worth of data to avoid any bias.
Issue 26	***Frontier Economics, Annex 3, Page 4*** The scale of total special factors for NIW is large compared to E&W average. For NIW, the scale of total special factors expressed as a percentage of total modelled opex is around 9%. Only two of the E&W companies have a total special factor contribution that exceeds this (see Figure above). These are smaller water only companies that face specific operating environments. The extent of the special factors applied to NIW indicates that the efficiency models are less suited to NIW than to E&W. At one level this is not surprising given that the models were developed by Ofwat to be applied to E&W companies. It does though suggest that more caution should be applied in assessing the catch-up factor for NIW based on the modelling results.
Response 26	The Regulator accepts that the water distribution model in particular is unsuited to NI Water. This has resulted in a large scale special factor allowance in comparison to other companies. The Regulator believes it has exercised caution with respect to the catch-up as it has made residual adjustments, accepted large special factors and reduced the catch-up challenge in the final determination.
Issue 27	***Frontier Economics, Annex 3, Page 7*** The model coefficients that the Regulator has estimated using the 2010/11 data are different to those used by Ofwat. In some cases the changes in the model specification are material. The sample size for the water models has also reduced from 22 to 21 companies. Details of the models where the coefficients have changed materially are shown in Annex 2. For example: • In the water distribution model, there is a significant change in the co-efficient on mains length per property from -0.713 in the Ofwat 2007/08 model to -0.376 in the UR updated model. • In the resource and treatment model, the co-efficient on number of sources per distribution input has changed from 25.136 in the Ofwat 2007/08 model to 14.989 in the UR updated model. • In the sewerage network model, the co-efficient on holiday population over resident population has changed from 1.253 in the Ofwat 2007/08 model to 2.150 in the UR updated model.
Response 27	There is acceptance that the water distribution coefficient is no longer statistically robust and has been adjusted by the special factor process. With respect to other coefficient changes, it is not of undue concern that coefficients change over time (see also Response 13 above).

	The more important concern is that the reliability of the explanatory variable has not deteriorated. The t-stats table continues to support the reliability of the modelling.
Issue 28	***Frontier Economics, Annex 3, Page 7*** There is regulatory precedent for applying a less stringent approach to catch-up and efficiency targets in the face of less robust modelling evidence. For example: • Ofwat and UR have applied larger residual adjustments to sewerage models (20%) compared to water models (10%) to reflect the smaller sample size and less precise results from the sewerage models. • When Ofwat used econometric models for capital maintenance efficiency (for example, at the 1999 and 2004 price controls) they applied a lower catch-up factor of 40% to the efficiency frontier. This lower catch-up factor (i.e. compared to the 60% for operating costs) reflected the fact that the capital maintenance models were less robust.
Response 28	A reasonable response to model uncertainty would be to reduce the rate of catch-up. The Regulator does not have any undue concerns about the current approach that would lead it to reduce catch-up rates beyond that set out in the final determination. Although the circumstances may be different, the Competition Commission also saw no reason to apply catch-up rates below the 60% precedent, preferring to remain with existing regulatory precedent in the case of the Bristol Water referral.
Issue 29	***Frontier Economics, Annex 3, Page 9*** UR includes PPP concessionaire payments as part of the modelled opex. It is important to note that concessionaire payments are not an operating cost incurred by NIW. These payments are a 'third party' cost which UR uses as a proxy for cost of operating PPP assets. We understand that these costs are based solely on valuations provided by the external PPP contractors and that NIW does not subject these valuations to the normal cost verification process. This also increases the uncertainty in the assessment of NIW's efficiency.
Response 29	The PPP payments may add an additional level of uncertainty. However NI Water has opportunity in the AIR commentary to strip out any costs from the concessionaires payments that it does not consider to be comparable e.g. capital maintenance.

3 Conclusions

3.1.1 There are numerous areas with respect to efficiency where NI Water and the Utility Regulator disagree. That said, the difference in the scale of the efficiency gap is not that great (Regulator view of 38% against NI Water view of 34% inefficiency).

3.1.2 The main area of contention is the rate of catch-up. The Utility Regulator is firmly of the opinion that challenging opex efficiency targets are still required. This view is reached on the basis of:

- The size of the efficiency gap;
- The evidence in PC10 that the company can deliver against challenging opex efficiency targets in spite of the corporate structure;
- The availability and access to transformation funding; and
- Regulatory precedent, especially the achievements elsewhere such as Scottish Water.

3.1.3 There will always be some disagreement concerning approaches to measuring efficiency. However the Regulator believes that the challenge imposed at PC13 is robust but achievable and supports the continuing development of NI Water.

References

Reckon (2008) for UKWIR (08/RG/04/3), “Application of time series analysis to relative efficiency assessment”.

Reckon (2012) for NIAUR, see PC13 Annex M: Reckon: Advice on aspects of Northern Ireland Water’s response to the PC13 draft determination.