

Water and sewerage service  
Price Control 2013-2015  
Northern Ireland Water

PC13 Final Determination Main Report

December 2012

# Water and sewerage service Price control 2013-15

## PC13 final determination

### Contents

<b>Foreword .....</b>	<b>5</b>
<b>Summary .....</b>	<b>6</b>
<b>1. Introduction .....</b>	<b>10</b>
1.1 Background .....	10
1.2 Governance Framework .....	10
1.3 PC13: A Proportionate Approach .....	12
1.4 Areas of Focus for PC13.....	13
1.5 Outcomes from PC10 .....	14
1.6 Outline of this Document.....	15
<b>2. Overview of responses to key issues and our decisions ..</b>	<b>16</b>
2.1 Introduction .....	16
2.2 Key issues .....	16
2.3 Other issues.....	21
2.4 Summary of key changes from the draft determination .....	21
<b>3. Price Limits for PC13.....</b>	<b>23</b>
3.2 Allowed Revenue.....	23
3.3 Financial Sustainability .....	26
3.4 Price Limits and Charges.....	27
3.5 Management of Risk and Uncertainty .....	30
<b>4. The Investment Programme .....</b>	<b>32</b>
4.2 Our Approach .....	32
4.3 Changes from the Draft Determination.....	32
4.4 Capital Investment Outturn for PC10 .....	33
4.5 Capital Investment in PC13.....	35
4.6 Our Assessment of the Proposed Investment Programme.....	35
4.7 Application of Investment.....	38
<b>5. Outputs .....</b>	<b>42</b>
5.2 Definition of Outputs .....	42
5.3 Summary of Key Benefits.....	49
5.4 Overall Performance Assessment (OPA) .....	50

<b>6. Operational Costs and Efficiency .....</b>	<b>53</b>
6.2 Background .....	53
6.3 Scope for Operating Cost Efficiency .....	53
6.4 Establishing Baseline Opex .....	54
6.5 Additions / (Reductions) to Base Operational Expenditure .....	55
6.6 Transformation Costs.....	58
6.7 Opex from Capex.....	60
6.8 Special Factors.....	60
6.9 Relative Efficiency Gap and Catch-up.....	62
6.10 Frontier Shift Assumptions.....	65
6.11 Treatment of PPP/PFIs .....	67
6.12 NI Water Opex Proposals .....	69
6.13 Overall Challenge to NI Water .....	70
<b>7. Conclusions.....</b>	<b>75</b>
7.2 NI Water’s performance against the First Price Control – PC10.....	75
7.3 PC13 Final Determination – Challenges for NI Water .....	75
7.4 NI Water’s Governance Framework .....	76
7.5 Next Steps – The need for a Strategic Outlook and Certainty of Funding..	77
<b>8. Monitoring Delivery .....</b>	<b>78</b>
<b>Glossary of Terms.....</b>	<b>81</b>
<b>Abbreviations .....</b>	<b>86</b>

## Annexes

The following annexes are published separately on the Utility Regulator’s web-site and are organised in order of the chapters in this report:

### Chapter 2 – Overview of responses to key issues and our decisions

**Annex N:** Utility Regulator: Responses to the Draft Determination

### Chapter 3 – Price Limits for PC13

**Annex F:** Utility Regulator: Financing Investment

**Annex G:** Utility Regulator: Sources of Revenue

**Annex H:** Utility Regulator: Memorandum of Understanding

**Annex I:** Utility Regulator: Draft Consequent Written Agreement for PC13

## **Chapter 4 – The Investment Programme**

**Annex J:** Utility Regulator: PC10 Capex Out-turn Report

## **Chapter 5 – Outputs**

**Annex E:** Utility Regulator: Overall Performance Assessment

**Annex K:** Utility Regulator: PC13 Outputs

## **Chapter 6 – Operational Costs and Efficiency**

**Annex A:** Utility Regulator: Special Factors

**Annex B:** Utility Regulator: Atypical Costs

**Annex C:** Utility Regulator: Calculation of Operational Efficiency Gap and Efficiency Targets for PC13

**Annex D:** First Economics: The Rate of Frontier Shift Affecting Water Industry Costs

**Annex L:** Utility Regulator: Responses to NI Water's Comments on the Draft Determination Operational Efficiency Challenge

**Annex M:** Reckon: Advice on Aspects of Northern Ireland Water's Response to the PC13 Draft Determination

## About this document

This document sets out the Utility Regulator's final determination for price caps for NI Water for the two-year period from April 2013 to March 2015. The price control for this period is also known as PC13.

We published our draft determination in September 2012 and when the consultation closed in November we had received 12 responses on our proposals from a wide range of stakeholders. We carefully reviewed these responses, along with new information that became available after we had published the draft determination. All of these responses are published in full on our website.

The issues raised in response to the draft determination are addressed within this report, 'Price control 2013-15 main report'. We have published a summary of the full determination, which is available on our website at [www.uregni.gov.uk](http://www.uregni.gov.uk).

This final determination is available in alternative formats on request.

The draft determination described the context within which we and NI Water are operating, approaches taken to determine the price caps and overall required revenue, our proposed decisions, and their impact on the overall costs and charges for water and sewerage services.

Having taken account of the representations received, this final determination sets out our final decisions. It also details the outputs that are to be delivered given the allowed investment.

We will continue to monitor NI Water's performance against these outputs both on a quarterly basis and through the formal annual information return each financial year. We will also continue to publish our view on the company's performance each year within our Costs and Performance Report.

NI Water will now consider our final determination. If the company decides not to accept our decisions it can ask us to refer the determination as a whole to the Competition Commission. It has two months from publication of the final determination to make this decision. If NI Water decides not to refer our final determination, the determination will be applied over PC13 through the annual Scheme of Charges.

## Foreword

The Utility Regulator's primary role within the water industry of Northern Ireland is to protect the interests of consumers, both today and in future. One of our most important regulatory processes is to determine price controls for NI Water that provides consumers with best value for money. At present, the revenue that is attributable to domestic consumers is provided by government subsidy. This final determination will see bills and subsidy together being £58 million lower than NI Water's business plan bid. As a result, tariffs will fall, on average, by 6% below inflation for each of the two years 2013 to 2015.

This is the second price control we have conducted for NI Water (the first covered the period 2010-13). Following consultation on our draft determination we have reduced the challenge for NI Water to make operational efficiencies from 6% a year to 5%. This slows the pace at which the company would close the remaining significant efficiency gap (currently 38%) between it and benchmarked companies in England and Wales.

We have also responded to NI Water's concerns regarding the impact of its status as a non departmental public body. While we agree that the current model is not ideal, the hard evidence is that NI Water has performed well under the independent regulatory regime. It has delivered operational efficiencies of more than 6.9% a year to date during PC10, while at the same time improving its overall performance assessment from a score of 131 to 184. The real challenge is for NI Water to sustain this momentum by focusing on reducing costs and improving levels of service.

NI Water also expressed its concerns regarding the certainty of public expenditure funding to meet the price control determination. As we did for PC10, we will, with the Department for Regional Development, apply the agreed process to address any withdrawal of capital funding with a reduction in outputs. We will also accept and review any submissions relating to justified operational pressures indicated at the start and/or during the two PC13 financial years.

Our engagement with officials from the Department for Regional Development and the Department for Finance and Personnel has brought a transparency and understanding of our determination. It has also led to an acceptance of the need for public expenditure to fund 'spend to save' voluntary early retirement/voluntary severance and business improvement initiatives. This will ensure that consumers do not pay twice for these items (which were already funded in PC10).

This determination challenges NI Water to deliver better value for its consumers. The company has the opportunity to learn from others, particularly Scottish Water. This company, like NI Water, is publicly owned and has fast-tracked delivery of substantial efficiencies while at the same time improving services. At its heart, this determination poses an exciting challenge. Northern Ireland's water industry can be as efficient and provide as good a service as anywhere in the world. This final determination seeks to continue NI Water's journey towards this goal.



**Shane Lynch**

**Chief Executive**

# Summary

## Background

The Utility Regulator's (UR) role is to promote the interests of water and sewerage consumers and ensure that they receive best value for money. Through our price control process, we determine how much revenue NI Water requires in order to be able to deliver water quality, environmental and customer service objectives at the lowest reasonable overall cost to consumers for a set period of time. We then set price limits for NI Water in line with this revenue requirement.

This final price control determination (called PC13) sets out our price limits for water and sewerage services for the two years 2013-15. Our PC13 determination states that NI Water requires £703 million of revenue for the two-year period. This assessment is based on our benchmarking of the company's costs and our objective scrutiny of its performance. We have also taken into account the responses we received to our draft determination consultation (which closed in early November).

***Indications are that NI Water will successfully deliver its first regulatory price control, covering 2010 to 2013 (called PC10). This will have saved consumers more than £91 million over the three year period. This final determination now challenges NI Water to deliver a saving of £58 million, over the shorter 2013 to 2015 period.***

## Key benefits

**Lower charges for consumers** – charges will fall by an overall average of 6% below inflation in both 2013-14 and 2014-15.

### Reduction in charges: Typical annual consumer bills (£)

	Actual 12-13	NI Water 13-14	UR 13-14	NI Water 14-15	UR 14-15	NI Water PC13 saving	UR PC13 saving
<b>Bills (2012-13 prices)</b>							
<b>Average notional household<sup>1</sup></b>	424	418	400	414	377	16	71
<b>Typical unmetered</b>	273	259	253	247	234	40	59
<b>Typical small metered</b>	382	370	356	357	333	37	75
<b>Typical large metered</b>	3,468	3,356	3,237	3,248	3,022	332	677

Note: The notional household charge is provided as domestic consumers are not billed.

**A more efficient company** – for every £1 that comparative water companies in England and Wales spend in operating their businesses, NI Water spends £1.62. We are challenging the company to reduce this 38% operational efficiency gap at a rate of 5% per annum.

**Investment in water and sewerage assets** – we have allowed for £324 million of prioritised and targeted investment, maintaining the efficiency levels in PC10, to deliver specified infrastructure improvements.

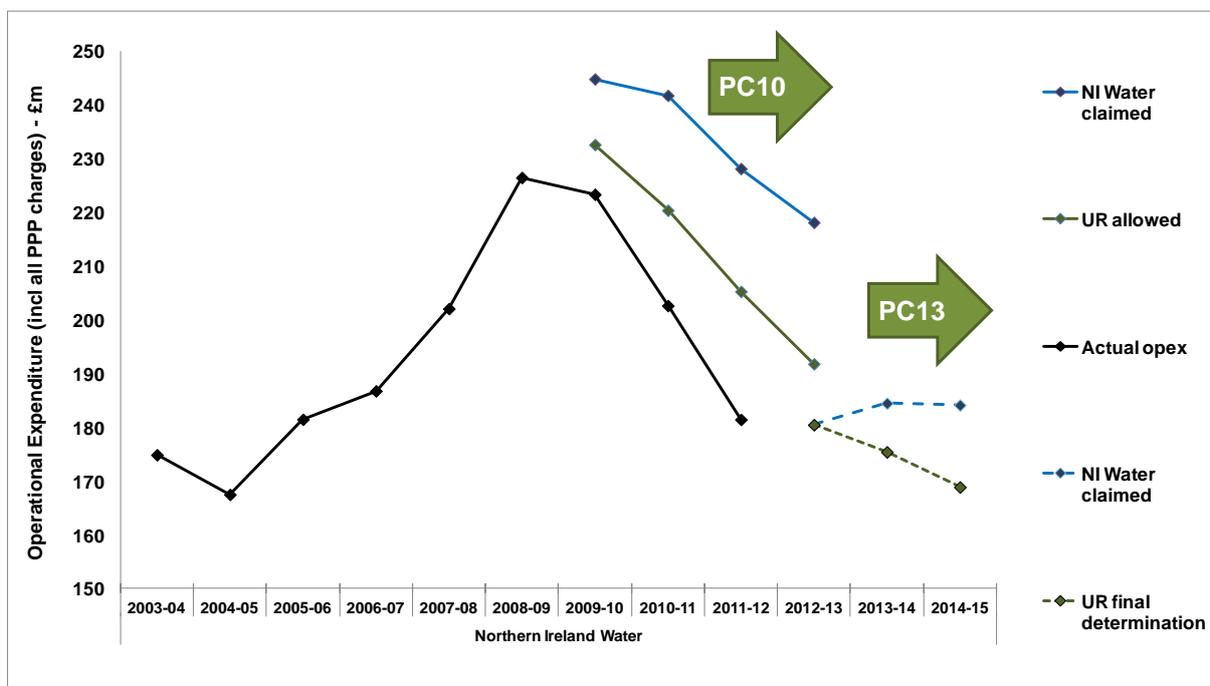
**Higher levels of service** – an improvement in the overall performance assessment or 'OPA' score, moving from 131 at the start of PC10 to 215 by close of PC13. This will narrow the gap to the average water company score of 290.

## The operational efficiency challenge

Since economic regulation was first introduced in 2007, NI Water has steadily improved its operational performance while at the same time reducing its operating costs. At the 2010-13 price control, the operational efficiency gap compared with the best performing company in England and Wales was assessed as 49%. For PC13 it has been assessed as 38% for the 2010-11 base year.

***This efficiency gap means that for every £1 that comparative companies in England and Wales spend running their operations, NI Water now spends £1.62. This compares with £1.96 in 2007.***

The operational efficiency improvements during PC10 and the challenge provided by the PC13 final determination are shown in the graph below.



The graph shows NI Water’s claim, our allowance and the company’s outperformance of PC10. PC13 challenges the company to reduce its operating costs by a further 5% per annum over the two-year period. The company’s challenge to itself was a reduction of 1.6% a year. In its business plan, NI Water indicated that operating costs would need to rise over the period.

***NI Water outperformed the PC10 efficiency challenge for operating costs. The company’s management must now rise to the challenges ahead. In this way, billed customers and taxpayers will not have to pay more than is necessary for their vital water and sewerage services.***

NI Water is being challenged to achieve what other companies elsewhere have already delivered. Of particular note is Scottish Water which reduced its operating costs by almost 40% over eight years, while at the same time continually improving services to consumers.

## Differences between the draft and final determination

### Increase in the allowed for revenue

We have increased the revenue allowance in our final determination by just over £12 million. The majority of this (some £8.4 million) is attributable to a reduction in the rate at which NI Water is being challenged to reduce its 38% operating efficiency gap with its comparators, from 6% a year to 5%. The remaining difference reflects a combination of smaller adjustments, both positive and negative, primarily resulting from new data.

### Rate of reducing operating costs

We have decreased the rate at which NI Water is challenged to reduce its operational costs. We made this change in response to the company's strongly held concerns, that we had not taken sufficient account of the constraints arising from its status as a non departmental public body (NDPB). While we agree that the current model is not ideal, and have reduced the rate of challenge, the hard evidence is that NI Water has, to date, delivered operational efficiencies of more than 6.9% a year, in spite of operating as an NDPB.

Regarding the company's statement that efficiencies to date have been easier to deliver, there still remains a material efficiency gap for delivery of the efficiency challenge. The journey that NI Water is being asked to follow is not uncharted.

### The perceived NDPB barrier

NI Water's business plan and response to the draft determination did not persuade us of the quantum of the impact arising from its NDPB status. We accept that the company may incur additional administration costs (for which we have made an allowance), and other burdens. However, as a result of its NDPB status (and the absence of domestic charges) the company has to deal with fewer consumer related issues.

### Public expenditure funding

NI Water raised concerns regarding the adequacy of public expenditure funding to deliver this price control.

For PC10, we amended NI Water's licence in recognition of its dual status operating within the public expenditure and regulatory price control regimes. This resulted in an agreement between ourselves and the Department for Regional Development. The agreement addresses any public expenditure capital funding shortfall, with appropriate changes to price control outputs. It also provides a process for reviewing any operational pressures that arise; facilitating the company to submit a justified case for review. These processes have been revisited and will apply during PC13.

An issue that may arise during PC13 is a possible cut in the public expenditure resource (operating costs), below the price control allowance. It would not be appropriate or indeed feasible for this issue to be resolved by increasing charges to customers. We have liaised with officials from both the Department for Regional Development and the Department of Finance and Personnel and are assured that such issues will be managed in the same way that similar issues are dealt with for other NDPBs. We will continue to engage with all parties on such matters.

Our engagement with both Departments has brought a transparency and understanding of our determination. It has also led to acceptance of the need for public expenditure to fund 'spend to save' voluntary retirement and business improvement initiatives so that consumers do not pay twice.

## Summary of capital outputs

The table below shows the work programme that NI Water is required to undertake in the years 2013-14 and 2014-15 to maintain and improve levels of service and to improve compliance with drinking water quality.

<b>Base maintenance</b>	<ul style="list-style-type: none"> <li>Investment in the existing assets to maintain levels of service to existing consumers.</li> <li>Completion of planned safety work at impounding reservoirs.</li> </ul>
<b>Maintain and enhance consumer service</b>	<ul style="list-style-type: none"> <li>Investment in trunk mains to Newry and Belfast to improve security of supply.</li> <li>Investment in the water distribution network to reduce interruptions to supply and reduce the number of properties supplied at low pressure by 288.</li> <li>Investment in the sewerage network to alleviate the risk of internal flooding at 67 domestic properties.</li> <li>Investment in systems and management to improve NI Water's response to consumer queries and complaints.</li> </ul>
<b>Improve water quality compliance</b>	<ul style="list-style-type: none"> <li>Completion of two water treatment upgrades to secure the quality of drinking water.</li> <li>Continued investment in water distribution mains, to improve the water quality at the tap, as part of a programme to rehabilitate a further 445 km of mains.</li> </ul>
<b>Improve environmental compliance</b>	<ul style="list-style-type: none"> <li>Investment in 38 wastewater treatment schemes to improve the quality of discharge from works &gt;250 population equivalent.</li> <li>Upgrading of 84 unsatisfactory intermittent discharges to meet quality standards.</li> </ul>
<b>Growth and supply demand balance</b>	<ul style="list-style-type: none"> <li>The company will be able to continue to connect new properties to the water and sewerage network.</li> <li>Investment at sewage treatment works will continue to release development constraints resulting from a lack of capacity.</li> </ul>
<b>Improve sustainability</b>	<ul style="list-style-type: none"> <li>Improvements to existing assets, levels of service and quality enhancements, will contribute to a sustainable service.</li> <li>Further reductions in leakage will reduce water lost, targeting the sustainable economic level of leakage (ELL).</li> <li>The company will determine a sustainable long run ELL which will inform leakage targets for PC15.</li> <li>The proportion of renewable energy used will increase and energy efficiency measures will be implemented.</li> <li>NI Water will extend the sustainable catchment management approach it has developed with stakeholders.</li> <li>A drought plan will be prepared to assess how NI Water would respond if drought conditions were to exceed those planned for in the water resources management plan.</li> <li>NI Water will continue to improve its asset data including water supply area investigations and drainage area plans.</li> <li>Feasibility and development work will be undertaken to ensure the continuity of output delivery into PC15.</li> </ul>

The main final determination report, technical annexes and consultation responses to the draft determination are all available to view on our website [www.uregni.gov.uk](http://www.uregni.gov.uk)

# 1. Introduction

## 1.1 Background

- 1.1.1 We were established in 2007 to protect the interests of water and sewerage consumers. One of the ways in which we ensure that consumers receive best value for money is by setting prices that allow NI Water to deliver water quality, environmental and customer service objectives at the lowest reasonable overall cost. Our duties also require us to secure that the functions of water undertakers and sewerage undertakers are properly carried out and to secure that a company holding an appointment as a water and sewerage undertaker can properly finance the services it provides to consumers.
- 1.1.2 The PC13 'price control' process is a key part of discharging our duties in relation to NI Water. Through the PC13 process we have determined NI Water's price limits for the two-year period 2013-15. These limits are based on our assessment of the lowest reasonable costs that the company should incur in delivering the priorities for consumer services, water quality and environmental compliance that are set out in the Social and Environmental Guidance. This is produced by the Department for Regional Development.
- 1.1.3 NI Water obtains its revenue from a combination of:
- direct charges to non-domestic customers;
  - direct charges to the Department for Regional Development Roads Service for road drainage costs;
  - subsidy paid by the Department for Regional Development for services provided to domestic consumers;
  - various charges made for new connections; and other
  - direct services that the company provides.

## 1.2 Governance Framework

- 1.2.1 In the absence of domestic charging NI Water depends on a government subsidy for around 76% of its revenue. As a consequence, NI Water is now classified (for the purposes of public expenditure funding) as both a government owned company in legislation and as a non-departmental public body.
- 1.2.2 This dual status adds a layer of complexity and administrative burden to the company's governance framework. In coming to our price control determination there are a number of issues that arise from NI Water's requirement to work within the public expenditure regime. These include the following:
- **No 'end of year flexibility'** – This in effect means that the budget allocation for a specific year must be spent in that year. It cannot be carried forward but is lost to the water industry if not spent in that year.

This is far from ideal for a capital intensive industry that involves delivering large-scale projects to comply with European Directives (and avoid the risk of infraction). The lack of flexibility encourages expenditure on smaller scale projects, such as water mains and sewers, which while necessary may not be the priority.

We therefore emphasised to stakeholders, particularly NI Water and the quality regulators, the need to work together to agree what can be delivered and to highlight any quality and/or infraction risks that stem from the need to ‘fit’ the capital programme to annual capital funding, rather than to suit the priority of projects or for efficient delivery.

- **Uncertainty of the public expenditure budget** – The public expenditure process operates a number of monitoring rounds during the financial year. At each monitoring round, Departments are required to assess expenditure and, where necessary, surrender excess funds. There is also the potential for funding levels to be cut or indeed increased depending on pressures or surpluses elsewhere in the Department or Northern Ireland budgets.

This absence of a hard budget brings much uncertainty and dilutes the pressure on NI Water to outperform the regulatory price control contract.

- **Profile of public expenditure** – NI Water must follow the public expenditure profile of funding. Since the draft determination, the PE capital profile has been amended to transfer £12 m from PC13 to PC10 and to provide a smoother, but not level, capital profile in PC13:

**Table 1.1 – NI Water PE capital profile (nominal)**

2011-12	2012-13	2013-14	2014-15
£189.1	£159.5m	£166.3m	£153.0m

As well as being inherently inefficient, large changes in funding between years (of more than 20%) reduce the company’s ability to deliver large-scale, priority projects that span a number of years.

- **Operational expenditure and incentives** – Contrary to the regulatory price control regime, which incentivises a regulated company to outperform its targets, the public expenditure regime incentivises spending to budget. This is because any savings or under spend that NI Water achieves in any year must be handed back in the same year, and such returns of funding late in the financial year are unwelcome. We have considered this fact, together with the performance delivered during the PC10 period, when setting our operational efficiency challenge.
- **Management of risk** – Under this governance model a degree of risk has been transferred back to taxpayers. This is because NI Water has no access to reserves and the capital budget is restricted by the allocation from public expenditure, rather than being informed by the company’s investment needs.

We have agreed a memorandum of understanding and associated consequent written agreement with the Department for Regional Development to help mitigate any risks that arise during each year of the regulatory control period. This approach was applied during PC10 and worked well.

- 1.2.3 NI Water also operates as a government owned company and pays a dividend to its shareholder, the government. We have therefore continued to calculate an annual rate of return on the company's 'regulatory capital value' (RCV).

### 1.3 PC13: A Proportionate Approach

- 1.3.1 This is the second price control that we have carried out for NI Water. The first price control, PC10, placed a significant demand on all stakeholders as we were developing robust regulatory processes for the first time. However, the detailed development work that was carried out brought benefits for consumers, resulting in a determination which among other things delivered £91 million savings over the three-year period.
- 1.3.2 Our approach to PC13 has built on the work that was completed for PC10. We have developed our regulatory practices so that they are 'regulation-lite' but will ensure a programme of work that matches and delivers best value outputs from public expenditure funding. Our focus has been to minimise the regulatory burden on NI Water. As such, our processes took into account the following factors:
- **The two-year timeframe** – Although the PC13 is of very short duration, when married to the PC10 three-year price control it reflects the preferred five-year price control period. Much of the analyses and methodologies that we used at PC10 have been projected forwards for the PC13 price control. In particular, principal stakeholders agreed that the Social and Environmental Guidance priorities that we used at PC10, which reflect consumer views, should apply at PC13.
  - **Benefits of one-to-one regulation** – We used the opportunities provided by one-to-one regulation to lessen the regulatory burden. We are able to do this by aligning our information requirements with the data systems and processes that the company uses to prepare their own Business Plans.
  - **Reducing information requirements** – It continues to be essential that we are able to establish a baseline then measure and benchmark NI Water's delivery and performance over the regulatory control period. We reviewed the information we required for PC10 and as a result reduced the number of formal tables we previously required by around 75%. Whenever possible we also aligned our price control requirements with existing Annual Information Returns and data definitions.
  - **Additional public expenditure constraints and reporting requirements** – We considered the additional governance and reporting requirements that arise from NI Water's status as a non-departmental public body. We reviewed the memorandum of understanding and associate consequent written agreement (CWA) with the Department for PC13. We also engaged with officials from the Department for Regional Development (DRD) and the Department of Finance and Personnel (DFP) to ensure transparency and understanding of our determination.

- **The more strategic PC15** – The water industry faces many challenges over the long term, including climate change, population growth and an uncertain economic environment. In such a capital-intensive industry, where long-term planning is required, clear policies and an overall strategic direction will be essential to equip the industry to meet these challenges. PC15 associated consumer and stakeholder engagement, and more detailed processes have been progressed alongside PC13 for our next price control which will cover a 6 year period.

## 1.4 Areas of Focus for PC13

1.4.1 To ensure a proportionate approach to PC13 we identified that it would be important to focus on the following key areas:

- **Improving data quality** – it is important to maintain momentum in relation to improvements in NI Water’s data quality. We have focussed on particular areas that would help improve the processes by which investment is justified and targeted for PC13 (where possible) and PC15.
- **Improving programme planning and delivery** – as it works within the public expenditure regime it is arguably even more important that NI Water improves its ability to deliver outputs. We asked NI Water to provide proportionate business cases for the investment it proposed. We also asked NI Water to assess the impact of third party risk on delivery (such as land purchase or planning constraints) and agree outputs that can be delivered so that outputs are clearly defined.
- **PC10 capex review and PC13** – our PC10 review informed our approach to PC13. The outputs we agreed for PC10 were subject to some re-phasing as a result of changes in Departmental budgets. We have agreed revised phasing of outputs over a five-year period (PC10 plus PC13) without revising our capex efficiency challenge.
- **Streamlining engagement with NI Water and reducing regulatory burden** – following receipt of NI Water’s PC13 Business Plan, before adopting any formal information query process we asked NI Water to present its Business Plan to us, and addressed queries face to face. This worked well and we adopted a similar process for the draft and final determinations.
- **Applying the 80:20 rule to opex** – our focus on NI Water’s baseline was determined by the largest items of expenditure, such as power. Additions to baseline were subject to the same transparent approach that we used at PC10. The twin tests for ‘newness’ and ‘exogeneity’ were applied at PC13.
- **Recognising good progress on the opex efficiency gap** – we discussed the process for submitting special factor claims with NI Water. These claims allow the company to argue for an efficiency target that takes account of the operating conditions in different areas. NI Water has to date made successive improvements in closing its operational efficiency gap with the best performing companies in the rest of the industry. We have recognised this fact by recalibrating our analysis around the 2010-11 base year for PC13 and as a consequence the efficiency challenge at PC13 is lower than for the previous price control at PC10.
- **Local context and the impact of non-departmental public body status** – when setting operational and capital efficiency targets, we reflected on the impact of local circumstances on NI Water’s ability to deliver, together with its actual performance

during PC10. We also encouraged the company to submit a special factor claim to inform our thinking in this regard.

- **Preparing for PC15** – we recognise that long-term planning between price controls promotes efficient delivery. We therefore encouraged NI Water to include within its PC13 Business Plan the investment necessary for projects that would require investment in the first years of PC15. We also encouraged the company to include proposals for investigatory work to allow it to develop strategic, sustainable and risk-based solutions that take time to develop but offer the opportunity to maximise the long-term value obtained.

## 1.5 Outcomes from PC10

1.5.1 The final year of PC10 ends in April 2013, so it is not possible for us to be definitive about the outcome of PC10 at this stage. However, our analysis of the company's annual information returns for 2010-11 and 2011-12, together with knowledge of the second quarter performance of 2012-13 indicates that NI Water:

- out-performed its operational efficiency challenge in the first two years of the price control.
- improved its operational efficiency gap to the benchmarked companies in England and Wales from 49% to 38%. This reduced its comparative spend per £1 for the English and Welsh companies from £1.96 to £1.62.
- improved its OPA score from 98 in 2007-08 to 184 in 2011-12, closing the gap to the average English and Welsh company score of 290.
- achieved its capital efficiency targets, delivering various outputs to the value of the £516 million (nominal) funding made available. This involved reprioritising outputs following the withdrawal of £61 million capital funding from public expenditure.

1.5.2 We welcome the company's performance against the targets for PC10 delivered to date.

1.5.3 In March 2011 we reported the outcome of our investigation into the freeze/thaw incident which occurred in 2010-11. The overall conclusion of our investigation was that the company's management of the incident was inadequate – particularly with regard to its service to, and communication with, consumers. The incident itself cost the company £2.9 million, which was not passed on to charged consumers. It also resulted in additional expenditure on improving its communications with consumers.

1.5.4 In this final determination we have set out to apply the principles of better regulation of transparency, accountability, proportionality, targeting and consistency. We sought stakeholders' views on the decisions of our draft determination and we have listened to these responses in coming to this final determination.

## 1.6 Outline of this Document

- 1.6.1 We aim to apply a transparent process, and our final determination has followed the process that we set out in our PC13 Approach document<sup>1</sup>. Time did not allow us to undertake a full consultation on our approach to PC13. However, key stakeholders, including CCNI, the quality regulators, the Department for Regional Development and NI Water, were consulted over the approach and timetable agreed.
- 1.6.2 As part of the agreed PC13 timetable we consulted for 8 weeks on our draft determination during which time we held a number of workshops to explain the price control process and draft determination proposals and to provide an opportunity for us to address questions.
- 1.6.3 The following chapters of this report set out the approach and decisions we have taken in coming to our final determination. A separate document of technical annexes provides more information about our methodology and the workings that informed our determination. The technical annexes have been updated to reflect changes between our draft and final determinations and to take account of any additional information used to inform this determination.
- 1.6.4 Chapter 2 provides a high level summary of the responses to our consultation on the draft determination and the decisions we have taken at final determination.
- 1.6.5 Chapter 3 sets out NI Water's overall revenue allowance and associated price limits. Compared with NI Water's PC10 Business Plan, it will see bills and subsidy together being £58million lower over the two years. This equates to a saving of some 8%.
- 1.6.6 Chapter 4 sets out the investment programme associated with the £324 million capital funding allocated from public expenditure. It outlines our scrutiny and challenge of NI Water's capital programme for the PC13 period.
- 1.6.7 Chapter 5 sets out how we classify and measure outputs and benefits to consumers through an overall performance assessment score. A summary of key benefits is also provided.
- 1.6.8 Chapter 6 sets out our approach to assessing the scope for additional operating cost efficiency. This includes how we have established a base line, adjustments to the base line, special factors, the operational efficiency gap and the proposed efficiency targets.
- 1.6.9 Chapter 7 sets out a number of conclusions we have drawn from our continued regulation of NI Water.
- 1.6.10 Chapter 8 sets out how we intend to monitor NI Water's delivery of PC13, outputs and efficiencies.
- 1.6.11 The appendices comprise a glossary of terms and abbreviations. Technical annexes relating to Chapters 3, 4, 5 and 6 are contained in separate documents, published on our website [www.uregni.gov.uk](http://www.uregni.gov.uk) along with Annex N – Responses to the Draft Determination, where we list the individual respondents and publish their responses to our draft determination. We are grateful and thank those who took the time to respond.

---

<sup>1</sup> [http://www.uregni.gov.uk/publications/approach\\_to\\_pc13/](http://www.uregni.gov.uk/publications/approach_to_pc13/)

## 2. Overview of responses to key issues and our decisions

### 2.1 Introduction

- 2.1.1 We published our draft determination which set out our initial proposals for PC13 on 13 September 2012. The consultation closed on 8 November 2012. We received 12 responses to the consultation and have included these within Annex N of this final determination document.
- 2.1.2 We assessed the consultation responses in the light of our statutory duties and, in coming to our final decisions, have fully and carefully considered each response. We would like to thank all respondents for the time and effort they contributed to this process.
- 2.1.3 NI Water submitted a substantial and detailed response, accompanied by 11 annexes. We have not, however, referred to all of the points NI Water raised here as we consider the company's detailed response in the following chapters and related technical annexes to this final determination.
- 2.1.4 Respondents covered many different issues. However, the most salient of these related to the three main and sometimes overlapping themes of opex efficiencies, governance and capital investment. A number of other issues were also raised. These issues are discussed below.

### 2.2 Key issues

#### The proposed rate of efficiency catch-up

##### *Responses received*

- 2.2.1 In the main, respondents were positive about the efficiencies achieved by NI Water to date and welcomed both the benchmarking work and the price control regulatory process being applied. A number of respondents, however, considered that the rate of catch-up we had set in the draft determination was overly challenging given the circumstances of PC13. These respondents regarded such efficiency rates as both unprecedented and unachievable, given NI Water's dual status as both a government owned company and a NDPB. This would, they argued, limit the capability and flexibility for the company to make the savings required without a risk to service delivery.
- 2.2.2 While some respondents did not criticise the proposed rate of efficiency catch up, they did highlight the risk to services that may come from overly challenging efficiency targets. They believed it was important for us to ensure that the target we set is achievable without risk to service performance.

- 2.2.3 One respondent considered that the level of efficiencies being delivered in relation to public expenditure operating costs identified in the draft determination was disappointing, especially in light of the level of efficiencies evident across the public sector during the current budgetary period.
- 2.2.4 In its response on this issue, NI Water raised strongly held concerns that we had not taken sufficient account of the constraints arising from its status as an NDPB. NI Water stated the following negative impacts:
- a) Additional governance burden resulting from the DRD Minister having to approve certain decisions before implementation.
  - b) Compliance burdens due to regulatory and government submissions.
  - c) Procurement restrictions in the form of 'green book' appraisals and onerous departmental approval processes.
  - d) Financial restrictions such as a lack of reserves and end year flexibility.
  - e) Limited control over employee terms and conditions.

### ***Our determination***

- 2.2.5 It is important to understand the nature of our benchmarking against comparative companies. Such benchmarking of costs through the use of econometric models, particularly of operational costs, is well established. It has been used extensively by Ofwat (the economic regulator of the English and Welsh water companies) and by the Water Industry Commission for Scotland (the economic regulator of the Scottish water and sewerage industry). The methodology and approach we apply mirrors that of these regulators. This approach provides for individual companies to submit 'special factors' that are then considered to ensure that benchmarking is on a like-for-like basis. The benchmark company used to establish the operational efficiency gap is not necessarily the top performing company but the one that is considered most robust for benchmarking purposes.
- 2.2.6 NI Water had submitted claims for special factors that were taken into consideration as part of the benchmarking exercise in the draft determination. The benchmarking methodologies and even the scale of the established efficiency gap (38% as measured by us and 34% as measured by NI Water), is not therefore the issue. Rather, it is the actual rate at which NI Water can close the gap.
- 2.2.7 In the draft determination we chose to set a robust and challenging efficiency target for NI Water of 6%. This fell within our central range for reasonable efficiency of between 5% and 7.5% a year. In our final determination we have moved to the lower limit of this range, by reducing the annual catch-up efficiency challenge from 6% to 5% a year.
- 2.2.8 Reducing the efficiency challenge to 5% a year for the two years of PC13 has also reduced the overall rate of closure of the efficiency gap (from 72.5% to 62.5% over a five-year period). This positions the challenge comfortably within the bounds of regulatory precedent for rate of catch-up. This has reduced the extent of additional efficiencies imposed on NI Water from a figure of £24.8 million in the draft determination to £18 million in the final determination.

- 2.2.9 Further regulatory evidence supporting our rate of catch-up comes from a review of the Competition Commission's findings on the recent referral of Ofwat's PR09 determination on Bristol Water. The Competition Commission found that there was no reason to set an efficiency challenge below 60%. This is especially the case given that NI Water:
- retains its position as the least efficient company among its peers; and
  - exhibits a materially large efficiency gap of 38%.
- 2.2.10 We are also within the bounds of efficiency catch-up set by the Office of Rail Regulation (ORR) of 66% closure of the efficiency gap over a five-year period.
- 2.2.11 Annex C: Calculation of operational efficiency gap and efficiency targets for PC13 provides additional information on other independent research of regulated utility performance. This supports our position regarding NI Water's operational efficiency challenge.
- 2.2.12 We also examined the company's reference to Frontier Economics' view on the setting of operational efficiency targets. We found no evidence to support the company's proposal for an upper bound limit of 65% catch-up over five years.
- 2.2.13 The five-year catch-up rate of 62.5% that we have set is well within regulatory precedent whilst maintaining a robust and challenging efficiency target. It will reduce operational expenditure to an end point for PC13 in 2014-15 of £169 million.
- 2.2.14 The concern expressed in setting too high an operational efficiency challenge translated through to a concern regarding the risks to services. We recognise that NI Water's NDPB status does not provide the company with any access to reserves should risks arise. At PC10 we addressed this concern through licence modifications, the development of a Memorandum of Understanding, and an associated 'Consequent Written Agreement'. See point 1.2.25 below.
- 2.2.15 From a regulatory perspective, in protecting consumers, it is important that any risks or shortfalls in performance that arise from poor management or the absence of leadership should not be paid for by consumers. The process for managing risks within this governance model provides for any risks that arise, either within or beyond management control, to be correctly allocated and paid for by either the shareholder or by consumers. It is important to remember that charges are being paid by the non-domestic sector and that a dividend is being paid to the Department as the Shareholder.

## NI Water's status and governance

### *Responses received*

- 2.2.16 During the consultation exercise a number of organisations referred to NI Water's governance arrangements in relation to its dual status as both a government owned company and a NDPB. Most of the respondents were of the view that this governance arrangement was unsatisfactory. Some expressed particular concern that capital investment could be lost to the industry due to the lack of year-end flexibility for NI Water.

- 2.2.17 Respondents tended to consider that NI Water's NDPB status would provide an additional layer of bureaucracy and administrative challenges. Concerns regarding the extent to which NI Water can be compared with companies in the industry were also raised. A certain number of respondents considered that NI Water's governance arrangements would inhibit the rate of catch-up to the level of efficiency evident in the water industry in Great Britain.
- 2.2.18 Both the CBI and NI Water stated in their responses that the company should be better incentivised to deliver outperformance than is currently the case.
- 2.2.19 NI Water's response largely reiterated the points and views expressed as part of the business plan submission. The company expressed a strongly held view that we had not taken sufficient account of the constraints arising from its status as an NDPB.

### ***Our determination***

- 2.2.20 We asked NI Water to further substantiate its argument that its NDPB status meant that it incurred additional costs and reduced the company's ability to meet its efficiency challenge. In particular we asked for evidence to support its view that its rate of catch-up to its peers was half that of the speed observed across the rest of the industry.
- 2.2.21 NI Water's PC13 business plan and response to the draft determination did not persuade us of the quantum of the impact arising from its NDPB status. We accept that the company may incur additional administration costs (for which we have made an allowance), and other burdens. However, as a result of its NDPB status (and the absence of domestic charges) the company has to deal with fewer consumer related issues.
- 2.2.22 We believe our reduction from a 6% to a 5% a year efficiency challenge in this final determination reflects a realisable challenge. While we agree that the current model is not ideal, and we have reduced the rate of challenge, the hard evidence is that NI Water, to date, has delivered operational efficiencies of more than 6.9% a year, in spite of operating as an NDPB.
- 2.2.23 Regarding the company's statement that efficiencies to date have been easier to deliver, a material efficiency gap still remains. We believe that NI Water is not yet in the position where it becomes more difficult to find further efficiencies. The journey that NI Water is being asked to follow is not uncharted, and NI Water has the opportunity to learn from others, particularly Scottish Water. This company, like NI Water, is publicly owned and has fast-tracked the delivery of efficiencies while at the same time improving services.
- 2.2.24 NI Water was provided with funding for voluntary early retirement/voluntary service schemes and business improvement initiatives in PC10 which the company did not fully execute and yet outperformed the PC10 efficiency challenge. NI Water must continue to deliver these plans to deliver better services and value for the consumers of Northern Ireland.
- 2.2.25 At PC10 we amended NI Water's licence in recognition of its dual status, operating within both a public expenditure regime and a regulatory price control framework. This resulted in a memorandum of understanding and associated Consequent Written Agreement being made between the Department for Regional Development and ourselves. The agreement addresses any public expenditure capital funding shortfall, setting out a process by which appropriate changes to capital outputs are

made and agreed with stakeholders. It also provides a process for reviewing any operational pressures that arise, facilitating the company to submit a justified case for review. This process worked well for PC10 and has been revisited and will apply during PC13.

- 2.2.26 An issue that may arise during PC13 is a possible cut in the public expenditure resource (operating costs), below the price control allowance. It would not be appropriate or indeed feasible for this issue to be resolved by increasing charges to customers. However, we do believe that if NI Water is underfunded from public expenditure during PC13 it is important that the shareholder is able to address any consequential in-year risks. We have liaised with officials from both the Department for Regional Development and the Department of Finance and Personnel and are assured that such issues will be managed in the same way that similar issues are dealt with for other NDPBs.
- 2.2.27 Public expenditure issues are both complex and beyond the regulatory environment. However, our engagement with officials from the Department for Regional Development and the Department of Finance and Personnel have ensured transparency and understanding of our determination. We will continue to engage with these parties and other stakeholders in order to ensure delivery of effective and efficient services for consumers.
- 2.2.28 This engagement has been particularly important given our approach to the funding of transformation costs, such as voluntary early retirement /voluntary severance and business improvement initiatives. These are important programmes that will contribute to NI Water's delivery of efficiencies. While we fully support them we require them to be funded from public expenditure. This is to take account of funding provided during PC10, for these schemes which was not spent and was consequently handed back to the public expenditure purse. Were we to include the funding of these initiatives in PC13, consumers would be being asked to pay twice.

## Capital investment

### *Responses received*

- 2.2.29 Respondents who commented on the levels of capital investment highlighted the continued need for investment in NI Water's water and sewerage assets. The Drinking Water Inspectorate (DWI) welcomed the provision of the statutory drinking water quality programme, along with continued investment to deliver new or rehabilitated water mains over the period of PC13. The DWI also highlighted that drinking water investment needs to address the appearance of tap water, pointing out that discoloured water was an issue of some concern to customers.
- 2.2.30 Some respondents believed that businesses should have a greater input into NI Water's investment plans than is currently the case; they also felt that there should be more certainty over the delivery of projects. Others noted that the level of capital investment being made available to NI Water did not necessarily reflect an assessment of need, strategic outcomes or identified risks. They felt that this was a shortfall in the process. The Consumer Council stated that it was imperative for NI Water to improve links between investment plans and outcomes for consumers.

### ***Our determination***

- 2.2.31 We agree that fixing the level of investment outside the process detracts from the effective delivery of strategic outcomes and longer term sustainability, as does the vulnerability of investment to changes in the availability of public expenditure. This is more concerning given the impact on services that we are already experiencing as a result of more frequent and extreme weather events.
- 2.2.32 We welcome the development by the Department for Regional Development of a Long Term Water Strategy, and have adopted a longer, six-year timeframe for the next price control (PC15). We have also funded NI Water within PC13 to carry out investigative work to allow it to develop strategic, sustainable and risk-based solutions. We will continue to encourage and require this longer term sustainable approach, so that when making funding decisions the NI Executive is further informed of potential risks.
- 2.2.33 For our PC15, which spans the six-year period 2015 to 2021, we are working with NI Water and the Consumer Council to engage and elicit consumer views to inform investment decisions.

## **2.3 Other issues**

- 2.3.1 In addition to the three main issues outlined above, respondents also mentioned a number of specific issues in relation to the draft determination. Waterwise stated that it thought the draft determination did not satisfactorily address the issue of water efficiency, highlighting the many benefits of water efficiency measures. The organisation proposed the introduction of a partnership retrofitting programme during the six years of PC15, supported by data from a pilot project in PC13.
- 2.3.2 A number of other respondents that commented on NI Water's service performance noted the substantial improvements in overall performance that have been delivered.
- 2.3.3 The Consumer Council shared our view that the licence should be amended to prevent unused K, from previous price controls, from being included in current price limits.
- 2.3.4 A number of respondents acknowledged the approach we had taken during the PC13 process, agreeing with us that a more strategic, long-term approach will be necessary for the six-year PC15.

## **2.4 Summary of key changes from the draft determination**

- 2.4.1 The following offers a brief description of the key changes from the draft to the final determination.
- 2.4.2 The sum total of changes from the draft to the final determination that affect revenue, and therefore the K-factors we determine, are summarised in Table 2.1 and accompanying paragraphs.

2.4.3 The single largest contributory factor to the increase in allowed for revenue from the draft to the final determination is our final assessment of NI Water's operational efficiency challenge, which was reduced by £8.4 million. Once the remaining material changes (both positive and negative) are taken into account, the total change to allowed revenue is increased by £12.3 million.

**Table 2.1: Material changes from the draft to the final determination**

Material changes in revenue terms	PC13
	£m nominal
Rate of efficiency catch-up	8.4
Adjustment to baseline	2.1
Allowed additions to opex	-1.2
Opex from capex	2.0
PPPs	-0.8
Additional capital outputs	-1.7
Adjustment to weighted average cost of capital (WACC)	3.5
<b>Total revenue difference</b>	<b>12.3</b>

2.4.4 The £12.3 million uplift in revenue has resulted in an overall 6% reduction in tariffs below inflation in both 2013-14 and 2014-15. For comparison, the draft determination would have delivered an overall average reduction of 7%.

2.4.5 Decisions about whether or not to make changes, and the extent of any changes, were taken following extensive dialogue with NI Water at working level, building on the company's formal response to the draft determination alongside the other responses we received. Where relevant we also took account of more up to date information and forecasts that became available.

2.4.6 In addition, we held a number of meetings with our principal stakeholders to better understand their responses to the draft determination. These too helped inform our final determination in a number of important areas.

2.4.7 The detail and rationale behind the changes made are elaborated upon throughout the body of this report and associated technical annexes.

## 3. Price Limits for PC13

3.1.1 This chapter sets out NI Water's overall revenue allowance and associated price limits. Compared with NI Water's PC10 Business Plan, it will see bills and subsidy together being £57.8million (nominal prices) lower over the two-year period 2013-14 and 2014-2015. This equates to a saving of 7.6%.

### 3.2 Allowed Revenue

3.2.1 The revenue and price limits we have determined for NI Water cover the two-year period from 1 April 2013 to 31 March 2015. The overall revenue requirement is informed by the operational running costs and the level of capital investment, which we seek to apportion fairly between current and future consumers.

3.2.2 We allocate the revenue between five different customer groups. This ensures that each group pays for the services they receive and are not being subsidised by, or subsidising, other customer groups.

3.2.3 We apply a 'building blocks' approach for determining revenue and for setting charges. This approach follows regulatory practice and is similar to the approach we used at the previous price control, PC10. Under the building blocks approach, NI Water receives a rate of return on its RCV, i.e. the value of the company's asset base. The rate of return on the RCV is the cost associated with financing the asset base. The table below shows the various elements of the building blocks which inform the allowed revenue.

**Table 3.1 – Allowed Revenue Building Blocks**

Return allowed on the regulatory capital value
+
depreciation on non-infrastructure assets
+
the infrastructure renewals charge (IRC)
+
allowed for operating costs
+
allowed for PPP costs
+
Taxation
=
Allowed Revenue

3.2.4 It is therefore necessary for us to update the company's RCV at the start of the price control. Efficient investment in new assets is added to the RCV at the start of the price control. Depreciation (reflecting the cost of using the existing assets) reduces the RCV. The cash cost of replacement is covered by the depreciation charge. The table below sets out the calculation of the notional RCV for each year of this regulatory control period.

**Table 3.2 – Calculation of notional RCV**

Nominal Prices	2013-14	2014-15
	£m	£m
Closing RCV (Previous Year)	1809.2	1937.6
Indexation	46.3	49.6
Adjustments	0	0
Opening RCV	1855.5	1987.2
Capital expenditure (excluding IRE)	134.6	123.6
Infrastructure renewals expenditure	33.4	32.3
Infrastructure renewals charges	-33.4	-32.3
Grants and contributions	-5.6	-5.8
Depreciation charge (MNI)	-49.9	-44.5
Adjustment to MNI for depreciation of capital grants	4.1	4.3
Other adjustments (e.g. disposal of assets)	-1.1	-6.6
<b>Closing RCV</b>	<b>1937.6</b>	<b>2058.1</b>
<i>Note: Figures may not add up due to rounding.</i>		

### Allowed rate of return

3.2.5 In setting price limits we consider the appropriate rate of return that NI Water should earn on its RCV. In particular we consider three components, NI Water submitted a claim for each and we made our own assessment.

- The gearing level, which reflects the level of borrowing against the asset base. We have set this as 55%.
- The cost of debt, which is informed by an assessment of the cost of embedded debt, the forecast nominal rate of new debt and the projection of retail prices index (RPI) inflation.
- The cost of equity, which reflects what level of return the financial market would expect from its investment. This is informed by the perceived level of associated risk.

3.2.6 Table 3.3 summarises the rate of return that NI Water sought and the determined rate of return.

**Table 3.3 – Proposals on the weighted average cost of capital (WACC)**

Components of the allowed rate of return	NI Water's PC13 claim	Our PC13 final determination
Cost of debt	2.33%	2.30%
Cost of equity	7.10%	6.28%
Gearing	55%	55%
WACC (pre-tax cost of debt, post-tax cost of equity)	4.48%	4.09%

3.2.7 NI Water's cost of equity is the same as the one we applied for the PC10 final determination. We have, however, continued to monitor the market and decisions by other regulators and reflect on the impacts of NI Water's status. Our detailed considerations are set out in the technical Annex F – Financing Investment.

3.2.8 In making our assessment on the rate of return, together with our consideration of the company's financeability we considered the following:

- the perceived risk to NI Water that arises because the company does not have a secure revenue stream (given the absence of domestic charging);
- the fact that risk has been handed back to taxpayers by the government and that only the government can address this risk transfer;
- the fact that the company must pay a dividend to its shareholder, the government;
- the absence of scrutiny of NI Water by external providers of finance and the setting aside of a requirement for a credit rating; and
- the risk associated with taking a price cap approach to regulation, as opposed to a revenue cap approach (which protects against a fall in customer numbers and consumption).

3.2.9 We have calculated an allowed revenue requirement of £703.3 million. This delivers a saving of £57.8 million, when compared with NI Water's Business Plan submission (a saving of 7.6%).

**Table 3.4 – Final determination revenue proposal**

	NI Water's PC13 Business Plan	PC13 final determination	Saving over PC13
Overall revenue (nominal)	£761.1m	£703.3m	£57.8m
Level of subsidy (nominal)	£576.3m	£537.0m	£39.3m
Revenue from charging (nominal)	£184.8m	£166.4m	£18.4m
<i>Note: Figures may not add up due to rounding.</i>			

3.2.10 The way we have calculated the overall revenue requirement compared with NI Water's PC13 Business Plan is shown below. The main areas of saving result from our proposed rate of return and our challenge on operational expenditure.

**Table 3.5 – Revenue requirement for PC13 (nominal) (£)**

	NI Water's PC13 Business Plan	Our PC13 final determination
Allowed rate of return	£173.0m	£157.9m
Infrastructure renewals charge	£69.6m	£65.7m
Depreciation	£99.4m	£94.4m
Operational expenditure	£325.1m	£292.2m
PPP costs	£94.1m	£93.3m
Overall revenue (unsmoothed)	£761.2m	£703.4m
Smoothing Adjustment	-£0.1m	-£0.1
<b>Overall revenue (smoothed)</b>	<b>£761.1m</b>	<b>£703.3m</b>

*Note: Figures may not add up due to rounding.*

### 3.3 Financial Sustainability

- 3.3.1 We have a primary duty to ensure that NI Water is able to finance its functions. We believe that NI Water's financial strength should be appropriate to the governance framework within which it operates.
- 3.3.2 In regulating the water and sewerage companies in England and Wales, Ofwat uses a range of financial ratios which it developed through discussions with the investment community and rating agencies. We adopted these ratios in PC10 as a yardstick for financial sustainability and have again assessed them for PC13.
- 3.3.3 We have noted that NI Water questioned the use of financial ratios to assess financial sustainability, given its current dual status as a government owned company and a non-departmental public body that is not able to generate suitable reserves.
- 3.3.4 We have considered this view alongside the factors outlined in section 3.2.8 above. We believe that the financial strength as indicated by these ratios should be appropriate for the governance framework within which NI Water operates. We are therefore of the view that there continues to be merit in assessing NI Water's performance against these ratios but that the level of compliance should tolerate a 25% to 30% margin of the target that Ofwat sets for the privatised companies.

**Table 3.6 – Financial performance 2013-15**

Financial ratio	Targeted value	2013-14	2014-15
Cash interest cover	Around 3 times	3.0	2.8
Adjusted cash interest cover	Around 2 times	1.6	1.6
Funds from operations: debt	Greater than 13%	11.1%	10.1%
Retained cashflow: debt	Greater than 8%	8.3%	7.7%
Gearing (adjusted for PPP asset/liability)	Less than 55%	52.2%	52.4%

3.3.5 While observing that NI Water has failed many Ofwat's target values, we consider that the values the company has achieved are appropriate for the governance framework within which it currently operates.

## 3.4 Price Limits and Charges

3.4.1 We have to determine the price limits (referred to as K factors) to be applied over the price control period. The K factors are the annual percentage increase or decrease in tariff basket charge caps above or below inflation (as measured by RPI). We set separate K factors for each of the five tariff baskets so that the correct revenue is raised from each customer group. The K factors for this final determination are set out in Table 3.7.

**Table 3.7 – K factors for PC13**

Tariff basket	2013-14	2014-15
Unmeasured water supply	-3.4%	-3.4%
Unmeasured sewerage service	-7.8%	-7.8%
Measured water supply	-5.6%	-5.6%
Measured sewerage services	-7.7%	-7.7%
Trade effluent	-7.1%	-7.1%
Overall K factor	-6.0%	-6.0%

3.4.2 We are aware that customers value having stable charges. We have therefore smoothed the revenue profile over the two years.

3.4.3 Customers of the companies in England, Wales and Scotland pay a proportion of their sewerage charges for the collection and treatment of surface water drainage from individual properties and roads. This is because legislation in Great Britain does not permit any alternative method of cost recovery. However, the NI Executive endorsed the charging of roads drainage costs to DRD Roads Service.

### Average notional household charges

3.4.4 Our price control process does not differentiate between customer groups, but seeks to deliver lower charges and better services for all. We have assumed that there will be no direct charging for domestic customers over the period of this price control. However, in order to provide full information, we have reproduced the notional average household charge over the PC13 period in the table below.

**Table 3.8 – Average notional household charge**

	Average notional household charge (2012-13 prices)			Saving during PC13
	2012-13	2013-14	2014-15	
NI Water's PC13 Business Plan	£424	£418	£414	£16
Our PC13 final determination	£424	£400	£377	£71
Our final determination saving	-	£18	£37	£55

1. Figures may not add due to rounding.

3.4.5 The notional household customer is projected to save £71 over the PC13 period. This is a further saving of £55 compared to the NI Water Business Plan.

### Typical small and large business customer charges for water and sewerage services

3.4.6 We have provided indicative bills for water and sewerage services for a small and large metered customer and an indicative unmetered non-domestic bill for water and sewerage services. These indicative bills are for information purposes only and are based on a number of assumptions that may not apply to each water and/or sewerage customer.

**Table 3.9 – Typical small metered business bill**

	Typical bill (2012-13 prices)			Saving during PC13
	2012-13	2013-14	2014-15	
NI Water's PC13 Business Plan	£382	£370	£357	£37
Our PC13 final determination	£382	£356	£333	£75
Our final determination saving	-	£14	£24	£38

1. Represents combined bill for water and sewerage services after deduction of subsidy element for domestic allowance. Domestic allowance available to non-domestic customers that pay full business rates.  
2. Calculated based on assumed usage of 285m<sup>3</sup> a year and assuming a customer supply pipe size diameter of <20mm.  
3. Based on 95% return to sewer.  
4. Based on smoothed charge caps.

3.4.7 A typical small metered business customer is projected to save £75 during PC13. This is a further saving of £38 compared to the NI Water Business Plan.

**Table 3.10 – Typical large metered business bill**

	Typical bill (2012-13 prices)			Saving during PC13
	2012-13	2013-14	2014-15	
NI Water's PC13 Business Plan	£3,468	£3,356	£3,248	£332
Our PC13 final determination	£3,468	£3,237	£3,022	£677
Our final determination saving	-	£119	£226	£345
<ol style="list-style-type: none"> <li>1. Represents combined bill for water and sewerage services after deduction of subsidy element for domestic allowance. Domestic allowance available to non-domestic customers that pay full business rates.</li> <li>2. Calculated based on assumed usage of 1306m<sup>3</sup> a year and assuming a customer supply pipe size diameter of over 25 up to 40mm.</li> <li>3. Based on 95% return to sewer.</li> <li>4. Based on smoothed charge caps.</li> </ol>				

3.4.8 A typical large metered business customer is projected to save £677 during PC13. This is a further saving of £345 compared to the NI Water Business Plan.

**Table 3.11 – Typical unmetered business bill**

	Typical bill (2012-13 prices)			Saving during PC13
	2012-13	2013-14	2014-15	
NI Water's PC13 Business Plan	£273	£259	£247	£40
Our PC13 final determination	£273	£253	£234	£59
Our final determination saving	-	£6	£13	£19
<ol style="list-style-type: none"> <li>1. Represents combined bill for water and sewerage services before after of subsidy element (currently corresponding to 50% of unmetered water and sewerage services)</li> <li>2. Based on an annual Net Annual Value of £8,000.</li> <li>3. Based on smoothed charge caps.</li> </ol>				

3.4.9 A typical unmeasured business customer is projected to save £59 during PC13. This is a further saving of £19 compared to the NI Water Business Plan.

### The infrastructure charge

3.4.10 When NI Water connects a household premises to the water and sewerage network for the first time it can levy an infrastructure charge, as well as charging the direct costs of making the new connection. The infrastructure charge provides a contribution towards the cost of developing local networks to serve new consumers.

3.4.11 Under NI Water's Licence Condition C we set limits on the infrastructure charge. We have determined a final infrastructure charge limit of £290 for 2013-14 (2012-13 prices). This is £38 lower than the equivalent charge in England and Wales.

## 3.5 Management of Risk and Uncertainty

### Post PC10 final determination

- 3.5.1 At the time when we concluded the PC10 price control, we had not been advised that NI Water was required to be treated as both a government owned company and a non-departmental public body. This requirement, and the dependency on confirmation of funding in lieu of charging through the public expenditure regime, caused NI Water to initially reject the PC10 final determination. As the reason for this rejection was beyond the scope of our detailed work on determining the allowed revenue, there was no basis on which to refer our determination to the Competition Commission.
- 3.5.2 In order to provide a clearer framework for future price controls we worked with the Department to develop a memorandum of understanding to set out how the regulatory regime would work alongside the public expenditure regime.
- 3.5.3 Following on from the memorandum of understanding a 'consequent written agreement' was drawn up. This sets out the procedures for dealing with alterations to funding to be agreed between the Department and the regulator. This agreement details the processes and assumptions that will apply at each price control. The consequent written agreement sets out agreed approaches for the treatment of the following:
- **Risk** – it acknowledges that NI Water has no access to reserves and provides for an interim determination process. This allows the company to submit a bid for additional funding to both the Regulator and the Department. A joint decision must be made, in consideration of the company's net financial position. Such funding may be allocated to public expenditure only or to charges.
  - **Inflation** – it clarifies the treatment of both the Retail Price Index and the Construction Output Price Index.
  - **Unused K** – NI Water's licence permits the company to undercharge customers in any year and to be able to claim this back in subsequent years.
  - **Alterations to public expenditure funding allocations** – a process is set out to take account of any alteration to capital funding over the price control period.
- 3.5.4 We have revisited the Consequent Written Agreement with the Department so that it applies to the PC13 Final Determination.
- 3.5.5 The changes are largely procedural to reflect a review of funding in advance of each financial year. However, our approach to unused K has changed and is discussed in further detail below.

### Under recovery of charges – unused K

- 3.5.6 During PC10 NI Water did not claim the entire charges increase available to them in 2011-12 or 2012-13. The current licence permits NI Water to recover this unused K at any time in the future. We believe this was an oversight in the drafting of the

licence; the licences of the water companies in England and Wales require them to reclaim any under recovered charges within a three-year window.

- 3.5.7 Our proposal set out in the consequent written agreement for PC13, indicates that NI Water may reclaim the current unused K during the PC13 period but not beyond.
- 3.5.8 We would question the viability of such an unused K facility applying within the public expenditure regime. While we do not propose to remove such a provision we do intend to consult on the amendment of the licence so that NI Water can reclaim any unused K within a three-year period only or before the end of the subsequent price control (whichever is the shorter).
- 3.5.9 The detail of both the Memorandum of Understanding and the updated Consequent Written Agreement are set out in Annexes H and I respectively.

## PC13

- 3.5.10 The Consequent Written Agreement process worked well during PC10 as an effective process for addressing additional in year funding beyond the final determination.
- 3.5.11 However, should NI Water be underfunded from PE during PC13 it is important that the shareholder is able to address any in year risk arising.
- 3.5.12 Whilst PE issues are both complex and beyond the regulatory environment, we have worked with officials from the Department for Regional Development (DRD) and the Department of Finance and Personnel (DFP) to ensure transparency and understanding of our Determination
- 3.5.13 This is particularly important in our approach to allowed transformation costs such as business improvement and voluntary severance/retirement schemes. Customers must not pay twice for these items which have already been funded in PC10. We do however support these initiatives being met directly from public expenditure.
- 3.5.14 DFP have recently written to DRD indicating they are keen to support and will look favourably on VER/VS schemes and other invest to save proposals assuming business cases are robust.

## 4. The Investment Programme

4.1.1 Chapter 4 sets out the investment programme associated with the £324 million of capital funding allocated from public expenditure. It outlines our scrutiny and challenge of NI Water's capital programme for the PC13 period.

### 4.2 Our Approach

4.2.1 PC13 is a two year price control that provides continuity from the PC10 period and gives NI Water an opportunity to prepare a more strategic business plan for PC15. In line with our commitments to key stakeholders, we have developed a proportionate approach to PC13. As such, in relation to capital investment we have:

- based the level of investment on the public expenditure budget that was advised by the Department for Regional Development;
- continued to use both Social & Environmental Guidance and consumer research from PC10 to support the outputs which will be delivered in PC13 and continued to use the same outputs defined in PC10;
- agreed the broad allocation of investment with key stakeholders at an early stage based around a series of capital sub-programmes that are linked to different types of activities and outputs;
- asked NI Water to provide a business plan submission structured around the same capital sub-programmes and supported by outline business cases;
- noted that the company was unable to provide a detailed bottom up analysis of base maintenance investment and agreed to use the top-down econometric analysis developed for PC10 to support the determination of base maintenance investment in PC13; and
- agreed to extend the capital efficiency targets that were developed for PC10 as the basis of capital efficiency over PC13, pending a substantive review of capital efficiency in PC15.

4.2.2 A key objective of our approach was to provide a clear proportionate framework for a business plan linked to business as usual processes. The aim in doing so was to elicit a realistically costed programme of work and ensure continuity of delivery into PC13 and PC15.

4.2.3 We have also carried out a detailed assessment of the investment and outputs that were delivered in PC10. The purpose of this exercise was to confirm whether or not NI Water had delivered the capital efficiency challenge included in the PC10 determination. Based on this analysis we have adjusted the opening balance of the Regulatory Capital Value (RCV) for PC13 to protect consumers and ensure that the company is adequately funded.

### 4.3 Changes from the Draft Determination

4.3.1 The final determination takes account of the following key changes since the draft determination:

- NI Water submission of an updated detailed capital programme which took account of the following:
  - a change in public expenditure funding which required NI Water to invest an additional £12 million in 2012-13 at the expense of an equal reduction in planned expenditure in the PC13 period;
  - more up to date information on actual and planned expenditure which takes account of recent project estimates and delivery programmes; and,
  - a revised investment profile in PC13.
- Further information provided by NI Water in respect of the unit cost and efficiency challenge in our draft determination.

4.3.2 The updated programme submitted by the company included a large number of changes to individual project expenditure in PC13. However, many of these changes involved a change of expenditure profile between PC10 and PC13 rather than an overall change in the programme. We assessed the major changes to the overall programme and concluded that it was reasonable. Key changes to project estimates (either increased or decreased) which are not associated with a change in outputs delivered were taken into account in the PC10 out-turn and the associated adjustment to the Regulatory Capital Value (RCV) at the start of PC13.

## 4.4 Capital Investment Outturn for PC10

4.4.1 Our determination for PC10 allowed capital investment of £564.4 million in 2007-08 prices. NI Water under-spent this allowance by £41.4 million in 2007-08 prices. In this section we assess this under-spend and describe the action we have taken to ensure that the company is adequately financed for the outputs it has delivered and that consumers do not pay twice for the same output.

4.4.2 All costs presented in this section are in 2007-08 prices, consistent with the PC10 final determination

4.4.3 The capital under-spend in PC10 was partly caused by constraints in the public expenditure regime within which NI Water operates:

- In 2010-11 the company under-spent its budget by £25 million. Because it does not have year-end flexibility on capital budgets, the company was unable to retain the unused budget to invest in subsequent years.
- The public expenditure Comprehensive Spending Review that concluded in 2011 resulted in an increase in investment in 2011-12 of £11 million.
- The 2011 Comprehensive Spending Review also resulted in a reduction in investment in 2012-13, off-set in part by the allocation of a further £12 million in 2012-13. This gave a net reduction in investment of £27 million from the PC10 final determination.

4.4.4 There has also been a reduction in the outputs delivered in PC10. To determine whether the company continued to deliver value for the investment made in PC10, we assessed the changes in outputs through a process of logging up and logging down. This process results in an adjustment to the opening balance of the RCV at the start of PC13 which ensures that future charges to consumers will reflect the

value of the outputs that have been delivered. We do not adjust the determination to the actual cost of delivery, instead:

- where an additional output is delivered, the efficient cost of delivery is logged up; and,
- where an agreed output is not delivered, the value of the output is logged down.

4.4.5 Our assessment of logging up and logging down is presented in more detail in the technical Annex J - PC10 Capex Out-turn Report and the outcome summarised in Table 4.1. The assessment has been updated for the final determination to take account of the revised capital programme, including the additional £12m which was made available to the company from public expenditure in 2012-13.

**Table 4.1 – PC10 logging up and logging down (2007-08 prices)**

	PC10 adjustment
Additional outputs logged up	£57.6m
Outputs not delivered and logged down	-£109.5m
Recovery of PC10 return on capital	-£3.0m
Opening RCV adjustment for PC13	£-54.9m

4.4.6 On 21 Nov 2012, the Department for Regional Development asked NI Water to invest an additional £5m investment in 2012-13 to utilise funding which had become available through the public expenditure monitoring round. We understand that the company is working to accommodate this. We were not able to take it into account when assessing the opening balance of the RCV for PC13. We will consider this in the next Price Control (PC15) when the company will be able to confirm the quantum of the additional investment in PC10 and demonstrate the additional outputs this investment has delivered. We will amend the opening RCV for PC15 to take account of the efficient delivery of additional outputs in PC10 related to this additional investment.

4.4.7 NI Water benefitted from lower construction price inflation than we assumed in the PC10 determination. This should have allowed it to deliver the same outputs for less or deliver additional outputs for the same nominal investment. In our final determination we indicated that we would adjust charges to reflect actual levels of inflation specific to the construction sector. We subsequently agreed to monitor the impact of inflation on capital investment during PC10 but not to take action until PC13. In line with this commitment we have also adjusted the opening balance of the RCV for PC13 downwards to reflect the lower level of construction inflation experienced in PC10 using a 'notified index' calculation which is described in Annex F.

4.4.8 The net value of outputs logged up and logged down (£51.9 million excluding the recovery of return on capital) is consistent with the reduction in investment (£41.4 million). Taking account of the fact that the logging up and logging down process does not credit the company for material omissions in its PC10 business plan, we have concluded that the company has delivered the capital efficiency challenge set in the PC10 final determination.

## 4.5 Capital Investment in PC13

- 4.5.1 The level of capital investment available to NI Water in the PC13 programme is constrained by public expenditure limits. NI Water's PC13 business plan submission was based on a budget profile provided by the Department for Regional Development (DRD), subject to the subsequent transfer of £12m from the PC13 period into PC10.
- 4.5.2 The revised level of expenditure included in our determination is set out below. This sets out the reconciliation of the public expenditure capital budget and capital investment in PC13 taking account of the accounting treatment of PPP schemes, other accounting adjustments and capital income raised by NI Water.

**Table 4.2 – PC13 Capital investment budget**

	2013-14	2014-15	PC13
Public expenditure budget (nominal)	£166.3m	£153.0m	£319.3m
PPP and accounting adjustments (nominal)	-£4.0m	-£2.9m	-£6.9m
Net capital income (nominal) <sup>1</sup>	£5.6m	£5.8m	£11.4m
PC13 Capital investment budget (nominal)	£168.0m	£155.9m	£323.9m
PC13 Capital investment budget (2010-11 prices) <sup>2</sup>	£156.2m	£141.4m	£297.6m

*Note 1: Capital grants and contributions less transfers to deferred credits.*

*Note 2: We will monitor compliance with the final determination in real terms using the Construction Output Price Index (COPi).*

## 4.6 Our Assessment of the Proposed Investment Programme

### Capital efficiency challenge

4.6.1 In Section 4.4 we concluded that NI Water has delivered the capital efficiency challenge for PC10. This challenge was set by benchmarking the company's capital delivery costs with water and sewerage companies in England and Wales using econometric and standard unit cost comparisons. We applied a regional price adjustment to reflect the lower outputs costs in the local construction market. This analysis revealed an efficiency gap for NI Water of 4% relative to the median companies in England and Wales and 17% relative to the frontier companies. NI Water was challenged to achieve:

- 75% catch-up to the upper quartile companies for enhancement investment by 2010-11;
- 60% catch-up profiled over three years for base maintenance investment; and
- continuing efficiency of 0.4% a year.

4.6.2 This is typical of the efficiency challenge that the regulated companies in England and Wales are required to deliver over a five year period.

- 4.6.3 For PC13, we adopted a proportionate approach to the determination of capital efficiencies based on the extension of the efficiency challenge set for PC10. Our determination takes account of the following:
- the efficiency challenge set for PC10 is the challenge we would have set had we determined charges for five years, covering the period to the end of PC13;
  - the company has delivered the capital efficiency challenge in PC10;
  - the company has used current investment run-rates, current framework contracts and recent tenders to price the PC13 business plan; and
  - much of the work that will be carried out in PC13 is already committed, is in procurement, will be delivered through existing framework contracts or is based on well developed scopes of work estimated using recent tender costs. This limits the opportunity for the company to deliver additional efficiencies over a two year price control.
- 4.6.4 We have concluded that it would only be appropriate to extend the continuing efficiency adjustment of 0.4% a year into PC13. Following representations from the company in its response to the draft determination, we have taken 2011-12 as the price base for the cost estimates included in the company's business plan. This requires the company to reduce the cost of the planned outputs for PC13 by £3.2 million in nominal terms.

### Investment to maintain the existing asset base

- 4.6.5 Almost half the capital investment is used to maintain the existing asset base. At PC10 we concluded that NI Water did not have the systems or data necessary to prepare a robust, bottom up assessment of asset maintenance needs. In the absence of this, we prepared a top down assessment based on an econometric comparison with investment by water and sewerage companies in England and Wales. We then applied a regional price adjustment to reflect local market conditions.
- 4.6.6 To ensure a proportionate approach for a two year price control, we agreed with stakeholders that we would continue to use this approach for PC13. The company will need to focus on developing a more robust estimate of base maintenance investment for PC15.
- 4.6.7 Extending this analysis for PC13, gives a projected base maintenance need of £169.9 million in nominal terms over PC13. We have reviewed the allocation to base maintenance in the company's business plan and made minor amendments. The revised allocation following these reallocations and the unit cost and scope challenge described below is £160.1 million in nominal terms. As this is marginally lower than the outcome of our econometric analysis, and in the absence of more detailed bottom up analysis by the company, we have concluded that it is a reasonable allocation for base maintenance in PC13.

### Unit cost and scope challenge

- 4.6.8 We asked the independent Reporter to scrutinise and report on the NI Water's business plan. The Reporter did not identify any material issues in relation to the overall scope of works and the unit costs used to cost the investment and output delivery proposed by the company.

4.6.9 We also met with NI Water to understand and challenge its proposals. We found that the quality of information used in the capital investment plan had improved since PC10. The company was able to rely more on well developed scopes of work based on its normal project development processes. In addition the Business Plan structure, based on established regulatory reports and supported by outline business cases for defined sub-programmes of work, has increased the clarity of the plan, reducing the risk of misunderstanding and material errors or omissions.

4.6.10 We have identified minor unit cost and scope adjustments summarised in Table 4.3.

**Table 4.3 – Unit cost and scope challenge**

	£m
Capitalised salaries and on-costs. The company has increased the quantum of internal salary costs capitalised from 2012-13 onwards.	£0.9m
Water main unit rates. We have concluded that the work planned by the company in PC13 can be delivered for a lower unit rate.	£2.2m
Challenge to scheme added to the capital programme since the draft determination revealed that a lower cost option is available.	£0.4m
Unit cost and scope challenge total	£3.5m

4.6.11 The unit cost and scope challenge has been reduced from the final determination in the light of additional information provided by the company as follows:

- In its Business Plan the company increased its estimate of salaries and on-costs which are capitalised because they support the delivery of the capital programme. The company acknowledges that the increase in capitalised salaries and on-costs has an effect on the capital efficiency analysis. The Cost Base analysis used to estimate capital efficiency in PC10 was consistent with a set of on-cost percentages applied to the capital programme to estimate capitalised salaries and on-costs. Applying the same on-cost percentages to the PC13 capital works programme gives an estimate of capitalised salaries and on-costs in PC13 which is £1.4 million per annum lower than in PC10 (due to a reduced capital programme). The company has suggested that it is inappropriate to apply the PC10 percentages because it now incurs additional costs associated with its NDPB status to manage the loss of year end flexibility and frequent in year changes to capital budgets. In the absence of a detailed review of the Cost Base, we have reduced the capital cost challenge in respect of increased capitalised salaries and on-costs from £1.8 million to £0.9 million. We will undertake a more detailed review of capital efficiency for PC15.
- The company provided further information on differential inflation of plastic water main pipes. While there has been some increase since the draft determination, recent trends are downwards. We have considered the volatility in price movements since January 2011 and concluded that the allowance we made included in the draft determination was a reasonable reflection of the current price volatility.
- More developed costs of wastewater treatment works demonstrated that the company's initial estimates were reasonable and we have removed the challenge in the draft determination in respect of these works.
- Challenge of a scheme added to the capital programme since the draft determination revealed that a lower cost option was available and the capital programme was adjusted accordingly.

## Scope for additional outputs

4.6.12 We have identified three adjustments to the capital investment plan proposed by the company:

**Table 4.4 – Capital investment plan adjustments**

Item	£m
Additional capital income – accepted by the company and included in its revised investment plan.	£0.0m
Continuing efficiency	£3.2m
Unit cost and scope challenge	£3.5m
Total adjustment to the capital investment plan	£6.7m

4.6.13 In the draft determination we noted that the company had under-estimated capital income by £0.9 million. This was accepted by the company and reflected in the revised capital programme which forms the basis for the final determination. In view of this, it is no longer necessary to make an adjustment to the final determination in respect of capital income.

4.6.14 Within a capital budget fixed by public expenditure limits we expect the company to deliver additional outputs to the value of £6.7 million.

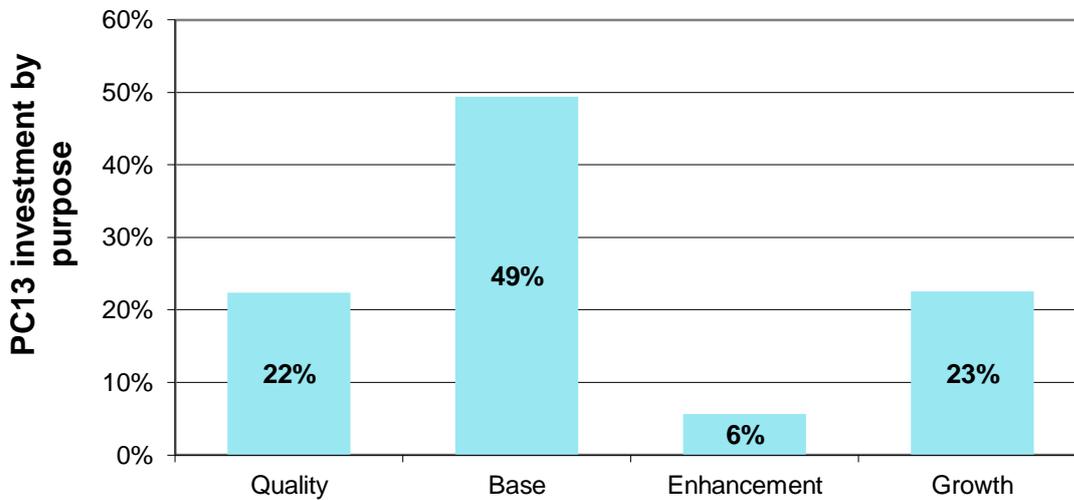
## 4.7 Application of Investment

4.7.1 Investing £324 million in the water industry over two years represents a significant commitment by consumers. To understand and monitor how this investment is applied we have broken down the investment in three ways:

- by four service areas, allocating expenditure between water and wastewater and between infrastructure assets (typically water mains and sewers) and non-infrastructure assets (typically treatment works and pumping stations);
- by four purpose categories, allocating expenditure between quality improvements (Q), base maintenance (B), enhanced service delivery (E) and growth and development (G); and
- by sub-programme which groups investment by a type of asset or procurement route.

### Application of investment by purpose

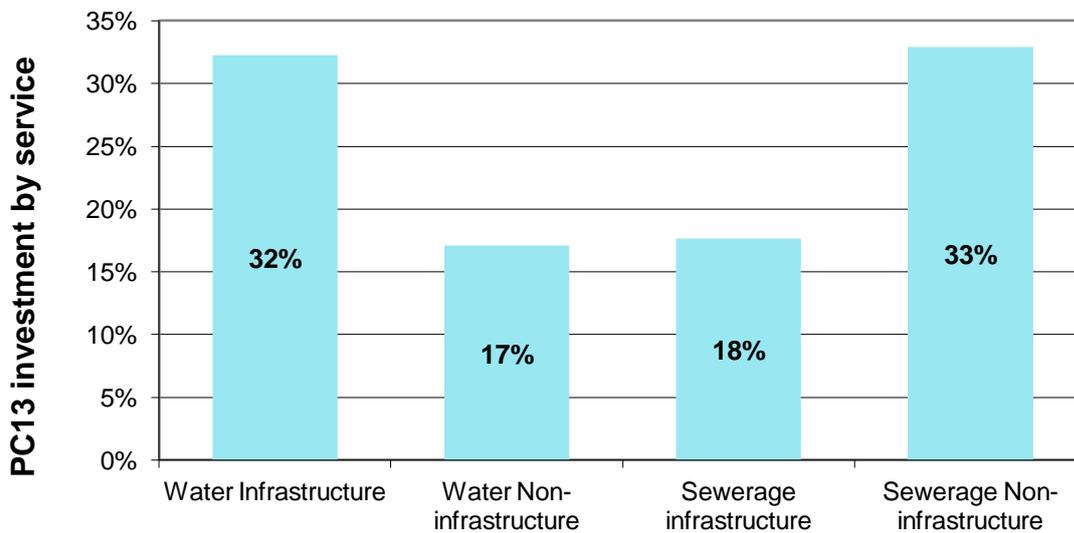
Figure 4.1 – Application of investment by purpose



4.7.2 Almost half the investment is required to maintain the serviceability of the existing assets. 22% is used to improve water quality and environmental compliance and a further 23% facilitates growth and development including new connections and increasing the capacity of treatment works. Only 6% is used to address direct consumer issues such as improving water pressure or reducing the risk of flooding.

### Application of investment by service

Figure 4.2 – Application of investment by service



4.7.3 Investment is dominated by water infrastructure (laying new water mains and upgrading existing water mains) and sewerage non-infrastructure (improving environmental compliance at existing wastewater treatment works). The proportion of investment in water non-infrastructure is low because significant investment has been committed in recent years to upgrade water treatment works to meet water

quality standards. The proportion of investment in sewerage infrastructure is likely to increase in the future as investment is committed to reduce the risk of flooding and the frequency of pollution incidents.

### Application of investment by sub-programme

4.7.4 We asked NI Water to structure its business plan around a series of capital sub-programmes which relate to different types of activity and output. This provides a practical way of understanding where the company will commit investment in the PC13 period. The allocation of investment included in the draft determination by sub-programme is set out in Table 4.5.

**Table 4.5 – Application of investment by sub-programme (nominal).**

	PC13 total £m	
00	Internal salaries and on-costs to support capital delivery	£20.1m
01	General base maintenance (water non-infrastructure)	£8.1m
02	General base maintenance (sewerage non-infrastructure)	£18.9m
03	Water resources including impounding reservoir safety work	£2.0m
04	Water treatment works quality improvements	£4.1m
05	Water trunk mains	£27.1m
06	New or expanded service reservoirs	£1.6m
07	Existing service reservoir maintenance	£8.2m
08	Water mains rehabilitation	£50.8m
09	Leakage control	£6.0m
10	Minor capital works (water) including new connections	£15.9m
12	Sewerage (including improvements to overflows and flooding)	£40.4m
15	Wastewater treatment works carry over projects	£3.1m
16	Wastewater treatment works quality enhancements	£42.8m
17	Improvements to small WwTW (<250pe)	£7.3m
18	Minor capital works (sewerage) including new connections	£15.5m
19	Metering installation and maintenance	£4.6m
20	Management and general	£26.2m
23	Minor water mains repairs, and requisition	£6.7m
24	Minor sewer repairs and requisitions	£7.6m
	Additional outputs	£6.7m
	Total	£323.9m

4.7.5 The level of investment available in PC13 does not meet all the immediate needs of NI Water. A number of treatment works will continue to fail their consents and intermittent discharges will remain unsatisfactory. There is every indication that at least a similar level of investment will be required in future years to maintain the existing assets, improve environmental and water quality compliance, address development constraints, reduce the risk of flooding and adapt to a changing climate.

## 5. Outputs

5.1.1 Chapter 5 provides a summary of the outputs which will be delivered in PC13. It sets out how we classify and measure outputs and benefits to consumers through an Overall Performance Assessment score. A summary of key benefits is also provided.

### 5.2 Definition of Outputs

5.2.1 The purpose of investing in water and sewerage services is to maintain and improve the services that consumers receive. Ultimately consumers experience service as a series of outcomes, for example:

- whether tap water is safe to drink and is acceptable in terms of taste, odour and appearance;
- whether the supply of tap water is reliable, including during extreme operating conditions such as severe weather;
- whether surface and foul wastewater is drained effectively and consumers are not affected directly by flooding or have a reasonable fear that they might be affected by flooding from sewers;
- whether the impact of water and sewerage services on the environment is limited (including the impact of water abstraction and the pollution that can be caused by intermittent and continuous discharges of wastewater); and
- whether the company responds quickly when things go wrong, is able to resolve the underlying problem satisfactorily and keeps the consumer informed while doing so.

5.2.2 In practice, a water and sewerage company will deliver a series of outputs which aim to secure the outcomes consumers want. We have assessed the outputs for PC13 in line with the level of investment. These outputs form part of an overall package which the company must deliver.

5.2.3 We categorise outputs under three headings:

- **Service level outputs:** service level outputs measure the impact of investment on the level of service experienced by consumers. This includes, for example the number and duration of interruptions to supply and overall compliance with water quality parameters. This type of output is preferred as it maximises the company's freedom to determine the best way to deliver the required level of service at minimum cost. It encourages innovation and cost savings that benefit consumers in the longer term.
- **Nominated outputs:** these are specific items, often identified by the quality regulators such as improvements to a discharge standard to meet mandatory legislative requirements. We have also included a number of specific improvements that NI Water identified as nominated outputs in its business plan. This includes trunk main schemes, the provision of additional water storage capacity and major base maintenance upgrades to wastewater treatment works.

- **General activities:** we included activities (such as the rate of replacement of water mains or the replacement of sewerage) as outputs where it was not possible to establish a clear link between activity and service level outputs in the short term. This ensures that NI Water will put forward robust plans for each price control period against which it can be monitored. Activity rates can be reviewed at subsequent business plans and increased or reduced to reflect experience and the levels of service that consumers require in the future.
- 5.2.4 In addition to monitoring individual outputs we also assess the company's progress against a composite Overall Performance Assessment score. This combines a range of service measures.
- 5.2.5 In line with the proportionate approach for a two year PC13 price control, we agreed with stakeholders that we would continue to use the outputs defined for PC10 in PC13.
- 5.2.6 The summary outputs for PC13 are set out in Table 5.1 (Consumer service and water quality outputs for PC13) and Table 5.2 (Sewerage service outputs for PC13). The output tables include actual and projected performance in the PC10 period and show how the outputs planned for PC13 compare with the current period.
- 5.2.7 These tables will form the basis of the monitoring plan we will ask NI Water to publish following the final determination. They are supported by a detailed list of nominated outputs which will be subject to formal change control process through the PC13 period.
- 5.2.8 We have provided more detailed information on PC10 outputs in the Technical Annex K - PC13 Outputs. In the following sections we highlight key areas where further clarification on PC13 outputs was sought for the final determination.

**Table 5.1 – Customer service and water quality outputs for PC13**

Line description			PC10			PC13	
			2010-11	2011-12	2012-13	2013-14	2014-15
<b>A</b>	<b>Consumer Service</b>						
1	DG2 Properties at risk of low pressure removed from the risk register by company action	nr	283	262	255	118	170
3	DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	26.57	0.09	0.20	0.19	0.19
4	DG3 Supply interruptions (overall performance score)	nr	95.79	0.97	1.16	1.12	1.08
5	DG6 % billing contacts dealt with within 5 working days	%	98.87	99.97	99.90	99.90	99.90
6	DG7 % written complaints dealt with within 10 working days	%	99.51	99.27	99.00	99.25	99.50
7	DG8 % metered customers received bill based on a meter reading	%	96.11	97.88	98.50	98.50	99.00
8	Call Handling Satisfaction score (1-5)	nr	4.59	4.57	4.70	4.70	4.75
9	DG9 % calls not abandoned	%	88.19	99.15	99.00	99.00	99.00
10	DG9 % calls not receiving the engaged tone	%	32.77	100.0	99.90	99.90	99.90
11	Overall Performance Assessment (OPA) score (11 Measures)	nr	131	184	184	202	215
12	Total Leakage	Mld	177	168	165 <sup>2</sup>	169	165 <sup>3</sup>
13	Security of supply index	nr	97	100	97	97	100
15	Percentage of NI Water's power usage derived from renewable sources	%	13.5	14.4	17.0	18.5	20.0
<b>B</b>	<b>Quality Water</b>						
16	% mean zonal compliance with drinking water regulations	%	99.82	99.83	99.80	99.70	99.70
17	Operational Performance Index (Turbidity, Iron & Manganese)	nr	99.08	99.31	99.00	99.10	99.10
18	% Service Reservoirs with coliforms in >5% samples	%	0.00	0.00	0.00	0.00	0.00
<b>C</b>	<b>Water Outputs</b>						
19	Water mains activity - Length of new, renewed or relined mains	km	204	510	311	214	231
20	Completion of nominated trunk main schemes	nr	2	0	2	0	3
21	Completion of nominated water treatment works schemes	nr	2	0	0	0	2
22	Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	nr	5	3	1	0	1
22a	Completion of nominated Major Incident Mitigation schemes	nr	-	-	-	3	2
<b>D</b>	<b>Serviceability</b>						
23	Water infrastructure serviceability	Text	Stable	Stable	Stable	Stable	Stable
24	Water non-infrastructure serviceability	Text	Stable	Stable	Stable	Stable	Stable

<sup>2</sup> PC10 actuals and targets are based on the current leakage management software method of measurement.

<sup>3</sup> PC13 targets are based on the new leakage management software method of measurement. This will be introduced in the 2013-14 year and will report figures which are around 8Mld higher than the current system.

Table 5.2 – Sewerage service outputs for PC13

Line description				PC10			PC13	
				2010-11	2011-12	2012-13	2013-14	2014-15
<b>A</b>	<b>Consumer Service Sewerage</b>							
1	DG5 Properties at risk of flooding - number removed from the at risk register by company action	nr		4	14	42	23	44
<b>B</b>	<b>Quality Sewerage</b>							
3	% of WWTWs discharges compliant with numeric consents	%		88.3	92.5	88.2	88.6	91.0
4	% of total p.e. served by WWTWs compliant with numeric consents	%		95.6	96.5	96.5	97.2	97.8
6	Number of high and medium pollution incidents attributable to NI Water	nr		46	44	48	46	44
<b>C</b>	<b>Sewerage Outputs</b>							
7	Sewerage activity - Length of sewers replaced or renovated	km		27	13	15	9	14
8	Delivery of improvements to nominated UIDs as part of a defined programme of work	nr		20	44	30	12	72
9	Delivery of improvements to nominated WwTWs as part of a defined programme of work	nr		32	7	9	19	19
10	Small wastewater treatment works delivered as part of the rural wastewater investment programme	nr		21	28	5	18	7
<b>D</b>	<b>Serviceability</b>							
11	Sewerage infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable
12	Sewerage non-infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable

### Nominated outputs

5.2.9 We have confirmed the nominated outputs included in the totals above with NI Water, Northern Ireland Environment Agency (NIEA) and the Drinking Water Inspectorate (DWI). This will provide a secure basis for monitoring delivery and managing any subsequent changes.

### Compliance standards variability

5.2.10 In some cases the service levels that NI Water proposed are lower than levels of service delivered in recent years. For example: % of wastewater treatment works compliant with numeric consents; and water quality mean zonal compliance. This can reflect real changes in the way the compliance is measured. For example, the change in prescribed concentration or value (PCV) for lead from 25 µg/l to 10 µg/l from 25 December 2013 will result in increased sample failures and a lower mean zonal compliance. However, it also reflects the natural variation in compliance caused by external factors such as the weather and the use of discrete random samples to assess compliance. For example, NI Water attributes the relatively high level of compliance with wastewater treatment works numeric consents in 2011-12 to weather conditions and estimates a lower level of compliance for 2012-13.

5.2.11 We have concluded that the company has set targets at the lower end of the range of potential outcomes for these compliance standards. We have accepted this as reasonable – it would be unreasonable to set a target based on average levels of compliance which the company is likely to fail 50% of the time. We have expanded on this further in the Technical Annex K, where we have indicated the range above the target the company is likely to operate in.

## Leakage targets

5.2.12 We have included a level of capital funding for leakage reduction in PC13 which is consistent with that included in PC10 and we expect the company to make progress in further reducing leakage.

5.2.13 In 2013-14 the company will introduce new leakage management software. This should improve the quality of information management and analysis and help NI Water to target leakage reduction. The new software uses a different methodology to determine minimum night flows which underpin the leakage estimate. The company is currently using the new software in parallel with its existing leakage management system to ensure that it is populated with quality controlled data and can be used with confidence before the existing system is switched off. This work shows that the new system will report a slightly higher level of leakage than the existing system. That is not to say that the level of leakage has increased, only that a revised methodology capable of investigating leakage in more detail results in a higher leakage figure being reported. The company has kept us fully informed of the changes and we continue to have confidence in the work being undertaken to improve leakage management.

5.2.14 At the time of the draft determination the increase in the level of reported leakage due to the use of the new software was not known. We were therefore unable to define target levels of leakage. We asked the company to complete a preliminary assessment of the likely change to allow us set leakage targets for PC13 in the final determination. The company has concluded this assessment, which indicates that the reported level of leakage will rise by around 8Mld. This estimate has been subject to independent review by the Reporter and has been used to determine leakage targets for PC13.

5.2.15 In our draft determination we proposed a target for leakage reduction of 5Mld per annum based on NI Water's average performance in recent years. In its response to the draft determination, the company drew attention to the fact that our analysis included 2011-12 which was a benign year in which the company achieved a much higher reduction in leakage than the average. In view of this, we extended our assessment of historic performance over a longer period. On the basis of this reassessment we have revised the annual target for leakage reduction to 4Mld.

## Sewer flooding

5.2.16 As part of the Annual Information Returns introduced in 2008, we asked NI Water to develop a register of properties that are at risk of internal sewage flooding. Initially the company was not able to populate this register from the limited records maintained by Water Service. By the start of PC10, the company had collated records of historic flooding incidents and identified more than 2000 properties that might have been affected by flooding in the past. The company has since completed an initial review of these properties and identified 213 properties that are at risk of

flooding more frequently than 1 in 20 years due to limited hydraulic capacity in the sewerage system.

- 5.2.17 In PC13, the company will alleviate flooding at 67 properties which are confirmed as at risk of flooding more frequently than once in 20 years.
- 5.2.18 While significant progress has been made, the company has not completed the feasibility study work on individual flooding alleviation schemes which would allow it to identify a clear set of prioritised flooding outputs for PC13 and a programme of work to deliver these outputs. In view of this, we expect NI Water to provide us with regular progress reports as the outputs are developed and delivered. This work will also inform the continuity of work to alleviate flooding into PC15. We will also ask NI Water to keep us and other stakeholders informed on the prioritisation of outputs and the development of the 'at risk of flooding' register.

## Pollution Incidents

- 5.2.19 The number of high and medium pollution incidents attributed to NI Water is higher than the level of pollution incidents attributed to water and sewerage companies in England and Wales. The company has noted a low level of investment in the sewerage system in Northern Ireland compared to investment in England & Wales over the last 20 years as a significant cause of its relatively low level of performance.
- 5.2.20 The company has also commented on the impact which rainfall has on pollution incidents. For example, the number of medium and high pollution incidents in the first half of 2012 is significantly lower than in previous years and the company attributes this to lower levels of rainfall. As a result there is a chance that the company will out-perform its target for 2012 by a significant margin – but that will be dependent on climatic conditions and asset performance in the remainder of the year.
- 5.2.21 The company has targeted a small reduction in high and medium pollution incidents of 2 per annum over PC13. This target is based on an extension of historic trends. The company has outlined a series of initiatives it has put in place to reduce the frequency and severity of pollution incidents. However, the company has not been able to quantify the impact that these will have. Nor has it quantified the impact which the investment it has made, or proposes to make, will have on pollution incidents. It is not clear how the gap in performance with England and Wales will be closed and what level of investment will be required to achieve this.
- 5.2.22 In PC13, we expect the company to develop its strategy for reducing high and medium pollution incidents and demonstrate a clear link between performance and the capital and operational interventions proposed. We expect the company to provide us with regular updates on its methodology and progress on this work. The work should be completed to inform the PC15 Business Plan and future targets for reducing pollution incidents. The success of this work to develop a clearly targeted plan to reduce pollution incidents is the output for PC13.

## Castor Bay trunk main

- 5.2.23 NI Water has proposed to invest £20million in a trunk main from Castor Bay to connect to the Aquarius trunk main. This will allow the company to improve the security of water supply in south Belfast at times of peak demand and cater for long term growth and development in the area served.
- 5.2.24 In the draft determination we asked NI Water to demonstrate the immediate need for this major scheme before the final determination. Following further detailed information provided by the company we have confirmed this scheme as a PC13 output. The 'critical period' analysis undertaken by the company shows the need for additional supply now or in the near future. While the new supply is not intended to fully address the short term demand which arose in the area during the 2010-11 Freeze Thaw, it will improve resilience and operational flexibility generally and improves the ability of the company to maintain and restore supplies during extreme events.

### 5.3 Summary of Key Benefits

**Table 5.3 – PC13 Summary of key benefits**

<b>Base maintenance</b>	<ul style="list-style-type: none"> <li>Investment in the existing assets will maintain levels of service to existing consumers.</li> <li>Completion of planned safety work at impounding reservoirs.</li> </ul>
<b>Maintain and enhance consumer service</b>	<ul style="list-style-type: none"> <li>Investment in trunk mains to Newry and Belfast to improve security of supply.</li> <li>Investment in the water distribution network to reduce interruptions to supply and reduce the number of properties supplied at low pressure by 288.</li> <li>Investment in the sewerage network to address the risk of internal flooding at 67 domestic properties.</li> <li>Investment in systems and management to improve NI Water's response to consumer queries and complaints.</li> </ul>
<b>Improve water quality compliance</b>	<ul style="list-style-type: none"> <li>Completion of two water treatment upgrades to secure the quality of drinking water.</li> <li>Continued investment in water distribution mains to improve water quality at the tap as part of a programme to rehabilitate a further 445 km of mains.</li> </ul>
<b>Improve environmental compliance</b>	<ul style="list-style-type: none"> <li>Investment in 38 wastewater treatment schemes to improve the quality of discharge from works &gt;250 population equivalent.</li> <li>Upgrading of 84 unsatisfactory intermittent discharges to meet quality standards.</li> </ul>
<b>Growth and supply demand balance</b>	<ul style="list-style-type: none"> <li>The company will be able to continue to connect new properties to the water and sewerage network.</li> <li>Investment at sewage treatment works will address development constraints due to lack of capacity.</li> </ul>
<b>Improve sustainability</b>	<ul style="list-style-type: none"> <li>Improvements to existing assets, levels of service and quality enhancements will contribute to a sustainable service.</li> <li>Further reductions in leakage will reduce water lost, targeting the sustainable economic level of leakage (ELL).</li> <li>The company will determine a sustainable long run ELL which will inform leakage targets for PC15.</li> <li>The proportion of renewable energy used will increase and energy efficiency measures will be implemented.</li> <li>The company will extend the sustainable catchment management approach it has developed with stakeholders.</li> <li>A drought plan will be prepared to assess how the company would respond if drought conditions exceed those planned for in the water resources management plan.</li> <li>The company will continue to improve its asset data including water supply area investigations and drainage area plans.</li> <li>Feasibility and development work will be undertaken to ensure the continuity of output delivery into PC15.</li> </ul>

## 5.4 Overall Performance Assessment (OPA)

- 5.4.1 We have adopted the Overall Performance Assessment (OPA) framework that Ofwat developed to measure the service performance of the water companies in England and Wales. We will continue to assess NI Water's progress against this measure in PC13. A detailed description of the OPA and our use of it for PC13 is set out in the technical Annex E – Overall Performance Assessment.
- 5.4.2 The OPA is a composite score of 17 individual service measures. Initially we were unable to use six of these because of data quality issues and so have based our OPA for NI Water on the remaining 11 measures.<sup>4</sup>
- 5.4.3 The OPA is a relative measure which is assessed within upper and lower boundaries set for companies in England and Wales based on past performance. NI Water's performance at the start of PC10 was at the lower end of these bands for a number of measures, and as a result there was an opportunity for NI Water to increase its OPA score rapidly as its performance increased.
- 5.4.4 Ofwat stopped using the OPA framework after reporting the scores for 2009-10, so this is the most recent score that we have for the companies in England and Wales. In that year the companies achieved an average OPA score of 290 (when comparing on the same 11 measures as used with NI Water's OPA). We use this "frozen" average to benchmark NI Water's improved OPA scores, year by year, and would expect NI Water to remain on course for eventual achievement of similar scores.
- 5.4.5 NI Water was unable to meet its target OPA score (of 142 as set out in the PC10 monitoring plan) for the first of the three years of PC10 (2010-11). This is largely because of the freeze-thaw incident that occurred in the winter of that year. However they have outperformed their targets for 2011-12 (of 161) and are projected to outperform 2012-13 (of 181). This strong progress is welcomed by the Utility Regulator.
- 5.4.6 We are encouraged by NI Water's positive individual OPA performances to date, and the commitment to service improvement that these represent. However, while we consider the company's projected increases for PC13 reasonable, we think they are somewhat conservative.
- 5.4.7 We have for the most part accepted NI Water projections. Of the 11 measures, 9 of the company's target scores have been accepted. It is believed that the company's set objectives represent a good challenge over the two year period of PC13.
- 5.4.8 The exceptions are:
- 1) Drinking water quality; and
  - 2) Sewage (wastewater) treatment work (STW) consents compliance.
- 5.4.9 Whilst the scores proposed by the company are not unreasonable, the Utility Regulator believes more can be achieved. Analysis of historic performance for drinking water and failure rates for sewage treatment works has led us to this conclusion.

---

<sup>4</sup> See Annex E for a full list of Overall Performance Assessment measures.

5.4.10 The projected and determined OPA figures by individual measures are shown below:

**Table 5.4 – NI Water claimed and Regulator determined improvements by individual measure**

Measure	NI Water Claimed 2013-14	UR Determined 2013-14	NI Water Claimed 2014-15	UR Determined 2014-15
Risk of low pressure	26	26	28	28
Unplanned Interruptions	26	26	26	26
Hosepipe restrictions	13	13	13	13
Customer contact combined	30	30	35	35
Drinking water quality	28	31	28	31
Sewage sludge disposal	13	13	13	13
Leakage assessment	13	13	13	13
Water pollution incidents (H&M)	13	13	13	13
Sewerage pollution incidents (H&M)	3	3	3	3
Sewerage pollution Incidents (Low)	7	7	7	7
STW consent breaches	25	27	30	33
<b>Total</b>	<b>197</b>	<b>202</b>	<b>209</b>	<b>215</b>

Note: Since the business plan and the draft determination, NI Water and Utility Regulator projections for STW consents compliance have changed for 2013-14.

5.4.11 Projected scores are the same for 9 of the 11 measures. Different compliance figures for the drinking water quality and sewage treatment works result in the following objectives.

**Table 5.5 – Determined OPA scores by individual measure**

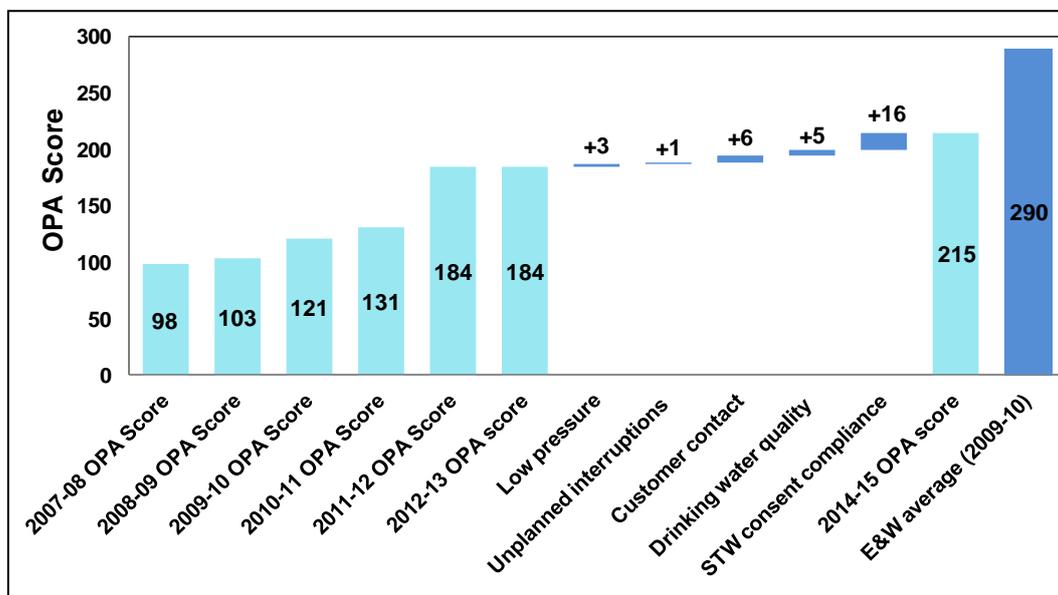
Measure	MAX OPA Score	Target 2012-13	Determined OPA Score 2013-14	Determined OPA Score 2014-15
Risk of low pressure	38	26	26	28
Unplanned Interruptions	38	25	26	26
Hosepipe restrictions	13	13	13	13
Customer contact combined	38	28	30	35
Drinking water quality	50	23	31	31
Sewage sludge disposal	13	13	13	13
Leakage assessment	13	13	13	13
Water pollution incidents (H&M)	13	13	13	13

Sewerage pollution incidents (H&M)	25	3	3	3
Sewerage pollution Incidents (Low)	13	7	7	7
STW consent breaches	50	17	27	33
<b>Total</b>	<b>304</b>	<b>181</b>	<b>202</b>	<b>215</b>

5.4.12 Performance in 2011-12 was particularly good. This was the combined result of company improvement (e.g. customer contacts) and favourable weather conditions. The mild wet winter helped reduce unplanned interruptions and improve sewage treatment work compliance.

5.4.13 The 2012-13 OPA figure of 184 has been taken as the base as this is what NI Water project they will achieve in their Business Plan. By the end of PC13 it is anticipated that the gap in service levels will be further reduced as evidenced below:

**Figure 5.1: Projected improvements to NI Water’s OPA score**



5.4.14 Despite significant improvement in NI Water’s OPA score, the company is still some way behind the scores achieved by England and Wales companies when making comparisons of the same 11 measures. In addition to the improvement of service levels, we also expect that NI Water will continue to improve the quality of data it supplies for the OPA, so that additional measures can be included in time for future price controls.

## 6. Operational Costs and Efficiency

6.1.1 Chapter 6 sets out our approach to assessing the scope for additional operational costs and efficiency. This includes how we have established a baseline, assessed adjustments to the baseline, special factors, the operational efficiency gap and proposed efficiency target.

### 6.2 Background

6.2.1 Under the legislation two key duties of the Utility Regulator are:

- 1) *“To protect the interests of consumers in relation to the supply of water by water undertakers and the provision of sewerage services by sewerage undertakers”*; and
- 2) *“To promote the economy and efficiency on the part of companies holding an appointment.”*<sup>5</sup>

6.2.2 The Utility Regulator fulfils these duties using a variety of techniques. One of the principal methods is to impose opex efficiency targets at a price control.

6.2.3 The setting of targets helps to protect consumer interests by ensuring that prices are not vastly inflated due to inefficiency. Targets also promote efficiency in the company through reputational incentives.

6.2.4 From a company perspective, the Utility Regulator has a duty to ensure that, *“relevant undertakers are able to finance the proper carrying out of the functions of such undertakers.”*<sup>6</sup> This means that any efficiency targets must be reasonable, justified and achievable.

6.2.5 The Utility Regulator undertakes these duties responsibly by assessing the scope for opex efficiency. Targets are then set based on what is considered achievable.

### 6.3 Scope for Operating Cost Efficiency

6.3.1 It is important to emphasise that by ‘efficiency’ we mean delivery of the same (or better) levels of service for less money. Efficiencies, by definition, cannot result in lower levels of service.

6.3.2 In order to determine the efficiency challenge, we must undertake a number of steps. These include:

- **Step 1** – Establish NI Water’s baseline opex. For PC13, 2010-11 is the base year. The baseline opex is considered to be ‘true’ ongoing cost to maintain service. Adjustment is made in this year for atypical costs which are not considered repeatable.

---

<sup>5</sup> The Water and Sewerage Services (Northern Ireland) Order 2006

<sup>6</sup> The Water and Sewerage Services (Northern Ireland) Order 2006

- **Step 2** – Adjust for additions / (reductions) to base costs. We have considered claims for new opex as a result of new obligations.
- **Step 3** – Determine transformation costs. We have made decisions on the provision for business improvement (BI) projects and voluntary early retirement / voluntary severance (VER/VS) schemes.
- **Step 4** – Assess opex from capex requirements. This reflects new expenditure arising from the capital programme.
- **Step 5** – Determine allowances for special factors and atypical expenditure. These adjustments will be reflected in the relative efficiency modelling.
- **Step 6** – Ascertain the relative efficiency gap between NI Water and the benchmark company. The catch-up targets and scope for improvement for NI Water are determined by the size of this gap. We also consider what has been achieved by companies in other utilities.
- **Step 7** – Make assumptions on the frontier shift. This includes consideration of productivity and real price effects (RPE).
- **Step 8** – Consider how PPP costs should be treated.
- **Step 9** – Review the views of NI Water and its approach in the Business Plan.
- **Step 10** – Come to conclusions on the scope for efficiency challenge.

6.3.3 Further detail on each of the steps is provided in the remainder of this chapter, supplemented by technical annexes.

## 6.4 Establishing Baseline Opex

- 6.4.1 Baseline expenditure is an assessment of the ‘true’ opex cost of providing water and sewage services in the base year. For PC13 the base year is 2010-11. The baseline cost will be the amount against which efficiency targets are set.
- 6.4.2 In order to establish a baseline, a number of adjustments must be made. For instance, PPP costs must be removed as these are not subject to the same level of efficiency challenge. Atypical costs should be accounted for as they are non-recurring in nature.
- 6.4.3 For PC13 we have continued to treat transformation costs as atypical. It is not anticipated that this approach will continue in the next price review.
- 6.4.4 BIP and VER/VS costs have been established for a number of years now and will be considered as business as usual or “BAU” baseline costs in future.
- 6.4.5 The one material change from draft to final determination has been our treatment of the company’s representations around rates. The Utility Regulator in its final determination has allowed the full atypical claim of minus £2.5 million.<sup>7</sup> This is based on the fact that NI Water has made the appropriate negative cost claims for rates in

---

<sup>7</sup> All monetary figures in this chapter are in 2010-11 prices.

the additional opex section of their revised Business Plan figures. In addition, this has meant the Regulator has accepted the proposed rates reductions of £0.8 million in the PC13 years in line with NI Water views.

6.4.6 The company's baseline and that adopted by us is set out in the table below.

**Table 6.1 – Claimed versus allowed baseline costs (2010-11 prices)**

	NI Water Approach	Regulator Allowed
Total opex in 2010-11	£203.31m	£203.31m
Less all PPP costs	£43.92m	£43.92m
Less BIP	£1.97m	£1.97m
Less VER/VS	£2.62m	£2.62m
Less atypical costs	£2.61m	£0.30m
<b>Baseline Cost</b>	<b>£152.20m</b>	<b>£154.50m</b>

6.4.7 We are proposing a slightly higher baseline than NI Water. Most of NI Water's adjustments have been accepted including the £5.1 million freeze/thaw provision. Atypical costs are slightly reduced as we consider some of these claims to be normal operating expenditure.

6.4.8 Full details on the atypical cost allowance (additions and reductions) are provided in Annex B – Atypical Costs.

## 6.5 Additions / (Reductions) to Base Operational Expenditure

6.5.1 We asked the company to either make a claim for additional costs or tell us of any opex reductions. These reflect changes to baseline costs not due to efficiency changes.

6.5.2 The table below details the amounts claimed and the proposed allowance.

6.5.3 In determining whether or not to allow additional opex, we apply the two regulatory tests as adopted at PC10:

- Newness – is the expenditure related to any new obligation or specified improvement in service levels e.g. new compliance standards?
- Exogeneity – does NI Water face an exogenous (i.e. outside its management control) increase in costs in relation to current activities e.g. new tax levy etc.

**Table 6.2 – PC13 claimed versus allowed additional costs (2010-11 prices)**

Additional Opex by Area	NI Water Claim	Regulator Allowance	Allowance (%)
Power increase / (reductions)	£3.08m	£0	0%
Rates increase / (reductions)	(£1.59m)	(£1.59m)	100%
Regulator and Reporter costs	£0.65m	£0.65m	100%
Bad debt increase / (reductions)	(£1.32m)	£0	0%
Carbon Reduction Commitment (CRC)	£3.71m	£3.71m	100%
Capitalisation	(£2.16)	(£2.16m)	100%
Membrane Bio-Reactor (MBR) Cleaning AND Integrated Pollution Prevention and Control (IPPC) Regulations	£0.63m	£0.63m	100%
PC15 Consultancy Support	£0.56m	£0.56m	100%
<b>Total Additional Opex</b>	<b>£3.56m</b>	<b>£1.80m</b>	<b>50%</b>

6.5.4 Consideration is further given as to whether the cost category has been taken account of elsewhere. For instance, no allowance would be necessary if the cost is accounted for in either the efficiency analysis or the frontier shift.

6.5.5 The table below details the rationale behind the proposed determinations.

**Table 6.3 – Rationale for additional opex allowances**

Additional opex claimed by NI Water	Criteria Met	Comment
Power (increase/reduction)	No	<p>This claim is dominated by a price forecast increase of the average price per unit (APPU) of electricity across PC13.</p> <p>The frontier shift analysis factors in a general allowance for real price effects "affecting an average WaSC", over and above the general rate of forecast RPI inflation. As such, no further price adjustment on power is required</p> <p>By way of comparison, NI Water has made an estimation of nominal electricity prices increases to be 20.5% (4.8% p.a.) over the period (from 2010-11 to 2014-15). This compares to an estimated increase of 4% (nominal) per annum calculated by First Economics in the frontier shift report<sup>8</sup>. 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. NI Water representations on power are considered further in section 6.10 – Frontier Shift Assumptions below.</p> <p>A small claim for growth in usage due to equipment deterioration has been disallowed. The Utility Regulator is of the opinion that no new obligation exists. Furthermore, the company is suitably funded to maintain assets via the capital maintenance allowance.</p>

<sup>8</sup> See technical Annex D - The Rate of Frontier Shift Affecting Water Industry Costs.

Rates (increase/reduction)	Yes	The reduction in the overall rates bill reflects on-going work to review rate attracting properties. This has been accepted as an exogenous reduction in base opex.
Regulator & Reporter costs	Yes	The increased cost estimates are based on experience of PC10 outturn opex for project management, customer surveys etc. anticipated around the development of PC15.  The costs are not new as price controls are a normal part of the business cycle. However, extra cost has been accepted given that the base year does not include the expenditure associated with a price control.
Customer service bad debt reductions	No	The reduction in bad debt charge reflects well on improvements in debt recovery. The Utility Regulator has rejected this reduction to base opex as it may be an efficiency improvement.  Credit is given to the company for this performance in the efficiency line rather than an exogenous change to base opex.
Carbon Reduction Commitment (CRC)	Yes	The CRC is effectively a new form of carbon tax. This is an entirely new and exogenous obligation.  The estimate at PC13 Business Plan is based on current £12/tonne levy, although NI Water is aware this may be raised to £16/tonne (a 33% increase). NI Water intends seeking such additional funding through Relevant Items bidding, if a higher than anticipated cost emerges.
Capitalisation	Yes	The extent of capitalisation is within the allowed scope of the company's Regulatory Accounts.  The Utility Regulator has accepted the reduction as the change is new and has not been taken account of in the 2010-11 efficiency analysis.
Membrane Bio-Reactor (MBR) Cleaning AND Integrated Pollution Prevention and Control (IPPC) Regulations	Partially	MBR – contract awarded for cleaning in 2011. The company contends this was necessary to mitigate the risk of NIEA enforcement.  Such costs are not exogenous from the view that the company decided to install MBR technology.  MBR additional costs were however exogenous or “unknown” at the time of the investment decision. The Utility Regulator would encourage NI Water to look at their replacement on grounds of economy if a robust business case emerges.  IPPC – These particular Regulations were in place from 2003 onward. However, NI Water sites have only been subject to NIEA inspection quite recently, having issued permits in 2010 and 2011. The compliance expenditure was not previously incurred.  Such costs are not exogenous from the view that NI Water knew the obligations since 2003. IPPC additions are however exogenous from the perspective of imperfect information regarding enforcement timing in the years previous to PC13. Hence these costs have been accepted.
PC15 Subject Matter Experts (SMEs)	Partially	This expenditure is required to support a more detailed price control effort by NI Water staff, involving specialist advice on efficiencies, for example.  The fact that PC13 was targeted as proportionate meant expenditure on price controls from 2010-11 onwards was necessarily lighter. Whilst accepted as additional cost for PC13 years, the Utility Regulator is minded to view such future opex as business as usual.

## 6.6 Transformation Costs

6.6.1 Since 2007-08 NI Water has been allowed transformation costs. This has taken the form of funding both business improvement projects (BIP) and voluntary early retirement / voluntary severance schemes (VER/VS). No efficiency challenge has been imposed on these costs.

6.6.2 The funding was granted in recognition that significant change was required to modernise the company. It was also provided to help reduce the sizeable efficiency gap. The PC13 costs claimed and the proposed allowance is set out in the table below.

**Table 6.4 – PC13 claimed versus allowed transformation costs (2010-11 prices)**

	NI Water Claim	Regulator Allowance
Business Improvement	£4.78m	£1.60m
VER/VS	£5.56m	£0.00m
<b>Total Transformation Costs</b>	<b>£10.35m</b>	<b>£1.60m</b>

6.6.3 We are supportive of NI Water continuing to improve its business and reduce its staffing numbers to further reduce the efficiency gap between it and English, Welsh and the Scottish water companies. There are however two issues which have informed our proposals in this determination relating to the funding of additional transformation costs in the form of VER/VS and BIP:

- The degree of under spend of allowed funding in PC10; and
- Our stated intention at PC10 final determination not to fund either programme from PC13 onwards.

6.6.4 The table below sets out the profile of allowed, actual and proposed VER/VS expenditure for PC10 and PC13.

**Table 6.5 – VER/VS PC10 and PC13 expenditure profiles (2010-11 prices)**

	PC10				PC13	
	2010-11	2011-12	2012-13	Total	2013-14	2014-15
VER/VS Allowance	£10.6m	£11.2m	£8.2m	£30.0m	£0.0m	£0.0m
VER/VS Actual or claimed	£2.6m	£2.8m	£1.8m	£7.2m	£2.8m	£2.8m
<b>Under spend</b>	<b>£7.9m</b>	<b>£8.4m</b>	<b>£6.6m</b>	<b>£22.9m</b>		

6.6.5 NI Water was allowed a total of £30 million to fund VER/VS in recognition of the significant transformation it proposed. This was expected to deliver much reduced head count, improved efficiency and therefore close the gap with its peers in England, Wales and Scotland. The actual profile of spend reflects more of a business as usual approach rather than a transformation approach.

- 6.6.6 Regarding NI Water's BIP the situation is similar to VER/VS expenditure but on a smaller scale:

**Table 6.6 – BIP PC10 and PC13 expenditure profiles (2010-11 prices)**

	PC10				PC13	
	2010-11	2011-12	2012-13	Total	2013-14	2014-15
BIP Allowance	£4.5m	£3.7m	£2.6m	£10.8m	£0.8m	£0.8m
BIP Actual or claimed	£2.0m	£1.4m	£1.0m	£4.4m	£2.4m	£2.4m
<b>Under spend</b>	<b>£2.5m</b>	<b>£2.3m</b>	<b>£1.7m</b>	<b>£6.4m</b>		

- 6.6.7 BIP has a similar and long track record of funding which began with “Business Transformation” during the company’s Strategic Business Plan years, to BIP during the PC10 period. The company at PC13 has re-titled such activity as the “Future Organisation Model” or “FOM” with delivery of savings throughout PC15 (quantum not specified).
- 6.6.8 In our PC13 Approach document we indicated to NI Water we would require an assurance that any claimed transformation expenditure would not represent double funding. The company has not provided us with any such assurances.
- 6.6.9 The significant level of VER/VS funding was passed onto all customers in charges, non-domestic consumers via bills and domestic consumers via the government subsidy. The substantial in year under spend to funding was handed back to government and therefore the taxpayer was credited. It is important that the non-domestic customer is not charged twice. We therefore propose that the additional funding sought by NI Water for the PC13 period, some £5.6 million should be funded through outperformance or if necessary through PE funding.
- 6.6.10 Across the PC10 years the company is projected to spend 41% (£4.38 million of the £10.80 million) of its BIP funding. This included a project to look at and restructure business operations. NI Water has sought funding of £4.78 million for BIP in PC13. We propose to fund £1.6 million which reflects current internal NI Water staff costs. These costs have been supported as they do not represent double funding and will be treated as business as usual costs in future price controls.
- 6.6.11 The basis for the Regulator being minded to treat such costs as business as usual going forward is discussed in more detail under Response 11, see Annex L – Responses to NI Water consultation views on operational efficiency challenge.
- 6.6.12 That said, we have sought additional support from stakeholders towards funding NI Water’s future transformation through VER/VS and BIP activities. We support the company in taking forward its proposals for same through the normal PE processes of business case submissions to the relevant funding bodies.
- 6.6.13 Further discussion of the Regulator’s decision not to support funding of double funding with regards VER/VS and BIP activities is discussed under Response 12, see Annex L – Responses to NI Water Consultation Views on Operational Efficiency Challenge.

6.6.14 DFP have recently written to DRD indicating they are keen to support and will look favourably on VER/VS schemes and business improvement or ‘invest to save’ proposals, assuming business cases have been submitted and are approved.

## 6.7 Opex from Capex

6.7.1 Besides additional obligations and transformation costs, baseline opex will be impacted by capex spend. This can either have a positive or negative effect. Opex could increase as a result of more power consumption associated with better treatment. Alternatively, costs could fall as a capex solution may reduce the man power requirement.

6.7.2 NI Water’s claim and the proposed allowances are provided below.

**Table 6.7 – PC13 claimed versus allowed opex from capex costs (2010-11 prices)**

	NI Water Claim	Regulator Allowance
Opex from Capex Costs	£6.80m	£6.40m

6.7.3 The opex from capex proposed by NI Water appears reasonable. As a proportion of capital spending, their opex from capex is in line with historic performance in England and Wales. The reduced allowance is based on analysis of individual project costs.

6.7.4 We have amended the opex from capex approach, from draft to final determination, based upon NI Water’s 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.

## 6.8 Special Factors

6.8.1 A special factor is a variable outside of management control which results in either higher or lower costs than comparators. The company has the opportunity to make a case for such items in the Business Plan.

6.8.2 For the purpose of establishing the efficiency gap, the Utility Regulator must determine on these costs.

6.8.3 Compared to the £18.6 million special factor allowance adjustment to their efficiency gap claimed by NI Water, the Regulator has allowed 71% which ameliorates its estimate of the 2010-11 efficiency gap.

**Table 6.8 – Claimed versus allowed special factors (2010-11 prices)**

Special Factors	NI Water Claim	Regulator Allowance	Proposed %
Water Distribution Econometric Model	£15.70m	£9.48m	60%
Electricity Prices	£4.40m	£4.93m	112%
Regional Wages	(£1.50m)	(£1.81m)	121%
NDPB Status	£0	£0.53m	n/a
<b>Total Special Factor</b>	<b>£18.60m</b>	<b>£13.12m</b>	<b>71%</b>

6.8.4 On the basis of the information provided, the Utility Regulator has determined a partial allowance of £13.12 million. The rationale behind the allowance for each factor is summarised below.

1. Water distribution – The Utility Regulator remains uncertain about the scale and extent of rural distribution costs. However, a significant element of the claim has been approved. This reflects acceptance that the econometric model is not a good predictor of costs for NI Water.
2. Power costs – The Utility Regulator acknowledges that an unavoidable gap in electricity prices exists in Northern Ireland. This has been reflected in the proposed allowance.
3. Regional wages – The Utility Regulator has accepted the negative special factor offered up by NI Water in full. Some extra costs were provided due to a slight difference in process.
4. NDPB status – NI Water did not make a special factor adjustment for the extra costs they contend they incur in operating as a non-departmental public body.

The company instead claimed that it halved the rate at which it could deliver efficiencies. Given the remaining efficiency gap and NI Water's outperformance of operational efficiency targets in PC10 we do not agree.

We do however acknowledge the additional complexity and administrative burden and have therefore included an allowance alongside the Consequent Written Agreement process which takes account of issues that may arise from its NDPB status.

6.8.5 Full details and discussion of the special factors is provided in our technical Annex A – Special Factors.

## 6.9 Relative Efficiency Gap and Catch-up

### Current gap

- 6.9.1 NI Water has steadily improved its opex performance since the inception of the company. The efficiency gap has fallen from 49% in 2007-08, with further improvements expected throughout PC10. This is set against an increasing level of service profile.
- 6.9.2 After taking special factors and atypical costs into account, the Regulator has assessed the gap to be 38% in the 2010-11 base year<sup>9</sup>.
- 6.9.3 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 benchmark comparator 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.
- 6.9.4 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.
- 6.9.5 Under this analysis NI Water remains a band E<sup>10</sup> performing company. There still remains scope for further reductions in operational spend if NI Water is to improve its efficiency band.
- 6.9.6 In money terms this means that in 2007-08 NI Water spent £1.96 for every £1 spent by the benchmark company. The 2010-11 gap equates to a £1.62 operational spend for every £1 spent by its peers.
- 6.9.7 Further and more detailed consideration of representations from NI Water at draft determination can be found in Annex L – Responses to NI Water consultation views on operational efficiency challenge.

### Final determination

- 6.9.8 Our final determination sets a catch-up efficiency rate of 5% per annum which offers NI Water a robust and reasonable challenge in the interests of consumers (and taxpayers). This represents a reduction from 6% per annum adopted at our draft determination.
- 6.9.9 This compares favourably with the equivalent 6.95% per annum catch-up rate applied at PC10 and recognises NI Water's success in reducing its efficiency gap from the much higher levels applying at PC10. Our 5% per annum catch-up remains within the

---

<sup>9</sup> Full details on the calculation of the efficiency gap can be found in Annex C - Calculation of Operational Efficiency Gap and Efficiency Targets for PC13.

<sup>10</sup> Ofwat used to compare companies relative efficiency using Band A to E, corresponding to 'most efficient' to 'least efficient' respectively.

bounds, albeit at the minima of our 5% to 7.5% per annum range as advised by our consultants (LECG and NERA) at PC10<sup>11</sup>.

6.9.10 The overall catch-up equivalent rate over the five years from 2010-11 is 62.5%. The equivalent catch-up assumption used under PC10 was 60% over five years, the same as used by Ofwat when setting efficiency targets for the private water companies in England & Wales. The WICS by contrast chose to adopt a catch-up rate assumption of 80% over just four years with the ORR adopting a two thirds catch-up rate across five years.

6.9.11 NI Water argued in their Business Plan and consultation response for a reduced rate of catch-up. Since the company provided no specific evidence in either their Business Plan submission or subsequent draft determination responses to support a rate of catch-up half that of their peers, our approach to these matters remains unaltered from our draft determination. We have however listened and reduced the efficiency challenge from 6% per annum to 5%. The Regulator has taken this decision based upon the following:

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 under spends 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.

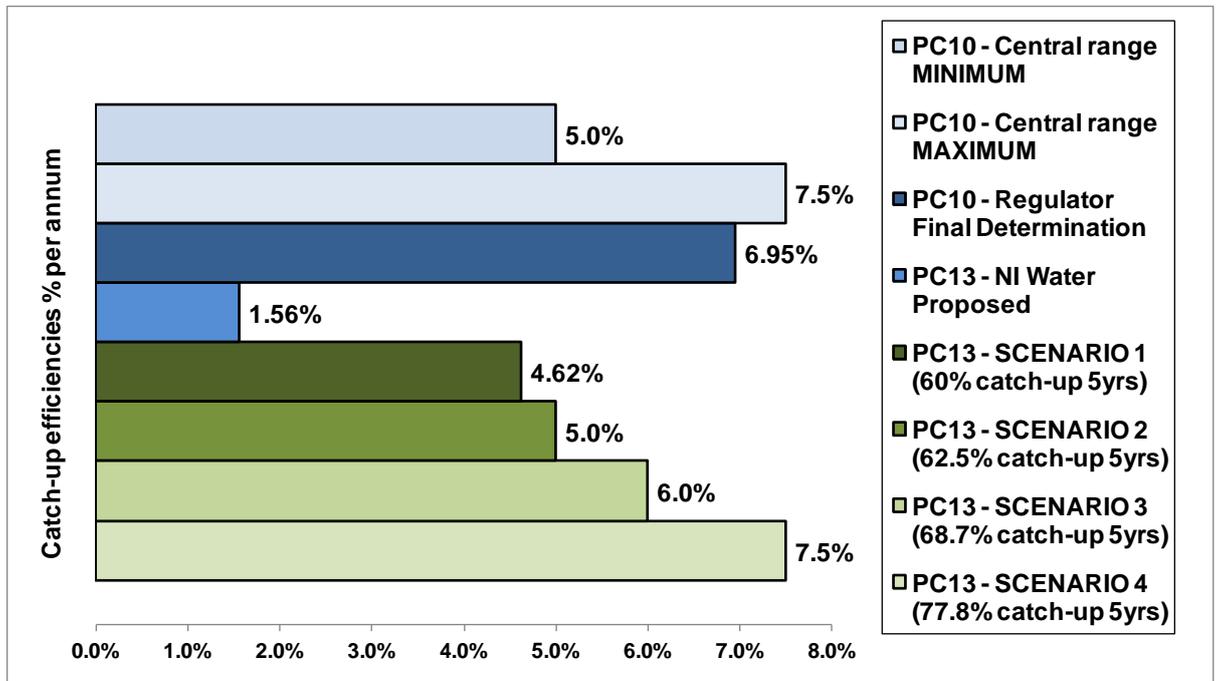
---

<sup>11</sup> [http://www.uregni.gov.uk/publications/final\\_determination\\_annexes\\_contents\\_page](http://www.uregni.gov.uk/publications/final_determination_annexes_contents_page), see Annex F.

7. Evidence from evaluative studies of other utility price controls shows that bigger efficiency challenges are achievable from the 2nd and subsequent price controls rather than the first such price control applying.<sup>12</sup>

6.9.12 We considered a slightly amended set of scenarios at final determination compared to draft. These options are illustrated in the graph below:

**Graph 6.1 – Opex efficiency scenarios**



6.9.13 The justification for choosing SCENARIO 2 against 1, 3 or 4 is detailed in full within the technical Annex C - Calculation of Operational Efficiency Gap and Efficiency Targets for PC13.

6.9.14 As a NDPB subject to Departmental public expenditure (PE) controls, NI Water is incentivised to “spend to budget” (see Section 1.2 Governance Framework above). This means that the setting of the budget becomes all important as NI Water has less incentive to outperform than in the Ofwat regime. There is not the same imperative to incentivise NI Water to the extent that its efficiency target is calibrated upon 60% catch-up to frontier performance, with the remaining 40% available as potential outperformance.

6.9.15 If NI Water outperforms its efficiency targets and delivers up, for example, 70% catch-up to frontier performance the public expenditure regime requires such under spends to be handed back to the Department.

6.9.16 A critical success factor for NI Water is for the company to reduce its operational expenditure within its PE funding envelope. NI Water’s PE budget and its operational expenditure should reflect what is therefore achievable.

<sup>12</sup> See: <http://www.rail-reg.gov.uk/upload/pdf/pr08-oxeraeffic-160408.pdf>

6.9.17 We therefore for the draft determination targeted a slightly higher level of catch-up than we might otherwise have determined, reflecting the interests of consumers (and taxpayers). Having listened to NI Water and our respondents, we have reduced our catch-up rate at final determination so that it is firmly grounded upon regulatory precedent, lying within the Ofwat (60%) and ORR (66%) range of precedent.

### Is there an upper limit to the rate of catch-up?

6.9.18 The company cited their experts Frontier Economics had stated a report from Reckon concluded that a 65% rate of catch-up over 5 years represented an upper bound for the efficiency catch-up factor.

6.9.19 We commissioned Reckon to validate this view and have been advised that the figures quoted in NI Water's response misrepresent Reckon (2008) findings for UKWIR. Reckon informed us that they did not and would not have suggested there was any upper bound to catch-up efficiency based on their research for UKWIR (2008).

6.9.20 Reckon further noted that the Regulator's catch-up and their own findings are not comparable as we had undertaken a residual adjustment (10% / 20%) discount to water and sewerage models respectively before the calculation of NI Water's efficiency gap.

6.9.21 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, see Annex M - Advice on aspects of Northern Ireland Water's response to the PC13 draft determination for further discussion.

6.9.22 We have listened to the company and have reduced the rate of challenge for closing 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.

6.9.23 Our approach can also be viewed as conservative since the effective catch-up of the company's efficiency gap, without residual adjustment discounts, lies below 60%.

## 6.10 Frontier Shift Assumptions

6.10.1 In addition to setting a catch-up target for the company to close the efficiency gap to the industry frontier, it is common regulatory practice to estimate how best performing or frontier companies are expected to perform with respect to costs during the price control period.

6.10.2 Historically, this has involved estimating the level of continuing efficiencies which these frontier companies are expected to make, while allowing for any change in RPI. In the water industry, this has provided an additional minimum efficiency target which all the industry is expected to achieve on top of any catch-up target.

6.10.3 For PC13 NI Water have proposed real continuing efficiencies of 0.25% per annum for operating costs. This means a projected frontier shift of -0.25% per year relative to the increase in RPI. We considered the NI Water submission, but came to the view

that a more holistic and robust approach to frontier shift is warranted than the approach taken in PC10.

- 6.10.4 The analytical framework we adopted examines productivity gains which the frontier companies are expected to deliver over the price control period. The analysis also examines input prices which England and Welsh water companies will typically expect, taking into account the nature of their opex spend.
- 6.10.5 Our new estimate of frontier shift was carried out by First Economics. This work follows a similar framework as Ofwat, Office of Rail Regulation and Ofgem have adopted in recent years. This same approach was also taken by the Competition Commission in their 2010 inquiry into Bristol Water's price control.
- 6.10.6 We considered this approach to be a more sophisticated and less arbitrary way of setting NI Water's opex, given that the frontier shift analysis now more fully considers how input costs may change over the price control period.

### **NI Water's response to draft determination**

- 6.10.7 As the frontier shift analysis takes into account input price inflation during the PC13 period as well as productivity improvements, it is no longer the case that discrete additional price cost allowances need to be made on specific cost categories (such as power, chemicals, equipment).
- 6.10.8 These costs have been taken into account in both input price calculations in the new frontier shift approach and more generally in the allowance for RPI price increases.
- 6.10.9 That said, NI Water made specific representations around its power costs and that as a consequence of facing materially higher unit costs than other companies its power cost weighting was much higher than that incorporated into our draft determination analysis.
- 6.10.10 Given we had already accepted the company's power cost special factor we deemed it necessary to reflect better on NI Water's operational expenditure weightings by area of spend. To undertake this for power costs without consideration of other accepted special factors would be 'one-sided'.
- 6.10.11 Accordingly, having adjusted the power cost weight we also adjusted NI Water's labour cost weighting to reflect our negative special factor for regional wages. Taken together this ensures we have dealt symmetrically with both positive and negative special factors for NI Water within our frontier shift analysis.
- 6.10.12 Further discussion of the company's representation on power costs can be found at Responses 7 and 8, see Annex L – Responses to NI Water Consultation Views on Operational Efficiency Challenge.
- 6.10.13 In addition, the company's experts Frontier Economics advised NI Water that our productivity analysis may give somewhat different results if a different time period is chosen. Frontier suggested a different time period for analysis to encapsulate the span of a complete business cycle.
- 6.10.14 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 of data to avoid any such bias.

## Summary

6.10.15 A summary of the results of the analysis can be seen below. The findings of our frontier shift analysis indicates the appropriate additions, or in the case of 2014-15 subtractions, to the efficiency catch-up targets.

**Table 6.9 – Frontier shift assumptions**

Year	Draft Determination	Final Determination
2013-14	(0.27%)	0.21%
2014-15	0.05%	(0.14%)

6.10.16 The associated frontier shift paper carried out by First Economics is included as technical Annex D - The Rate of Frontier Shift Affecting Water Industry Costs.

## 6.11 Treatment of PPP/PFIs

6.11.1 Three PPP/PFI contracts provide a significant proportion of NI Water's water and wastewater services. The Alpha project supplies approximately 250 million litres of drinking water per day. Omega PPP provides around 20% of current wastewater treatment capacity. Taken together NI Water's PPP/PFI contracts account for just over a fifth of its total opex spend.

6.11.2 Within the PC10 final determination the Utility Regulator expected that NI Water would continue to manage its PPP contracts efficiently so as to maintain the value for money advantages the company has asserted were established upon contract signature.

6.11.3 In order to help incentivise this, the Utility Regulator deemed that half of the 0.25% per annum continuing efficiency target should apply to the opex element of the PPP unitary charges i.e. that part of NI Water's regular PPP payments that is not related to capital. This 0.125% target was deemed appropriate for PPP due to the relatively fixed nature of PFI contracts and the fact that NI Water would receive 50% GainShare from any change in contract.

6.11.4 At this stage of PC10 it is apparent that NI Water is performing well against target. As efficiencies have been realised early in the contract period, the company has not offered any additional targets for sewerage in PC13 (as evidenced by the static cumulative profile).

**Table 6.10 – NI Water proposed PPP efficiency targets for PC13**

	2011-12	2012-13	2013-14	2014-15
PPP Water – Cumulative Efficiency	0.84%	1.21%	1.95%	5.10%
PPP Sewerage – Cumulative Efficiency	0.17%	0.60%	0.60%	0.60%

- 6.11.5 In our final determination we have accepted the company's efficiency proposals for the PC13 period. For PPP Water the company expects to make savings well in excess of the level targeted at PC10.
- 6.11.6 Although no additional PPP Sewerage efficiencies have been set, cumulative performance is still greater than would have been the case with a 0.125% per annum target from PC10. We have therefore accepted the proposed PPP efficiency profile in full.
- 6.11.7 Despite contractual limitations, there may still be scope for further efficiency savings within the PFI schemes and these should be explored by the company. During PC13 we expect the company to continue to:
- Effectively manage its PPP/PFI contracts to ensure value for money, including effective performance monitoring and payment deductions where appropriate;
  - Review whether the service specification reflects the current requirements and that the company is only paying for what it needs;
  - Consider opportunities to increase energy efficiency within its PFI projects (including potential energy from waste solutions);
  - Effectively manage any transfer of risk;
  - Monitor prospects for refinancing;
  - Communicate lessons learned with relevant parties.

### Indexation adjustment

- 6.11.8 While the Utility Regulator has accepted the level of efficiencies offered up by NI Water for its PPP schemes, there has been a separate additional reduction to the level of base PPP costs going forward. This change was made in consultation with NI Water since the draft determination. These PPP costs have been adjusted to reflect the fact that a certain proportion of the Unitary Charge is not subject to indexation.
- 6.11.9 As a result of this, NI Water's PPP allowance has now been reduced by a total of £0.74 million over the two years of PC13 from what was initially proposed in our draft determination.

### Is re-financing an option?

- 6.11.10 Projects which have existing funding terms that are above current market pricing can present opportunities for Value for Money refinancing gains. The two PPP/PFI contracts of Alpha and Omega have a sizeable scope for savings should funding terms transpire to be more favourable than experienced at financial close for the projects.
- 6.11.11 Although underlying swap rates are at low levels historically, overall funding costs remain quite high and financial markets are volatile. This makes refinancing an unattractive proposition at the present time.

6.11.12 The Utility Regulator notes NI Water’s proactive work on examining this. It is expected that NI Water should continue to monitor the prospects for refinancing in the future should conditions become more favourable.

## 6.12 NI Water Opex Proposals

6.12.1 The efficiency challenge proposed by NI Water in PC13 represents a ‘step-down’ from the targets imposed at PC10. The company cite a number of reasons for this including:

- a) A two year price control constrains benefit realisation due to the time taken to plan and implement efficiency projects.
- b) Efficiency made in PC10 was due to ‘quick wins’ which are not repeatable.
- c) NI Water has additional governance and compliance burdens resulting from NDPB status.
- d) The company is faced with financial restrictions which limit the ability to achieve efficiency improvements.

6.12.2 As a result of these issues, NI Water has adopted a planning profile of 60% efficiency catch-up over ten years. With an assumed frontier shift of 0.25%, this results in the following opex reduction profile.

**Table 6.11 – NI Water proposed efficiency targets for PC13 (excluding PPP’s)**

	2011-12	2012-13	2013-14	2014-15
Catch-up Reduction – Annual Profile (%)	7.62%	2.34%	1.56%	1.56%
Frontier Shift – Annual Profile (%)	0.25%	0.25%	0.25%	0.25%
<b>Total Cumulative Efficiency Profile (%)</b>	<b>7.85%</b>	<b>10.22%</b>	<b>11.85%</b>	<b>13.44%</b>

6.12.3 Adoption of a longer rate of catch-up, combined with good performance in the previous price control, has resulted in a relatively low annual target for PC13.

6.12.4 The company has also projected increases in various cost areas including:

- a) Above inflation power price increases;
- b) Opex from capex; and
- c) A step change in BIP and VER/VS expenditure.

6.12.5 The result of the company’s approach is detailed below.

**Table 6.12 – NI Water proposed opex profile for PC13 (2010-11 prices)**

	PC10			PC13	
	2010-11	2011-12	2012-13	2013-14	2014-15
Baseline Opex	£152.20m	£152.20m	£152.20m	£152.20m	£152.20m
<i>Plus</i> Additional Opex		(£4.08m)	(£1.10m)	£0.44m	£2.56m
<i>Plus</i> Opex From Capex				£2.91m	£3.86m
<i>Less</i> Efficiencies		(£11.62m)	(£15.45m)	(£18.43m)	(£21.33m)
<i>Plus</i> Busines Improvement	£1.97m	£1.51m	£0.97m	£2.39m	£2.39m
<i>Plus</i> VER/VS	£2.62m	£1.94m	£1.81m	£2.78m	£2.78m
<i>Plus</i> Adjustments	£2.61m	(£2.10m)	£0	£0.28m	£0.28m
<i>Plus</i> Total PPP Unitary Charge (Post Efficiency)	£43.92m	£42.43m	£42.03m	£41.91m	£41.38m
<b>Total Opex Profile</b>	<b>£203.31m</b>	<b>£180.27m</b>	<b>£180.47m</b>	<b>£184.48m</b>	<b>£184.13m</b>

*N.B. Figures may not sum due to rounding.*

6.12.6 NI Water is projecting a decrease from the 2010-11 base year, with improvements concentrated in PC10. Real costs are expected to rise in PC13 from last year of PC10. The company believes that additional costs and obligations will outstrip the efficiencies that are achievable.

## 6.13 Overall Challenge to NI Water

6.13.1 As part of the Price Control process the Utility Regulator has the responsibility of setting efficiency targets. These targets are generated on the basis of:

- The efficiency gap between NI Water and the frontier companies;
- The rate of catch-up which is deemed achievable; and
- Efficiency improvements previously recorded and/or expected of benchmark performers.

6.13.2 Having undertaken all the analysis, the Utility Regulator is of the opinion that NI Water's opex proposals are not challenging enough. We do not consider the 60% catch-up over ten years to be reasonable or supported by regulatory precedent. This is particularly the case given the scale of the gap.

6.13.3 Whilst NDPB status may result in extra costs being incurred, it is not considered to be an impediment to operational efficiency achievement. This has been well demonstrated by NI Water themselves through PC10 outperformance.

6.13.4 The Utility Regulator therefore proposes the following efficiency profile:

**Table 6.13 – Utility Regulator’s proposed efficiency targets for PC13<sup>13</sup>**

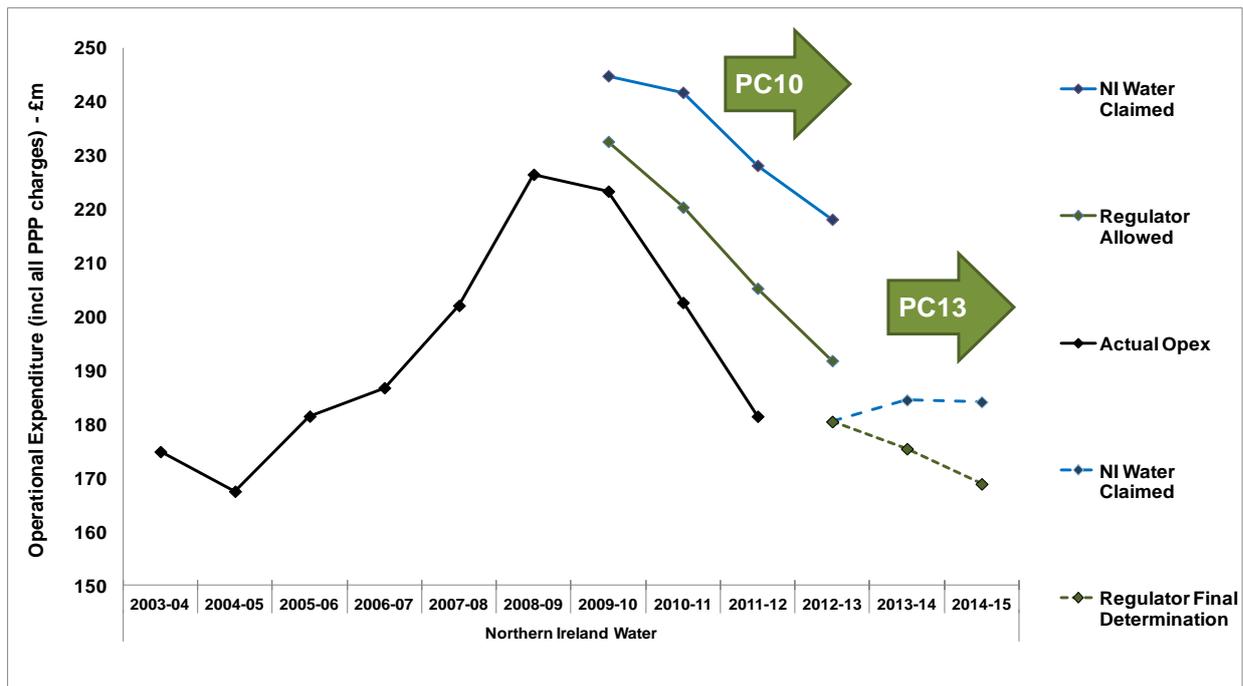
	2011-12	2012-13	2013-14	2014-15
Catch-up Reduction – Annual Profile (%)	7.62%	3.80%	5.00%	5.00%
Frontier Shift – Annual Profile (%)	0.25%	0.25%	0.21%	-0.14%
<b>Draft Determination Cumulative Efficiency Profile (%)</b>	<b>7.85%</b>	<b>11.58%</b>	<b>16.18%</b>	<b>20.26%</b>

- 6.13.5 The Regulator has amended the approach to 2012-13 in the final determination. The company’s own projection of £180.5 million (2010-11 prices) has now 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.
- 6.13.6 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 £180.5 million submitted within its revised opex figures.
- 6.13.7 The Regulator considers this approach to be conservative. NI Water accepted that a proportion of the £5.2 million reduction at draft determination was sustainable. More opex reductions have been identified in the company’s 2<sup>nd</sup> Quarterly Shareholder Report for 2012-13, over and above the company’s previous £5.2 million surrender to DRD, for which we have chosen not to make any further efficiency amendment.
- 6.13.8 The annual efficiency targets for PC13 therefore represent a robust and reasonable challenge for the company. 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 PC10’s the 6.9% per annum efficiency challenge. This is especially evident in the graph below:

---

<sup>13</sup> The figures exclude the PPP efficiency profile. The Regulator has accepted the company PPP targets in full.

**Graph 6.2 – PC10/13 claimed versus allowed and actual (2010-11 prices)**



- 6.13.9 The downwards trajectory for operational expenditure in PC13 is not as harsh as previously allowed during PC10 and is much less than NI Water’s actual performance in reducing opex during the PC10 period. We have determined to relax our catch-up efficiency rate assumption from PC10 in recognition of NI Water’s track record to date.
- 6.13.10 Our 5% per annum catch-up does remain within the bounds of our 5% to 7.5% per annum range as advised by our consultants (LECG and NERA) at PC10 (see Graph 6.1 – Opex efficiency scenarios).
- 6.13.11 Regarding our continued adoption of a central range of 5% to 7.5% per annum from PC10, it is worth noting that Scottish Water over a four year period managed to perform at 7.6% annual average (excluding merger gains).
- 6.13.12 We see no reason to deviate from setting NI Water’s efficiency catch-up target within this, “reasonable but challenging rate of catch-up for NI Water” (see PC10 Final Determination) based on what other regulated utilities have managed to deliver.
- 6.13.13 In addition, evidence from evaluative studies of other utility price controls shows that bigger efficiency challenges are achievable from the 2<sup>nd</sup> and subsequent price controls rather than the 1<sup>st</sup> price control.<sup>14</sup>
- 6.13.14 The proposed profile and opex allowances give the following targets.

<sup>14</sup> <http://www.rail-reg.gov.uk/upload/pdf/pr08-oxeraeffic-160408.pdf>

**Table 6.14 – Utility Regulator’s target opex profile for PC13 (2010-11 prices)**

	PC10			PC13	
	2010-11	2011-12	2012-13	2013-14	2014-15
Baseline Opex	£154.50m	£154.50m	£154.50m	£154.50m	£154.50m
<i>Plus</i> Additional Opex		(£4.08m)	(£1.10m)	£0.90m	£0.90m
<i>Plus</i> Opex From Capex				£2.91m	£3.47m
<i>Less</i> Efficiencies		(£11.81m)	(£17.76m)	(£25.61m)	(£32.18m)
<i>Plus</i> Busines Improvement	£1.97m	£1.51m	£0.97m	£0.80m	£0.80m
<i>Plus</i> VER/VS	£2.62m	£1.94m	£1.81m	£0m	£0m
<i>Plus</i> Adjustments	£0.30m	(£4.23m)	£0m	£0m	£0m
<i>Plus</i> Total PPP Unitary Charge (Post Efficiency)	£43.92m	£42.43m	£42.03m	£41.91m	£41.38m
<b>Total Opex Profile</b>	<b>£203.31m</b>	<b>£180.27m</b>	<b>£180.47m</b>	<b>£175.41m</b>	<b>£168.87m</b>

*N.B. Figures may not sum due to rounding.*

6.13.15 A summary of the difference between the amounts claimed and allowed is detailed below.

**Table 6.15 – Opex efficiency challenge (2010-11 prices)**

Opex Efficiency Challenge	NI Water PC13 Business Plan Claim	Regulator PC13 Final Determination Allowance	Variance	
<b>Total Operating Expenditure (post efficiency)</b>	<b>£369m</b>	<b>£344m</b>	<b>-6.6%</b>	<b>£24.3m</b>
			<i>Additional efficiencies</i>	£18.0m
			<i>Additional opex</i>	£2.2m
			<i>Transformation costs</i>	£8.7m
			<i>Adjustment to base year for allowed atypicals</i>	(£4.6m)
<b>Net efficiency challenge</b>	<b>1.69%</b>	<b>4.40%</b>		

6.13.16 The efficiency challenge applied to NI Water in PC13 is 4.4% (annualised), calculated as a percentage of the prior year baseline.<sup>15</sup> This percentage is lower than our net catch-up efficiency challenge which is applied to NI Water’s core operational expenditure only. We have accepted the company’s projections for PPP efficiencies in full.

<sup>15</sup> Efficiency percentage calculated excluding PPP capital charges.

- 6.13.17 The equivalent efficiency challenge at PC10 was 6.48% (annualised) which demonstrates the challenge to NI Water at PC13 although robust, remains reasonable having taken account of NI Water's delivery of outperformance during PC10.
- 6.13.18 The PC13 final determination efficiency challenge is materially lower than that for PC10. This recognises NI Water's success in reducing its efficiency gap by delivery of real and sustainable savings.
- 6.13.19 Real operating costs will reduce by 17% so that by close of PC13 we ought to see a return to an operational expenditure level not experienced in over a decade, alongside further improvements to OPA scores which will maintain the delivery of improving services for NI Water's consumers.

## 7. Conclusions

- 7.1.1 Chapter 7 sets out a number of conclusions we have drawn from our continued regulation of NI Water.
- 7.1.2 Our economic regulation of NI Water is good for consumers and the environment, and the committed investment is good for the economy. Costs have fallen and service measures have improved through the first price control PC10.
- 7.1.3 This PC13 final determination challenges NI Water to continue to close the substantial gaps in efficiency and consumer service that remain by comparison with the water companies in England, Wales and Scotland.

### 7.2 NI Water's performance against the First Price Control – PC10

- 7.2.1 Our first price control for NI Water covered the three year period 2010 to 2013. Current indications on costs and performance to date indicate that NI Water has:
- exceeded its operational efficiency targets, and as a result has reduced the gap with comparative water companies in England and Wales from 49% in the PC10 base year to 38% for the PC13 base year – this means that instead of spending £1.96 (2007-08 PC10 base year) for every £1 spent by its comparative companies, NI Water now spends £1.62 (2010-11 PC13 base year);
  - achieved its capital efficiency targets, delivering outputs to the value of £516 million (nominal) – this involved a significant reprioritising of outputs, necessitated by the withdrawal of £61 million (nominal) from the water industry's public expenditure capital funding allocation;
  - outperformed its OPA score of 161 for 2011-12 by making improvements in a number of the 11 service measures that contribute to the OPA score, obtaining a score of 184.

### 7.3 PC13 Final Determination – Challenges for NI Water

- 7.3.1 **Reducing operational costs** – our final determination challenges NI Water to reduce its running costs further. If delivered, charged customers and taxpayers will see an overall average reduction in their bills of 6%. This equates to a saving of £58 million overall. In these difficult economic times, this will be a welcome reduction, reducing charged customers' bills and saving £39 million in government subsidy. It will not, however, entirely remove the substantial 38% efficiency gap that exists between NI Water's operational costs and those of the comparator water companies in England and Wales. It is therefore crucial that NI Water remains focused and builds on its successes in PC10 by delivering additional efficiencies for PC13. It should also continue to plan for further cost reductions for the next PC15 price control.

- 7.3.2 **Improving overall performance** – while focused on improving efficiency levels, it is important to emphasise that by ‘efficiency’ we mean delivering the same (or better) levels of service for less money. With additional capital investment, we expect the company’s overall performance to improve. We are monitoring improvement in 11 service measures and are challenging NI Water to improve its OPA score to 215 by the end of 2014-15 from the PC10 target score of 184. While narrowing the gap to the average water company performance of 290, there remains a significant opportunity for further improvement to consumer service.
- 7.3.3 **Capital investment** – we have not increased the capital efficiency challenge for PC13, but are requiring NI Water to maintain the capital efficiency it achieved in PC10, delivering £ 6.7 million more outputs than included in its revised capital programme submission for the revised capital programme of £324 million.
- 7.3.4 **Data and information** – NI Water continues to improve its systems and sources of information. This has resulted in an improved business plan submission for PC13. However, the company has not yet been able to demonstrate a clear link between asset performance, operational activities and service improvements in two key areas of property flooding and pollution incidents. While we are aware of the progress made in these areas, we will ask the company to provide us with regular updates on its progress on delivering improvements based on robust information for these key areas.

## 7.4 NI Water’s Governance Framework

- 7.4.1 In the absence of domestic charging NI Water depends on a government subsidy for around 76% of its revenue. As a consequence, NI Water is now classified (for the purposes of public expenditure funding) as both a government owned company in legislation and a non-departmental public body. This ‘hybrid’ status adds a layer of complexity to the company’s governance framework.
- 7.4.2 The most significant concern raised by the company in response to the draft determination related to its status as an NDPB. There were two main aspects:-
- the impact on its ability to deliver the rate of operational efficiency catch-up proposed in the draft determination; and
  - the uncertainty of public expenditure funding to meet the price control determination.
- 7.4.3 We have listened to the company and reduced the rate of operational efficiency catch-up from 6% a year to 5%. While agreeing that the current model is not ideal, we believe that the efficiency challenge set within this final determination is achievable. We have also reviewed and updated the Consequent Written Agreement with the Department for Regional Development, which sets out processes for managing changes to budget allocations and to manage risks.

## 7.5 Next Steps – The need for a Strategic Outlook and Certainty of Funding

- 7.5.1 Recent extreme weather events emphasise the growing need for a more holistic, more strategic approach to managing all aspects of the water and sewerage industry. Long-term planning and investment are essential to deliver the right levels of service, efficiently. Climate change is increasing the frequency and severity of extreme weather events. Long-term decisions must be made to both mitigate climate change and adapt our infrastructure to changes that may now be unavoidable; delivering sustainable improvements in water management relies on contributions from a wide range of stakeholders so a holistic, integrated approach is required.
- 7.5.2 To address these issues, the Department for Regional Development is leading the development of a long-term water strategy with a 24-year horizon. Such a long-term strategy can only be effective if supported by challenging long- and medium-term delivery plans that are committed to and implemented through the regulatory framework. To support the development of longer term investment plans, we have increased the duration of our price controls so as to provide a more stable and predictable framework for delivery of long-term outcomes.
- 7.5.3 We are pleased to be advancing a more strategic approach for our next price control, PC15 which will cover a six-year period. However, we are concerned about the capacity of the public expenditure regime to support such a strategic approach. This concern is based on our experience during PC10, which saw £74 million of capital funding withdrawn from NI Water's capital programme part way through our last price control period. The water industry must be enabled to deliver effectively to maintain services, to be compliant with European Directives, particularly the Water Framework Directive and be able to adapt to and mitigate against future extreme weather events. This will require a commitment to justified funding to deliver the outputs prioritised by key stakeholders, endorsed by the assembly (through social and environmental guidance) and specified in the price control determinations.

## 8. Monitoring Delivery

### Introduction

- 8.1.1 Monitoring the company's delivery of the final determination is an important part of our role. Monitoring needs to be detailed enough to provide assurance that the company will meet targets for the period as a whole, but not so onerous that regulatory reporting adds a significant burden to NI Water. By monitoring delivery we both ensure that the outputs of the final determination are delivered and that we obtain the data and develop the understanding of NI Water's business necessary to carry out our role.
- 8.1.2 Monitoring the company's delivery of the final determination will help us discharge our duties under the Water and Sewerage Services (Northern Ireland) Order 2006 to secure that the functions of a water and sewerage undertaker are properly carried out.
- 8.1.3 We will monitor progress with the outputs shown in Chapter 5. We aspire to 'output' regulation, but the lack of robust data in some areas means that we must continue to monitor a mix of outputs and activities. We will also monitor the delivery of nominated schemes which are either:
- Specific quality outputs required by the quality regulators or other stakeholders and included in the determination; or
  - Specific schemes nominated by the company in its PC13 Business Plan which are directed at delivering a specific service improvement.
- 8.1.4 The key components of our plan to monitor delivery are:
- The Monitoring Plan;
  - The Scheme of Charges;
  - The Annual Information Return and Service Target Report;
  - The Regulatory Accounts;
  - Quarterly Capital Investment Monitoring returns;
  - Serviceability assessments;
  - Output monitoring; and,
  - Our Annual Cost and Performance Report
- 8.1.5 Where necessary we will introduce more frequent monitoring where there is a risk that the company will fail to deliver a target.

### Monitoring Plan

- 8.1.6 Once we conclude the final determination we will ask the company to summarise the outputs it will deliver in PC13 in a Monitoring Plan. This will provide a public facing summary which will be a ready source of information to allow other stakeholders to monitor the company's progress in delivering PC13.

## Scheme of Charges

- 8.1.7 The provision and approval of an annual scheme of charges is a condition of the Licence. We review and approve the Scheme of Charges to ensure that the company remains within the price limits of the determination and that its charges do not discriminate between different customer groups.

## Annual Information Return

- 8.1.8 Each year the company will submit an Annual Information Return providing information on its performance in the year including: key outputs; customer service measures; financial and billing information; the water balance and leakage; asset information; explanatory factors and expenditure reports.
- 8.1.9 The structure of our Annual Information Return was based on the detailed approach adopted by Ofwat in England & Wales. In PC13 we worked to develop a Business Plan to reflect local circumstances and to take account of one-to-one regulation. For PC13, we will review the Annual Information Return requirements to take account of this and ensure the continuity and consistency of structure and definition of information requirements for Annual Information Returns and Price Controls and other submissions. At the same time we will review the information requirements to ensure that the data collected remains relevant for current and future needs
- 8.1.10 Through Annual Information Returns, and other information returns, we will continue to monitor the quality of data submitted by the company to check that it is consistent and robust.

## Regulatory Accounting Information

- 8.1.11 We will continue to collect regulatory accounting information allowing us to monitor the financial performance of the regulated business against the financial projections of the final determination.

## Quarterly Capital Investment Monitoring Returns

- 8.1.12 We have found the quarterly Capital Investment Monitoring (CIM) returns useful in monitoring delivery of PC10 and acquiring data which has informed our work on PC13. We will continue to monitor capital investment quarterly. We will discuss the potential to use higher level summary data and exception reports and reduce detailed information requirements to half yearly submissions.
- 8.1.13 During PC10 we worked with the company to ensure that, where possible, the content and structure of our requirements aligned with the more extensive management data the company collects through its internal capital monitoring systems.
- 8.1.14 For PC13 we will review the CIM submission with NI Water to ensure that it provides a clear statement of committed and planned investment including key project dates.

## Serviceability Assessments

8.1.15 We will prepare an annual serviceability assessment throughout PC13. This will provide an assessment of the successful delivery of the determination and provide the basis for developing a more robust serviceability assessment for PC15.

## Output Monitoring

8.1.16 We will continue to work with the Output Review Group to monitor key outputs.

8.1.17 We have worked with the quality regulators to ensure a clear understanding of the nominated outputs which will be delivered in PC13. We will liaise with the quality regulators to receive compliance reports and sign-off of outputs and to manage the impact of any changes to quality requirements including the impact of any emerging issues.

## Annual Cost and Performance Report

8.1.18 We will publish a Cost and Performance Report annually setting out the progress the company has made in delivering PC13. We shall continue to scrutinise NI Water's claimed efficiencies and publish our views on the extent of the real and sustainable efficiencies, especially but not exclusively relating to those operational efficiencies delivered by the company in the preceding financial year.

## Particular areas of focus

8.1.19 In Chapter 5 we identified internal property flooding and pollution incidents as two key areas where the company has not been able to demonstrate a clear link between asset performance, operational activities, investment, and improved service. While we are aware that the company has made progress in these areas we will ask the company to provide us with regular briefings on its approach to these key areas and its progress in developing and delivering improvements based on a robust information.

# Glossary of Terms

<b>Appointed water company</b>	The term used to describe the regulated water only and water and sewerage companies who supply water and sewerage services to consumers. Also known as a 'regulated company' or 'undertaker'.
<b>Asset life</b>	The time from the date of installation (when new) of an asset (or part) until the asset (or part) has to be replaced. The remaining asset life is recorded from the present. Asset lives for the current asset base are estimated and only known exactly after the asset has been replaced.
<b>Base expenditure</b>	This is the expenditure needed to continue delivering current levels of service, before taking account of planned or required improvements. It comprises operating and capital maintenance expenditure.
<b>Base service outputs</b>	NI Water must maintain the service standards and the ability of its assets to continue to provide service into the future.
<b>Benchmark company</b>	This is the company which is used as the relative efficiency reference point. To set the benchmark, a company (or group of companies): <ul style="list-style-type: none"> <li>• must represent a reasonable proportion of industry turnover (historically 2.5% to 3%);</li> <li>• must have no special characteristics outside management control that significantly reduce its costs;</li> <li>• we must have no concerns about the consistency of the benchmark company's data; and</li> <li>• for a capital maintenance benchmark a company must have stable or improving serviceability.</li> </ul>
<b>Business plan</b>	NI Water's Business Plan sets out: <ul style="list-style-type: none"> <li>• its overall strategy and the implications for price limits and average bills;</li> <li>• its strategic objectives in terms of service performance, quality, environmental and other outputs;</li> <li>• the activities necessary in the period to meet these objectives; and</li> <li>• the scope for improvements in efficiency.</li> </ul>
<b>Capital efficiency</b>	The efficiency of using capital expenditure to deliver outputs.
<b>Capital expenditure (capex):</b>	Appointed water companies' spending on new, replacement or refurbished capital assets, such as construction and buying machinery.
<b>Capital maintenance</b>	Planned work by appointed water companies to replace and renovate water and sewerage assets to provide continuing services to consumers.
<b>Capital maintenance econometric return (CMER)</b>	A standardized data set provided by each appointed water company from which econometric models for assessing relative capital efficiency are developed.
<b>Change protocol</b>	Principles and outline procedures for confirmed changes funded improvement programmes during an asset management programme period.
<b>Charging year</b>	The period for which NI Water bills customers starting on 1 April each year.
<b>Competition Commission (CC)</b>	Considers merger references. It is also the body to which companies can appeal if they disagree with our decisions on price limits, licence

	amendments or accounting guidelines.
<b>Construction output price index (COPI)</b>	Published by the Building Cost Information Service (BCIS), COPI measures changes to construction prices which can move in a different way from the Retail Price Index. We use COPI to compare how much companies have actually spent on capital investment compared with what we allowed for in price limits.
<b>Consumers</b>	Consumers refers to individuals or households that purchase and use goods and services generated within the economy. In this case we are referring to those who use water and sewerage services.
<b>Cost base</b>	A defined set of standardised capital work items and projects.
<b>Cost benefit analysis</b>	This measures all the costs and benefits of a project in a common currency (preferably £s). It is used to assess the balance between the costs and benefits of a proposed project.
<b>Cost of capital</b>	The minimum return that providers of capital require to prompt them to invest in or lend to the appointed water companies given their risk.
<b>Current cost depreciation (CCD)</b>	The depreciation charge on tangible fixed (above-ground) assets based on the current values of those assets, less amortisation of deferred credits relating to grants and third party contributions. This depreciation is generally only applied to above-ground assets as an infrastructure renewal charge is applied to underground assets.
<b>Depreciation</b>	A measure of the consumption, use or wearing out of an asset over the period of its useful economic life.
<b>Determinations</b>	Some of our decisions are known as determinations, the biggest of which is the outcome of a price control setting out appointed water company's price limits that will operate for a period and the specific outputs that they will have to deliver.
<b>Econometrics</b>	A process that finds a link between expenditure in an area (for example, capital maintenance for water distribution) and a number of measurable explanatory variables (for example, length of distribution mains). If proved, the correlation can be used to derive predicted expenditure for an appointed water company.
<b>Enhanced service levels</b>	Permanent, identifiable and measurable improvements in service levels that are in addition to achieving the most recent established appointed water company-wide base levels of service. They are in addition to improvements resulting from expenditure in other purpose categories.
<b>Enhancement</b>	A level of service delivered better than previously defined. Examples of enhancements include: <ul style="list-style-type: none"> <li>• fewer supply interruptions for consumers;</li> <li>• fewer disruptions for the public in general; and</li> <li>• less pollution for the environment.</li> </ul>
<b>Financeability</b>	Our duty to ensure that NI Water can finance the proper carrying out of their functions is interpreted to mean not only that they should receive a return on investment at least equal to the cost of capital.
<b>Gearing</b>	A company's net debt expressed as a percentage of its regulated capital value.
<b>Indexation</b>	A technique to adjust income payments by means of a price index.

<b>Infrastructure assets</b>	Mainly underground assets, such as water mains and sewers, also dams and reservoirs that last a long time. A distinction is drawn between the infrastructure and non-infrastructure assets because of the way in which they are managed, operated and maintained by appointed water companies.
<b>Infrastructure charges</b>	Developers pay infrastructure charges to NI Water when a new property is connected to either a public water supply or a public sewer. The infrastructure charge provides a contribution to the investment required as a result of the demand that new developments generally place on the local distribution or sewerage network.
<b>Infrastructure renewals charge (IRC)</b>	An annual accounting provision for the medium- to long-term maintenance needs of the infrastructure assets network (underground pipes) charged to the profit and loss account.
<b>Infrastructure renewal expenditure (IRE)</b>	The actual expenditure incurred in the financial year in maintaining the operating capability of infrastructure assets through renewal or renovation of those assets.
<b>Interim determination</b>	An interim determination may allow NI Water, or us, to seek revised price limits if specified outputs required of a company change such that the total impact on the company, in net present value (NPV) terms, amounts to 10% of company turnover. The specific items that can be considered are detailed in NI Water's Licence (as relevant changes of circumstances) or defined at a price control as notified items.
<b>International financial reporting standards (IFRS)</b>	These are standards and interpretations adopted by the International Accounting Standards Board.
<b>K factors (price limits):</b>	The annual increase in charges that NI Water can make. The amount by which a company can increase (or must decrease) its charges is controlled by the price limit formula $RPI \pm K + U$ . K is a number determined by us at a price control, for each year, to reflect what it needs above inflation, in order to finance the provision of services to consumers. It may be changed at an interim adjustment between price controls. RPI is expressed as the percentage increase in the Retail Price Index in the year to the November before the charging year and U is the amount of unused K not taken up in previous years.
<b>Logging up and logging down</b>	The process at price controls enabling appointed water companies to set aside variations in costs, which are taken into account when we next set price limits.
<b>Maintenance non-infrastructure</b>	All actual or historic expenditure charged to capital maintenance non-infrastructure.
<b>Modern equivalent asset</b>	A structure similar to an existing structure and having the equivalent productive capacity, which could be built using modern materials, techniques, and design. Replacement cost is the basis used to estimate the cost of constructing a modern equivalent asset.
<b>Monopoly</b>	A monopoly is defined as a persistent market situation where there is only one provider of a product or service, in other words a company that has no competitors in its industry.
<b>Net present value (NPV)</b>	The economic value of a project, at today's prices, calculated by netting off its discounted cash flow from revenues and costs over its full life.
<b>Non-infrastructure assets</b>	Mainly surface assets, such as water and sewerage treatment works, pumping stations, company laboratories, depots and workshops.

<b>Non-regulated activity</b>	Non-core business, not associated with the delivery of water and sewerage services.
<b>Notified items</b>	Any item notified by us to NI Water as not having been allowed for (either in full or in part) in the determination at the most recent price control.
<b>Operating expenditure (Opex)</b>	NI Water's day-to-day spending on running the services, for examples, staff costs and power.
<b>Outperformance</b>	Achieving planned outputs for less expenditure than that assumed in price limits.
<b>Output</b>	Whatever is produced by a project.
<b>Overall performance assessment (OPA)</b>	<p>A measure of performance which reflects the broad range of service provided to customers. The key areas within the OPA are:</p> <ul style="list-style-type: none"> <li>• water supply (pressure, interruptions, restrictions and drinking water quality);</li> <li>• sewerage service (flooding incidents and risk of flooding);</li> <li>• customer service (quantitative and qualitative aspects of service); and</li> <li>• environmental impact (compliance with statutory environmental legislation).</li> </ul> <p>We use the OPA within the price setting process.</p>
<b>Per capita consumption (PCC)</b>	The measure of average use per person in an appointed water company's area. Companies are required to report estimates for both metered and non-metered consumers.
<b>Quality enhancements</b>	A generic term for work programmes implemented by the companies to improve the quality of drinking water or the environment typically by treating wastewater discharges to a higher standard. These enhancements are required to fulfil new legislation or national initiatives approved by Ministers.
<b>Quality regulators</b>	A collective term for the Drinking Water Inspectorate and the Northern Ireland Environment Agency.
<b>Regulatory capital value (RCV)</b>	The capital base used in setting price limits. The capital value is calculated using our methodology (for example, after current cost depreciation and infrastructure renewals accrual). Also known as the 'regulatory asset base' and the 'regulatory asset value'.
<b>Reporters</b>	These are professional independent consultants who act as commentators on the wide range of regulatory information that the appointed water companies submit to us. This information needs to be well founded and provide a consistent base of industry-wide comparative information for regulatory decision making. We therefore require NI Water to appoint a reporter to examine, test and give their opinion on this information, in line with our guidance. Each reporter's appointment is subject to our approval. Each owes a duty of care to us and also owes a duty of care to NI Water.
<b>Retail price index (RPI)</b>	An index of changes in retail prices. Charges are controlled by the formula $RPI \pm K$ . RPI is expressed as the percentage increase in the Retail Price Index in the year to the November before the charging year.
<b>Return on capital</b>	Return on capital, also known as return on invested capital, is a financial measure that quantifies how well a company generates cash flow relative to the capital it has invested in its business.

<b>Revenue base</b>	This is the amount received by NI Water from their customers.
<b>Revenue requirement</b>	The amount of money that NI Water must receive from its customers to cover its costs, operating expenses, taxes, interest paid on debts owed to investors and, if applicable, a reasonable return (profit).
<b>Security of supply index (SoSI)</b>	Assesses each appointed water company's ability to supply customers in dry years without imposing demand restrictions such as hosepipe bans. Companies with higher index score bands have better security of supply.
<b>Serviceability</b>	The capability of a system of assets to deliver a reference (i.e., expected) level of service to consumers and to the environment now and into the future.
<b>Substantial effect clause</b>	This allows companies, or us, to seek a change in price limits if circumstances beyond the companies' control change such that the total impact on the company amounts in NPV terms to 20% of company turnover.
<b>Supply/demand balance</b>	The balance between the amount of an appointed water company's available water resources and the demand for water by customers. Any imbalance between supply and demand can be met through resource enhancement or demand management strategies.
<b>Tariff basket</b>	<p>The basket of charges to which the annual price limits apply, comprising charges for:</p> <ul style="list-style-type: none"> <li>• unmetered water supply;</li> <li>• metered supply;</li> <li>• unmetered sewerage services;</li> <li>• metered sewerage services; and</li> <li>• reception, treatment and disposal of trade effluent.</li> </ul> <p>Within the overall price limit, basket items may increase or decrease by different amounts and percentages. However, the average change in the basket of charges must not exceed the price limit.</p>
<b>Unit cost modelling</b>	Simple modelling based on unit costs, for example per connected property, which can be used to assess relative efficiency.
<b>WaSC</b>	Appointed water and sewerage company provides water and sewerage services.
<b>Water Framework Directive (WFD)</b>	A European Directive to provide a coordinated approach to water management with the European Union (EU) by bringing together strands of EU water policy under one piece of framework legislation. Member States must produce plans for river basin management districts that set out a programme of measures aimed at protecting bodies of surface and groundwater. Each plan must include economic analyses of water use and move towards full cost recovery in water pricing. For more information, see the WFD website at <a href="http://www.fwr.org">www.fwr.org</a> .
<b>Water resource zone (WRZ)</b>	The largest possible zone in which all water resources, excluding external transfers, can be shared. Hence, it is the zone in which all consumers experience the same risk of supply failure from a resource shortfall.
<b>Weighted average cost of capital (WACC)</b>	For an appointed water company, the average costs of its debts and cost of equity capital, weighted according to the balance of debt and equity which finances the company's assets.
<b>Water only Company</b>	An appointed water only company. WoCs provide water but not sewerage services.

# Abbreviations

<b>AIR</b>	Annual Information Return
<b>BIP</b>	Business Improvement Programme
<b>CAPEX</b>	Capital Expenditure
<b>CCD</b>	Current Cost Depreciation
<b>CCNI</b>	Consumer Council Northern Ireland
<b>COPI</b>	Construction Output Price Index
<b>DFP</b>	Department of Finance and Personnel
<b>DG's</b>	Performance Indicators (originally set by OFWAT Director General)
<b>DRD</b>	Department for Regional Development
<b>DWI</b>	Drinking Water Inspectorate
<b>E&amp;W</b>	England and Wales
<b>ELL</b>	Economic Level of Leakage
<b>GoCo</b>	Government Company
<b>IRC</b>	Infrastructure Renewals Charge
<b>IRE</b>	Infrastructure Renewals Expenditure
<b>K-factor</b>	The adjustment to price caps excluding RPI
<b>KPI</b>	Key Performance Indicators
<b>M and G</b>	Management and General
<b>MEAV</b>	Modern Equivalent Asset Value
<b>MNI</b>	Maintenance non-infrastructure
<b>NDPB</b>	Non Departmental Public Body
<b>NIEA</b>	Northern Ireland Environment Agency
<b>NIW</b>	Northern Ireland Water
<b>OFWAT</b>	Office of Water Regulation (England and Wales)
<b>OPA</b>	Overall Performance Assessment
<b>OPEX</b>	Operating Expenditure
<b>ORG</b>	Output Review Group
<b>ORR</b>	Office of Rail Regulation
<b>PC10</b>	Price Control 2010 – 2013
<b>PC13</b>	Price Control 2013 – 2015

<b>PC15</b>	Price Control 2015 – 2021
<b>PE</b>	Public Expenditure
<b>PFI</b>	Private Finance Initiative
<b>PPP</b>	Public Private Partnership
<b>RCV</b>	Regulatory Capital Value
<b>RPA</b>	Regional Price Adjustment
<b>RPI</b>	Retail Price Index
<b>RPI-X</b>	A form of price control where charges are linked to RPI
<b>SBP</b>	The Strategic Business Plan 2007-2010
<b>STW</b>	Sewage Treatment Works
<b>VER</b>	Voluntary Early Retirement
<b>VS</b>	Voluntary Severance
<b>WACC</b>	Weighted Average Cost of Capital
<b>WACI</b>	Weighted Average Charge Increase
<b>WICS</b>	Water Industry Commission for Scotland
<b>WTW</b>	Water Treatment Works
<b>WwTW</b>	Wastewater Treatment Works



