Utility Regulator
ELECTRICITY GAS WATER

Cost and Performance Report 2007-10

An assesment of NI Water's cost and performance

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Foreword

The role of the Utility Regulator is to ensure that the interests of water and sewerage consumers are safeguarded, and in particular that they receive value for money services. This report examines how Northern Ireland Water Limited (NI Water) delivered against commitments made in its Strategic Business Plan (SBP) 2007-10. This was the period before the first regulated price control, but at a time when we scrutinised the company's performance. We have assessed NI Water's financial performance; efficiency; and overall service performance, and reflected on data issues arising over the period.

NI Water has a significant role in delivering major infrastructure investment. Over the last two decades there have been unprecedented levels of investment in the water and sewerage industry in Northern Ireland. Since 1990, around £3.4 billion (2007-08 prices) has been spent on upgrading water and sewerage services. The high level of capital investment over this period continues to deliver a better standard of water and wastewater compliance in Northern Ireland. Delivery of critical wastewater treatment projects successfully addressed the imminent risk of infraction.

This period has also seen a notable increase in operating costs. Over the last two decades expenditure has more than doubled in nominal terms, increasing to £213 million in 2009-10. A proportion of the increase can be attributed to the additional chemicals and energy required to run more technically advanced treatment processes and plants. The payments for the new public private partnership (PPP) schemes, Alpha and Omega, played a crucial role in averting infraction fines, but also raised operating costs.

When operating costs are high, efficiency is even more critical and the delivery of enhanced efficiency targets set by the Minister for Regional Development over the period is noteworthy. This will assure NI Water consumers, whether taxpayers, rate payers or those charged directly for the service, that costs are moving towards being as low as they reasonably can be.

The first period saw successful delivery of an operational efficiency target of £53.8 million (2006-07 prices from a 2003-04 base) and an improved overall service performance of 23 points. The second regulatory period, PC10 (2010-13), challenges the company to deliver a saving of £91 million and an improvement in its overall performance score of 80 points.

While there have been some data and governance issues over the period, NI Water has continued to deliver critical outputs and improved efficiency. Evidence is starting to build that shows NI Water is able to transform and meet the challenges it faces.

Jo Aston
Director of Water Regulation

1.0 Executive Summary

1.1 Introduction and background

The Utility Regulator has been the independent economic regulator of the water and sewerage services industry in Northern Ireland since 1 April 2007. NI Water was also established on 1 April 2007, and is the government-owned provider of water and sewerage services in Northern Ireland.

Our role is to protect consumers. We do this by ensuring that consumers receive value for money and that investment results in improvements to service. We monitor NI Water's performance, requiring it to provide information which allows us to assess its performance against targets. This information also enables us to compare NI Water's efficiency and performance relative to other water companies.

NI Water's SBP defined the requirements of the company in its first three years of operation (2007-10). The plan set out the allowed revenue, associated efficiency targets and Key Performance Indicators (KPIs) for the company, as agreed by the Department for Regional Development (DRD).

The Cost and Performance Report outlines our independent assessment of how the company performed against the SBP targets. Where appropriate, it compares NI Water's performance with water and sewerage companies in England, Scotland and Wales. Specifically, this report examines the progress made by NI Water over its first three years of operation under an economic regulatory regime.

1.2 Key findings from our analysis

Our analysis is based on an objective assessment of data and information – largely provided by NI Water. While our analysis has been to some extent limited by data availability and quality, the following key findings are evident.

Operational savings

Over the 2007-10 period, NI Water largely met enhanced efficiency targets for operational expenditure. NI Water spent £0.3 million[1] more than budgeted.

The company also reduced the operational efficiency gap between it and the English and Welsh benchmark performance from 49% to 40%. This shows that the company has made progress to reduce the gap but that NI Water needs to reduce its costs further by 40% to be as efficient.

Capital delivery

The company spent to its nominal SBP budget net of grants and contributions. Lower than expected inflation in the construction sector and lower income from grants and contributions, resulted in a net overspend in real terms of £39 million (2006-07 prices).

1 All figures in the report are given in outturn prices unless otherwise stated.

Some of this additional expenditure delivered extra outputs (e.g. lengths of water mains). However, the absence of a clear baseline makes it difficult to draw definitive conclusions on the efficiency and economy of the work undertaken.

Key performance indicators

The SBP identified 28 KPIs for the company which were structured around customers, cash, people and compliance.

In overall terms, performance against targets was mixed. NI Water performed favourably against consumer response targets. While performance on water quality was just short of the SBP targets, the company delivered the best water quality performance to date. Wastewater compliance continued to improve but fell short of the SBP targets.

Mixed success in terms of KPI performance can be attributed to a number of reasons. These include poor data, unrealistic target setting, unforeseen weather events or simple over/under performance.

However, a general improvement to customer service throughout the period is reflected in an improved Overall Performance Assessment (OPA) score.

Overall performance assessment

We use the OPA methodology to challenge NI Water to improve its overall performance and inform considerations of the level of service compared to that of other water companies. The OPA score combines several individual service measures which consumers consider to be important (e.g. how quickly water supply is restored after an interruption).

Our assessment shows a general improvement in performance by NI Water. The OPA score has improved during the period from 98 to 121 - representing a 23 point increase. This improvement in the OPA score by NI Water is noteworthy. The challenge for the price control period 2010-13 (PC10) is for NI Water to improve service levels further and to meet a score of 201.

The England and Wales average score is 290[2], which illustrates the opportunity for further improvement.

Information and data integrity

Weaknesses in the availability and integrity of data have been evident during the SBP period. This is not surprising for a company that has been subjected to regulatory reporting requirements for the first time. Action has been taken to address shortfalls but it will take time to remedy such issues. We continue to monitor NI Water's delivery of their formal undertakings requiring them to implement data quality programmes.

2 This relates to the same 11 measures used for NI Water.

1.3. The way forward

Price control 2010-13 (PC10)

We welcome NI Water's acceptance of our PC10 Final Determination (following agreement between the Utility Regulator and DRD on government subsidy and associated public expenditure issues), its efficiency targets, planned outputs and challenge for improving the OPA score. We are equally conscious of the unique circumstances within which we operate – a regulatory regime working alongside a public expenditure reporting framework.

The price control process sets the company challenging capital and operational efficiency targets alongside the delivery of clear outputs for the period. Savings of £91 million have been identified in the PC10 price control determination.

NI Water is required to publish a monitoring plan for the PC10 period and we will publish associated annual cost and performance reports.

Working within a public expenditure context

We have worked closely with stakeholders to develop a process which allows us to manage potential changes in public expenditure funding over the price control period, 2010-13.

Within this context, it should be recognised that some 92% of capital investment is driven by the need to maintain the asset base and to meet EU quality compliance standards and growth. The remaining 8% is focused on improving current levels of service. It will be important to be aware of the impact that any public expenditure reductions might have.

Compliance with the Water Framework Directive, together with the need to mitigate and adapt to climate change, means that there will be a continuing need to invest substantial sums in the water and sewerage industry in Northern Ireland. In this context, and in discharging our statutory duty, we will seek to ensure that consideration is given to all three aspects of sustainability – economic, social and environmental. For PC13 (the next price control) and subsequent price controls we will require the company, consulting with stakeholders, to set out their strategic direction.

Improving data

Data quality improvement is essential for both the company and the Utility Regulator. This is a particular focus for PC10 but will continue to be the case beyond 2013. More reliable and trended data will facilitate a better understanding of performance, business priorities and targeting of investment.

Price controls beyond 2013

It is critical for such a fundamental service, with both high capital and operational costs, to plan strategically. We have commenced work with the principal stakeholders on the programming and approach for the next price control. We will work with DRD and the Executive to inform any proposals for changes to the water governance arrangements. We will also work to ensure that water pricing policies comply with the European Water Framework Directive.

2.0 Context

2.1 The establishment of NI Water

NI Water was established as a government owned company on 1 April 2007 to replace DRD Water Service as the sole water and sewerage service provider for Northern Ireland. It is governed by the Water and Sewerage Services (NI) Order 2006 (the Order) and operates under a licence.

The introduction of direct charging of domestic consumers has been deferred. As a consequence, NI Water receives a government subsidy from DRD in place of those domestic payments. Non-domestic metered customers also receive a domestic allowance and unmetered customers receive a 50% subsidy. This dependancy on government subsidy led to the company being re-classified for accounting purposes as a non-departmental public body (NDPB) in 2008-09.

2.2 The Utility Regulator

The Utility Regulator was established as the economic regulator of Northern Ireland's water industry under the Order on the 1 April 2007. Our primary duties under legislation are to:

- protect the interests of consumers;
- ensure that NI Water carries out its functions properly in every area of Northern Ireland; and
- ensure NI Water is able to finance its functions.

2.3 NI Water's Strategic Business Plan

The outputs to be delivered by NI Water in the period April 2007 to March 2010 and the funding required to deliver these outputs, are defined in NI Water's SBP. Full and summary versions of this document can be found on NI Water's website (http://www.niwater.com/corporatereports.asp).

The SBP was negotiated and agreed between DRD and NI Water in consultation with the quality regulators (the Drinking Water Inspectorate for Northern Ireland and the Northern Ireland Environment Agency (NIEA)). The Utility Regulator was not established at that time and was therefore not involved in the process.

2.4 Annual Information Returns

In support of our objective of ensuring that consumers receive value for money from NI Water, we monitor the company's performance against its SBP objectives. This is done through the review of an Annual Information Return (AIR) submission from the company. The AIR submission enables us to:

- monitor the company's progress;
- ensure the company's standards of service are protected; and
- compare the company's costs and performance with the rest of the UK water industry.

We aim to publish the results of our analysis annually in our Cost and Performance Report and at the end of a regulatory price control period.

The processes, consistency and quality of information collected and submitted by NI Water are scrutinised on our behalf by an independent technical expert called the Reporter. The Reporter submits a comprehensive report to us which contains details of the audit findings, helping to inform our analysis.

3.0 COSTS AND EFFICIENCY

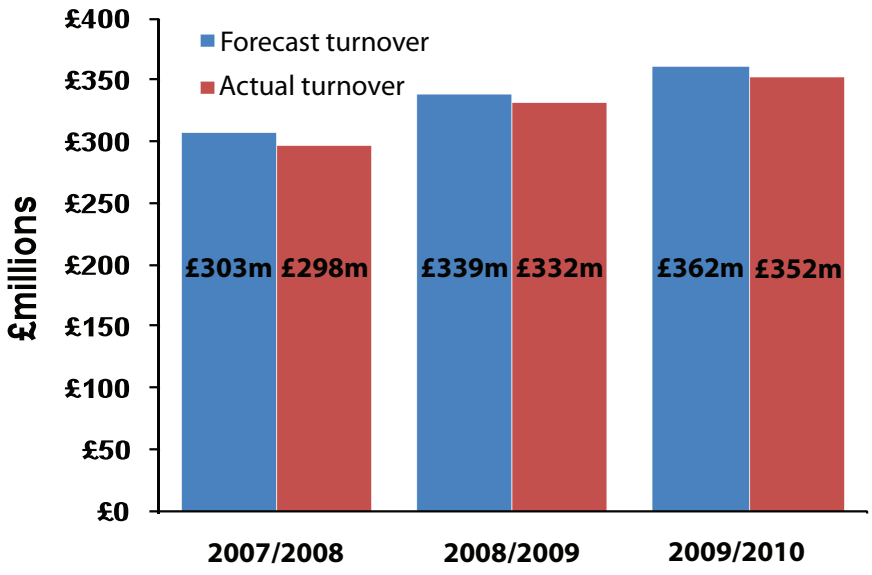
3.1 Overall financial performance

From April 2007, the water company was required to comply with an economic regulatory and reporting regime for the first time.

The first three years have been challenging for the company, particularly as domestic charges have not been phased in as intended over the period. An associated challenge has been the company's dependency on government subsidy for approximately 70% of its revenue. As a consequence it was re-classified as a NDPB.

Further challenges have included lower than expected turnover. Actual turnover was £982 million compared to £1,005 million predicted in the SBP (see figure 3.1). Some of this can be attributed to lower metered income arising from data transfer errors, the revision downwards in non-domestic customer numbers and a fall in consumption levels. Better information should improve future projections. The general economy, however, will continue to impact on consumptions levels.

Figure 3.1: NI Water's actual turnover compared to SBP projections



During the SBP period, the company paid £105 million by way of a dividend to its shareholder (DRD), as projected.

One constraint for NI Water, arising from its re-classification as a NDPB, is that it has no facility to build up a financial reserve. This is a feature of most regulatory regimes and provides a company with flexibility to manage its business effectively over a full regulatory period. It also encourages the company to outperform regulatory efficiency and performance targets to the benefit of consumers.

Such a reserve could also protect the consumer by acting as a buffer between long-term planning requirements and the shorter term public expenditure framework. Consequently the projected reserves were £21 million against the actual amount of £2.5 million.

More detailed information on NI Water's financial accounts is set out in the company's statutory and regulatory accounts. These can be found in NI Water's annual reports for each year which is published on their website (www.niwater.com/corporatereports.asp).

3.2 Operational expenditure

NI Water's operating costs over the SBP period were £613.8 million. This compares to £627.5 million allowed in the SBP (excluding removed cost of bad debt) and £613.4 million resulting from enhanced efficiency targets. The company therefore slightly overspent on budget by £0.3 million.

Table 3.1: NI Water allowed versus actual operating costs (outturn prices)

	2007-08	2008-09	2009-10	Total
Original SBP opex budget	£193.0m	£217.1m	£217.4m	**£627.5m**
Revised budget with enhanced efficiency target	£193.0m	£213.6m	£206.8m	**£613.4m**
Actual spend	£186.1m	£214.8m	£212.8m	**£613.8m**
Saving (-) /Overspend	**-£6.9m**	**£1.2m**	**£6.0m**	**£0.3m**

Figures may not add due to rounding.

Table 3.1 shows that the trend of NI Water's operating costs has been upward over the period. Some of this increase is justified and arises from the need to transform the service to a customer focused, efficient and output driven organisation.

The need to transform the business has resulted in expenditure of £23 million[3] on a Business Improvement Programme (BIP). The aim of the BIP is to equip the company with the technology and information systems to allow it to work smarter. It facilitates the company to gather the right information and help target expenditure and deliver an improved service, whilst reducing costs.

3 This refers to only the opex element of BIP expenditure. Total cost of the BIP, including capex, was £60.4 million.

The company has also spent £21 million on voluntary early retirement and voluntary severance schemes. The benefits from both these initiatives will be realised to an increasing extent over the coming years. This will be taken into consideration in future price controls.

The introduction of two PPP projects has also increased operating costs. This is because payments to the PPP contractors, covering operational and capital expenditure, are made through a unitary charge. Alpha now treats about 50% of NI Water's bulk water supplies. Omega provides 20% of wastewater treatment and 100% sludge disposal.

With such substantial and increasing operational costs it is crucial that the company operates efficiently. In order to gauge how efficient NI Water is, we deploy established econometric models to benchmark NI Water against comparative companies. This also facilitates the setting of viable but challenging efficiency targets for the future.

3.3 Meeting operational efficiency targets

NI Water slightly underperformed its allowed operating expenditure for the 2007-10 SBP period. Several specific elements are noteworthy:

- power costs unexpectedly increased by over £12 million above anticipated levels during the period;
- PPP projects were delivered later than expected. As a result PPP expenditure was £21 million lower than expected, but with a consequent increase in other company costs;
- efficiency targets originally set in the SBP were not sufficiently challenging. As a consequence of our advice, the DRD Minister set enhanced targets for the latter two years - an additional £3.5 million to be delivered in 2008-09 and £7 million in 2009-10, which the company largely delivered on; and
- NI Water has capitalised more salaries than was initially envisaged in the SBP. This transfer of cost from opex to capex does not represent efficiency, but reflects a transfer of costs to another area of expenditure. NI Water indicates it has done this to make reporting more comparable with England and Wales.

The lack of a clearly stated baseline of expenditure, in conjunction with the factors stated above, has limited our ability to assess the company's performance. For the current price control (PC10), we have sought to establish a clear baseline of operational expenditure.

Closing the efficiency gap

Another measure of performance and value is the company's efficiency position compared to companies in England and Wales. This is summarised in table 3.2.

Table 3.2: Relative efficiency gap closure over SBP

Category	Efficiency gap 2007-08	Efficiency gap 2008-09	Efficiency gap 2009-10[4]
NI Water to England and Wales 'average'	42.6%	39.5%	36.5%*
NI Water to benchmark or 'frontier'	48.7%	43.2%	40.5%*

Table 3.2 illustrates that the efficiency gap between NI Water and the other water and sewerage companies has narrowed over the period. This can be attributed to a number of factors, which include reduced headcount, rationalisation of depots, improved processes and a range of business improvement initiatives.

The comparison of relative efficiency in the industry takes account of special operating conditions of the different companies e.g. length of mains. This enables more robust comparisons.

Benchmarking in this way has proven to be a very effective regulatory tool, successfully driving down costs while improving service. The Water Industry Commission for Scotland has also deployed these tools. Since its reform in 2002, Scottish Water has significantly narrowed the gap with its counterparts in England and Wales, reducing opex by 40% between 2002-03 and 2007-08.

3.4 Capital expenditure

What drives investment?

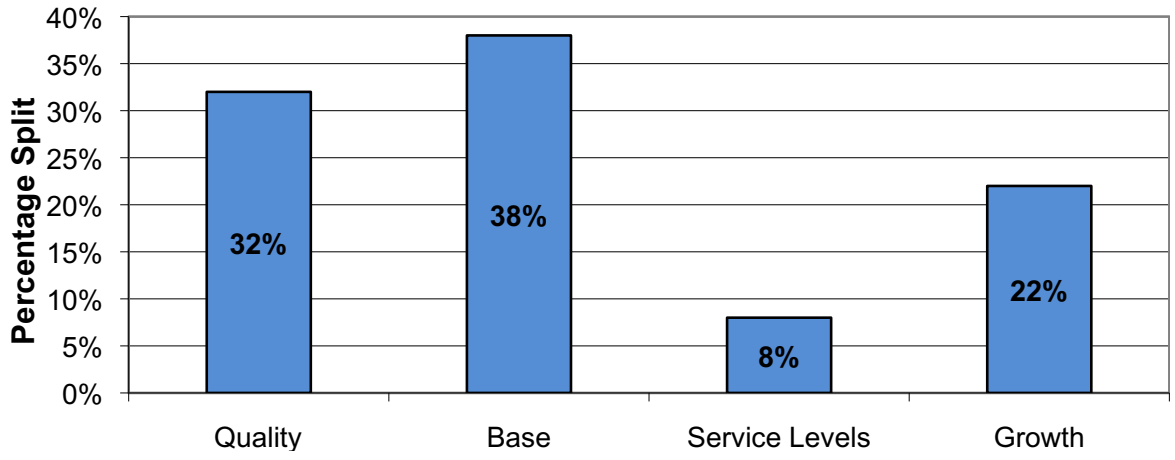
NI Water provides an essential service and has an extensive asset base that it estimates would take £6 billion to replace. Therefore it is important that the company continues to invest capital to maintain existing assets. It also needs to invest to create new assets to meet more demanding quality obligations, provide additional capacity for growth and development, and improve the service it provides.

Highlights

- **The operating cost of NI Water over the SBP period was £0.3 million more than its enhanced target.**
- **NI Water has reduced the efficiency gap with other water and sewerage companies since 2007-08. However a 40% operational efficiency gap remains.**
- **92% of capital investment by NI Water is necessary to maintain the current level of service, be compliant with EU directives and meet Northern Ireland population and development needs.**

4* The Utility Regulator has made an estimate of 2009-10 performance by using the latest Ofwat regressions (08-09), updated explanatory variables and deflated 2009-10 cost data for NI Water. This estimated figure will be revised for the next Cost and Performance Report when the latest regressions are available.

Figure 3.2: Allocation of capex in the SBP period by purpose



During the 2007-10 period, the company invested £796 million in gross nominal terms (£779 million in 2006-07 prices, which was the cost base for the SBP).

Investment to maintain the existing asset base was 38% of the total capital investment in 2007-10. Similar levels of investment in base maintenance are provided for in PC10. However, it may be necessary to increase this level of base investment in the future, once NI Water develops its asset management systems to support investment needs. The current average level of base maintenance expenditure in England and Wales is around 50%.

32% of NI Water's capital investment was driven by the need to meet statutory quality compliance targets arising from EU directives. The element that allows for increased demand, from a rising population and associated additional housing developments, amounted to 22%. Improving service levels accounted for the smallest proportion of investment at 8%. However, service improvements will also result from the other expenditure drivers.

Capital investment and value for money

The company spent in line with its nominal SBP budget net of grants and contributions. Lower than expected inflation in the construction sector, and lower income from grants and contributions, resulted in a net overspend in real terms of £39 million. However, we acknowledge the pressure to spend to the annual nominal cash budget when working in a public expenditure regime.

To assess value for money we have compared costs in real terms using actual inflation indices, as shown in table 3.3.

Table 3.3: Total capital expenditure compared to SBP projections

	SBP Baseline nominal £m	2007-10 Actual nominal £m	SBP Baseline (06/07 prices) £m	2007-10 Actual (06/07 prices) £m	Variance (06/07 prices) £m
Capital works programme	678	659	628	651	23
Other capital expenditure	134	137	128	129	1
Gross expenditure	812	796	756	779	24
Grants & contributions	30	15	29	14	15
Net expenditure	781	781	727	766	39

Expenditure at 2006-07 prices is based on the actual construction output price index and retail price index applied to the actual expenditure in nominal (cash) terms. Figures may not add due to rounding.
For comparison on a like for like basis, the grants and contributions reported exclude the element of infrastructure charges released to the company accounts as deferred income over an extended period.

Housing and industrial development was lower than the company estimated in its SBP. As a result, income from grants and contributions from developers was lower than expected. However, the company did not have to undertake the work it expected to facilitate new development and should have made equivalent savings in its capital expenditure.

£23 million of the overspend, in real terms, related to the capital works programme. The SBP did not clearly set out a programme of works linked to expenditure and outcomes in terms of specified KPIs. Our review and analysis on outcomes was therefore limited. We note that NI Water delivered additional outputs from its water mains programme. We therefore conclude that NI Water broadly delivered its capital investment objectives for the SBP.

Other capital investment, which includes expenditure such as capitalised salaries, metering, connections and technology, was in line with the SBP budget. Within this category, expenditure on capitalised salaries and overheads (internal staff and facilities costs incurred by NI Water to deliver capital investment) was £9 million higher than expected. This resulted from revised accounting allocations rather than a real increase in expenditure, so operating costs will be proportionately lower. Metering costs were £7 million lower than expected as a result of the decision not to introduce domestic charges.

Highlights

- **The company spent in line with its nominal SBP budget net of grants and contributions. Lower than expected inflation in the construction sector, and lower income from grants and contributions, resulted in a net overspend in real terms of £39 million.**
- **NI Water's efficiency gap for capex is much closer to water and sewerage companies in England and Wales than for opex. A reduction of 4% in NI Water's capital unit costs would result in average performance.**

Meeting capital efficiency targets

Given the level of capital investment, an important measure of a company's performance is the value for money delivered to consumers i.e. company efficiency. We assess NI Water's relative efficiency by benchmarking their costs to those of water and sewerage companies in England and Wales.

Unlike for opex, we are unable to undertake an annual review of the relative efficiency of capital expenditure given the longer duration of projects and associated procurement costs. Such benchmarking is therefore generally carried out to inform the setting of efficiency targets for a price control.

For PC10, we made an assessment of relative efficiency using Ofwat's cost base methodology. The cost base approach assesses the capital efficiency by comparing standard industry unit costs[5]. The results of the latest cost base analysis (2007-08) are highlighted in table 3.4.

Table 3.4: Capital expenditure relative efficiency gap

Category	Overall efficiency gap (% reduction in NI Water costs required)
NI Water to England and Wales 'median'	4%
NI Water to 'upper quartile'	17%

Utilising Ofwat's benchmarked methodologies shows that NI Water's capital efficiency gap, when compared to the English and Welsh water companies, is not as significant as the operational efficiency gap.

5 Such unit costs might include the standard cost (£/m) of mains or sewer laying for different diameter pipes.

3.5 Assessing capital outputs in 2007-10

The SBP lacked precision about what outputs were supposed to be delivered for the £756 million[6] budgeted gross capital spend. Subject to that caveat, we consider that the company broadly met its capital efficiency target.

During the SBP we initiated quarterly capital investment monitoring. We asked the company to provide a baseline programme as a basis for monitoring delivery. Our overall view of delivery against that baseline programme is as follows:

- additional efficiencies have been made on the wastewater treatment works programme;
- specific substitutions have been made. For example, the Maze infrastructure project was put on hold pending decisions on future development. The funding released was invested in additional trunk main schemes;
- there has been over-spend on some programmes of work without delivering specific additional outputs;
- the company has found that some specific elements of the baseline programme were no longer needed and has not delivered these; and
- the company increased activity on the water mains programme, delivering additional outputs.

Headline items delivered by the capital programme in the SBP period include:

- the £160 million Belfast Sewer Project with challenging tunnelling and marine works;
- 1,226 km of water mains rehabilitation and new mains compared to an initial target 910 km;
- the wastewater treatment works programme of improvement projects planned for the SBP period was broadly delivered. By delivering efficiency, the intended carry over costs to the PC10 period has not increased as a result of any delays; and
- 202 km of sewer improvements.

NI Water made commitments to deliver improved customer service over the SBP period. Delivering the capital programme contributed towards these improvements and associated KPIs. Details of performance against KPIs are summarised in Annex A.

6 Figures given in 2006-07 prices.

4.0 Customer Service

4.1 How customer service is assessed

We have adopted an OPA framework to monitor the level of service that NI Water provides to its consumers. The OPA was originally developed by Ofwat to monitor the performance of the English and Welsh water companies. It was subsequently adopted by the Water Industry Commission for Scotland to assess Scottish Water's performance. The OPA combines individual service measures that consumers consider to be important, such as:

- how quickly supply is restored after an interruption;
- how quickly NI Water handles complaints; and
- its performance in improving drinking water quality and environmental compliance.

Within a price control we are able to assess what improvements in performance should be delivered over the period, based upon the allowed investment levels. There is additional opportunity for the company to outperform this target by adopting more effective and efficient operational procedures. The methodology also ensures that improvement in one area is not adversely affecting other areas of performance.

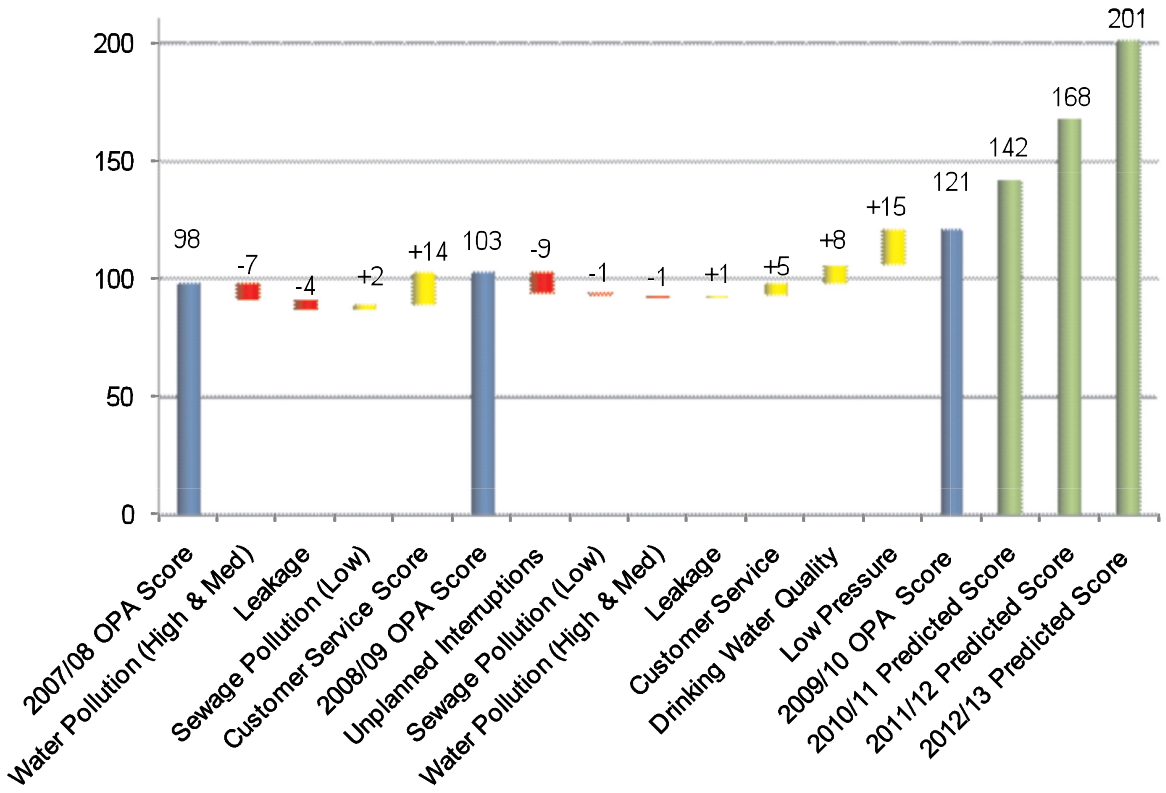
The methodology we apply is based on the Ofwat approach. We have amended this to take account of particular local reporting requirements and data limitations. At present, the Northern Ireland OPA includes 11 service measures compared to Ofwat's 17. Measures omitted in this analysis are:

- out of sewer flooding (three measures);
- security of water supply (two measures); and
- consumer contact and experience service measure.

We are aiming to include these in future price controls.

The SBP did not include any reference to an OPA score. However, KPIs were included in the SBP. These, together with Annual Information Return data, have been used to calculate the OPA score.

Figure 4.1: OPA movements over the last three years including future projections



4.2 NI Water's OPA score

We assessed NI Water's OPA score as 98 in 2007-08, 103 in 2008-09 and 121 in 2009-10. This was an improvement over the period of 23 points. The upward and downward movement in the individual measures are shown in figure 4.1.

Figure 4.1 also shows the OPA challenge for the company set out in our PC10 Final Determination. This involves the continued improvement of its score by 80 points, from 121 to 201, over the period to reflect funding levels.

The challenge to NI Water is how quickly it can improve its score. The England and Wales water company average OPA score is 290[7] albeit after over 20 years of regulation. However, Scottish Water, over a six year period, achieved a score of 252[8] in 2008-09, showing an improvement of 120 points since 2002-03.

7 This refers to the 11 measure OPA score.

8 Scottish Water's OPA score is not directly comparable as the measures included are different. It does however demonstrate the potential for improvement.

4.3 Delivery of SBP key performance indicators

The improvements to be delivered by NI Water during the SBP period (2007-10) were summarised into 28 KPIs. These were structured in terms of customers, cash, people and compliance.

Performance against the company's KPIs was as follows:

- the company performed well against consumer response targets;
- performance on water quality was just short of the SBP targets, but the company delivered the best water quality performance to date;
- wastewater compliance continued to improve but fell short of the SBP targets; and
- the extreme winter of 2009-10 had a significant impact on water supply. The result was a reduction in performance against leakage targets, interruptions to supply, billing and telephone response.

There has been a general improvement in customer service by NI Water throughout the period, as reflected in the OPA score. Overall performance against targets however was mixed. Reasons for this include a lack of robust data, unrealistic targets, unforeseen weather events and simple over/under performance.

We have set out the company's performance against its SBP KPIs in Annex A.

In the following sections we assess the company's performance against key targets and indicators for:

- water supply;
- sewerage services; and
- consumer response times.

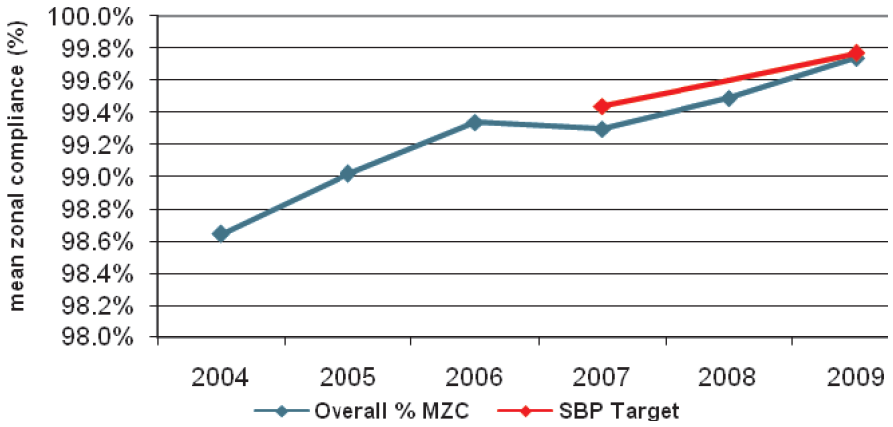
4.4 Water supply

Drinking water quality - mean zonal compliance

Mean zonal compliance is used to assess overall drinking water quality at consumers' taps. It is the average performance for 40 water quality parameters which are sampled under the regulatory sampling programme. Mean zonal compliance is a measure of both the quality of water treatment and any deterioration that occurs in the distribution system used to transport water to consumers.

Figure 4.2 shows the trend in mean zonal compliance since 2004, along with the targets set for NI Water in the SBP period.

Figure 4.2: Overall % mean zonal compliance



This performance reflects both the delivery of improvements at NI Water treatment works and improvements through the Alpha PPP scheme. We expect that further investment in the PC10 period will allow the company to maintain and improve water quality and meet its PC10 target of greater than 99.7%.

Water supply pressure

We assess water supply pressure against a target of 10m pressure at a flow of 9 l/minute at the main stop tap[9]. A surrogate pressure of 15m is used where flow measurement is not possible. NI Water reported this data for the first time at the end of 2007-08.

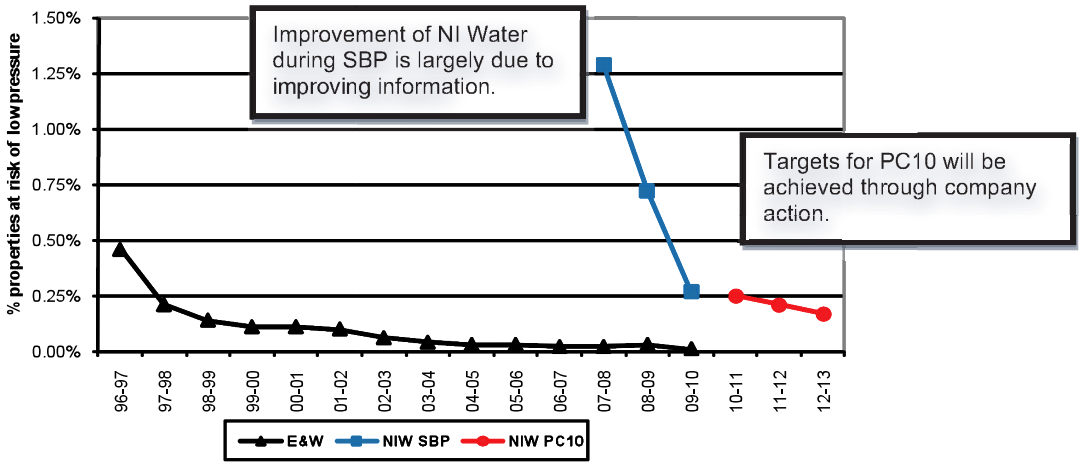
Figure 4.3 shows data reported by NI Water over the SBP period and targets for 2010-13. It also compares NI Water's performance with historical performance in England and Wales. Improvements in England and Wales occurred over a period of 20 years. NI Water should be capable of delivering similar levels of service subject to further investment based on sound data.

Highlights

- **NI Water has increased its OPA score by 23 points over the SBP period, obtaining a score of 121.**
- **NI Water delivered the highest ever water quality in 2009 and fell just short of its SBP target.**

9 This will normally mean that it takes approximately 30 seconds to fill a 1 gallon bucket from a kitchen tap.

Figure 4.3: Properties at risk of receiving low pressure



NI Water was initially unable to report low pressure data accurately but has made a sustained effort to address this by:

- relating water main distribution models to properties;
- undertaking pressure logging to confirm supply pressure; and
- general data cleansing and data management.

As a result the figure of around 2,200 properties below the reference level at the end of 2009-10 is the most robust figure reported to date. We expect the company to continue to improve its understanding of properties at risk of low pressure during the PC10 period.

In light of data uncertainty we have set targets for improvement in PC10 based on the number of properties receiving an improved level of service. This is because these targets can be attributed directly to NI Water action rather than data cleansing.

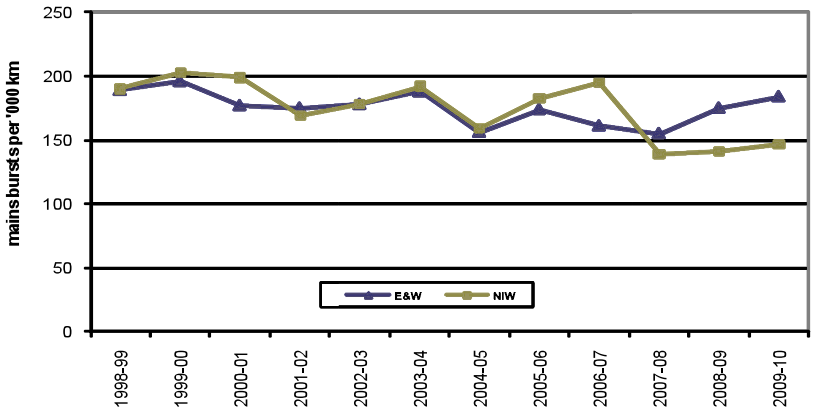
Water mains bursts

The level of bursts provides an indication of the condition of the water mains operated by NI Water.

Figure 4.4 shows the number of mains bursts per thousand km of water main reported by NI Water. It compares this with similar long-term data from England and Wales[10].

10 Excludes Thames Water which has burst rates that are approximately twice the average of other companies.

Figure 4.4: Water mains burst frequency



The frequency of water mains bursts in Northern Ireland is similar to that in England and Wales. This suggests that the overall condition and performance of NI Water's mains are similar to the average in England and Wales.

There has been a general improvement up to 2007-08. There was a marginal increase in 2008-09 and 2009-10 which could reflect the cold spells in each winter, which were more extreme than usual. This increase was more pronounced in England and Wales. We will continue to monitor burst frequency as an indicator of whether the serviceability of water mains is being maintained.

Unplanned interruptions to supply

The number of bursts per km of main provides an indication of asset performance. However the impact of the bursts on the level of service experienced by consumers is reflected by the extent and duration of the associated interruptions to supply.

SBP targets were set for NI Water based on durations of interruptions of greater than 6hrs, 12hrs and 24hrs. Table 4.1 compares NI Water's performance to its SBP targets. Figures are expressed in terms of the percentage of the overall number of connected properties affected for each duration. The table also shows an overall performance score for NI Water which combines the performance for each individual measure into a single score.

Highlights

- **NI Water has improved its data on the number of properties affected by low pressure. The reduction in the reported number of properties affected by low pressure was largely due to continuous improvement in data.**
- **Burst data suggests that the condition of NI Water's water mains is similar to the average for England and Wales.**

Table 4.1: Percentage of properties affected by unplanned interruptions to supply

	SBP Target			Actual		
	2007-08	2008-09[11]	2009-10	2007-08	2008-09	2009-10
Greater than 6hrs	2.00%		1.00%	1.35%	1.09%	1.30%
Greater than 12hrs	0.25%		0.15%	0.24%	0.26%	0.49%
Greater than 24hrs	0.03%		0.01%	0.01%	0.08%	0.29%
Performance score	2.31		1.17	1.62	1.51	2.37

Note: all figures quoted in the table reflect the KPI target methodology. This included third party interruptions and overruns of planned and warned interruptions. This is therefore not comparable to English and Welsh published data which considers unplanned interruptions only. No target was set for the overall performance score for the SBP period. The scores quoted have been calculated from the >6hrs, >12hrs and >24hrs performance measures. Overall performance score = (% >6hrs) + (% >12hrs) + (2 x % >24hrs)

An exceptional period of cold weather in December 2009 and January 2010 resulted in widespread operational problems including a significant increase in the number of burst mains. The severe weather also adversely affected NI Water's ability to respond to and resolve these problems. Heavy freezing snow in March 2010 caused widespread power failures which also affected water supply. These events had a significant impact on the extent and duration of interruptions.

The length of water main per property served by NI Water is twice the average of water and sewerage companies in Scotland, England and Wales. This is because NI Water's consumer base is distributed widely over small communities in a rural environment. A longer length of main per property contributes to the higher frequency of interruptions of supply per property in Northern Ireland.

Leakage

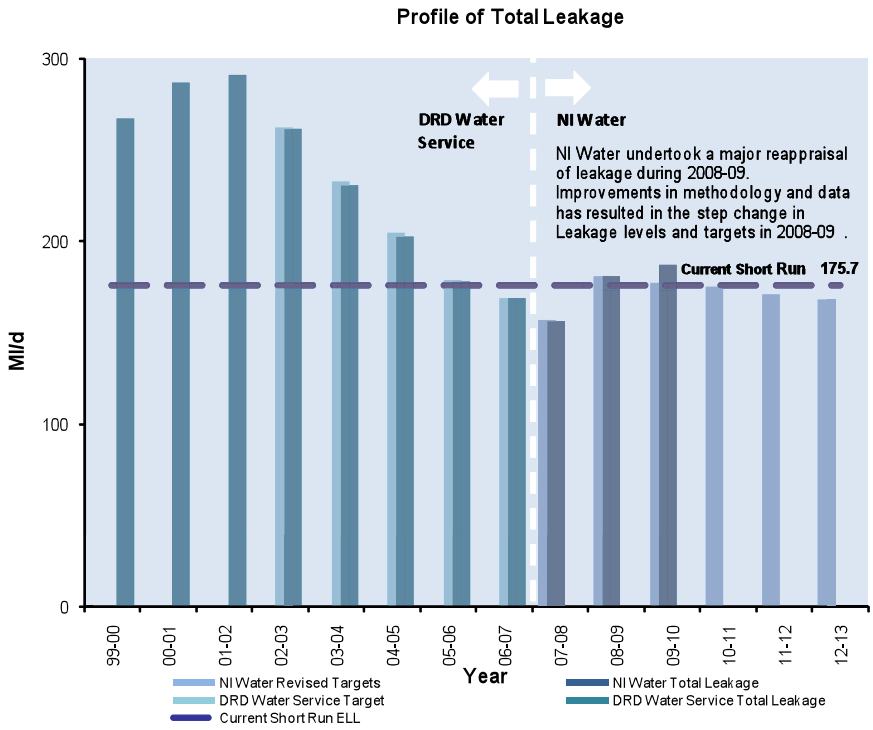
Some level of leakage is inherent in the operation of a pressurised water distribution network. Water companies aim to achieve an economic level of leakage (ELL). This balances the costs of the production of water with the cost of activity to control the level of leakage.

Figure 4.5 shows the historic trend in reported leakage against targets since 1999-2000. The stepped increase in 2008-09 reflects a rebasing of reported leakage and leakage targets as opposed to a real increase in leakage.

In 2007-08, the company's leakage figures were challenged by the Reporter. This identified weaknesses in the company's leakage methodologies and data. It also cast doubt on both the reported level of leakage and leakage targets for the SBP.

11 No SBP targets were set for 2008-09.

Figure 4.5: Historic leakage performance



NI Water subsequently prepared and implemented a formal action plan to improve leakage data and provided us with regular updates on progress. NI Water has delivered on its commitment and substantially completed its work to improve leakage data. As a result of this work:

- the reported level of leakage increased in 2008-09. It should be emphasised that this is a rebasing of reported leakage as opposed to a real increase;
- leakage targets have been raised to reflect latest best information; and
- the improved data and methodologies adopted by the company improved the ability of the company to manage leakage. It also provides a robust basis for future targets and reported data.

The rebasing of targets and reported data has made it difficult to determine the extent to which the company delivered planned improvements in leakage in the SBP period. We estimate that it fell short of the planned improvement by 16Ml/d excluding the impact of the severe winter of 2009-10.

Highlights

- **NI Water achieved its SBP targets in 2007-08. The company was unable to achieve the targets set for 2009-10 when a severe winter caused frozen pipes, increased pipe bursts and greater consumption.**
- **NI Water has significantly improved its leakage methodology and data.**

The winter of 2009-10 caused an increase in reported leakage equivalent to an average of 9Ml/d over the whole year. As a result, the company did not meet its revised leakage target for 2009-10. The Reporter has confirmed that the company was on course to meet its revised target until this event occurred.

NI Water will need to fully reassess its ELL in order to validate current targets and establish appropriate targets for the future. We expect it to complete this work by 31 March 2011. The company will be required to establish a sustainable long-term ELL which takes account of capital replacement costs and wider economic costs, including the cost of carbon and environmental impacts.

4.5 Sewerage services

Sewerage collapse and blockage

The frequency of blockage and collapse are indicators of the condition and performance of the sewerage system. Table 4.2 compares sewer blockage and collapse data for NI Water in 2009-10 with the range of data reported for England, Wales and Scotland.

Table 4.2: Blockage and collapse frequency

Company or group of companies	Blockage		Collapse	
	Per '000 km	Per '000 prop	Per '000 km	Per '000 prop
NI Water	1791	40.9	69	1.57
Scottish Water	391	8.0	89	1.82
England & Wales maximum	774	9.5	28	0.38
England & Wales average	469	6.4	12	0.16
England & Wales minimum	189	2.5	5	0.06

Frequencies based on length of main sewer excluding laterals and drains.

Sewer flooding

Sewer flooding can occur when the sewer blocks, when equipment fails, or when the volume of rainfall entering the sewer exceeds its capacity. External flooding can be unpleasant but internal property flooding from the sewerage system is recognised as having the most extreme impact on consumers. Consumers have identified it as their highest priority for action.

We have asked NI Water to report sewer flooding data including the number of internal and external flooding incidents and the risk of repeat flooding due to sewer incapacity. We have concerns about the quality of the data reported including the cause of flooding and whether incidents were internal or external. As a result, we believe that there is limited value in publishing data from the SBP period. The failure to accurately record incidents after three years inhibits the company's ability to identify and prioritise action to reduce the risk of flooding.

We asked NI Water to set out an action plan to improve the quality of its flooding data. Progress has been made with regard to collating and analysing historical data and changes in practice implemented to improve future records. We will continue to monitor company progress on a regular basis.

Pollution incidents

Pollution incidents are recorded by NIEA from reports from the public and its staff. They are classified by source, category, cause and severity. Severity is ranked as high, medium or low. NI Water's operations can sometimes lead to pollution incidents. Most common are those caused by discharges from overflows due to overloaded sewers or equipment failure.

The company set a target for percentage reduction in high and medium pollution incidents over the SBP period. The target baseline was established from the average number of pollution incidents during 2004-06. The company's performance is shown in table 4.3.

Highlights

- **The frequency of blocked and collapsed sewers reported by NI Water is significantly higher than that reported by companies in England and Wales but lower than that for Scottish Water.**
- **A legacy of poor data inhibits the company's ability to identify and prioritise action to reduce the risk of sewer flooding. To overcome this, the company must, as a priority, develop robust records of sewer flooding.**
- **NI Water has been unable to deliver the target reduction in pollution incidents during the SBP period.**

Table 4.3: Pollution incident targets and performance

Measure	2007-08	2008-09[12]	2009-10
Target: % reduction from 2004-06 average	5		11
Target: number of high and medium pollution incidents	46		43
Actual performance	60	56	55

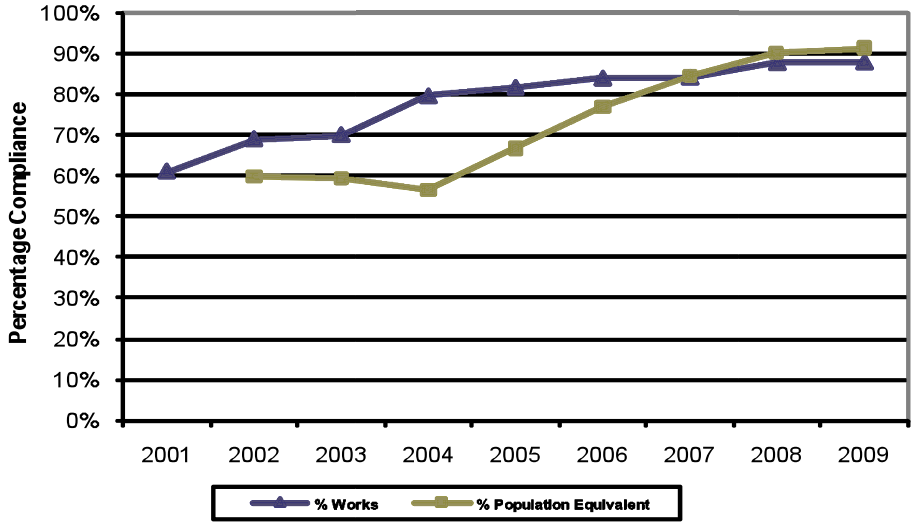
The company has not been able to meet its target for the reduction of high and medium pollution incidents. The reported number of incidents remained persistently higher than the average for 2004-06.

The company has noted concerns about the way that pollution incidents are recorded and categorised and is working with NIEA to review future reporting. The outcome of this work may result in a change to the recording of pollution incidents. We will consider the results of this work when it is completed. Subsequent revision of the PC10 targets for pollution incidents may be necessary to reflect any changes in reporting methodology or practice.

Sewage treatment and discharge

NIEA sets standards for wastewater treatment and monitors compliance against these standards. The company is assessed on compliance for around 250 treatment works with numeric and descriptive consents and a population equivalent greater than 249. Figure 4.6 shows compliance of these works by number and population equivalent.

Figure 4.6: Compliance with NIEA discharge standards



12 Targets were not set for 2008-09.

NI Water failed to achieve its targets for compliance by number of treatment works (88% compared to a target of 91%) and compliance by population equivalent (91.4% compared to a target of 94%).

Performance against the population equivalent target can be affected by 'upper tier' failures where a single sample failure results in a works failing. These can be caused by external events such as extreme weather or unidentified discharges to the sewerage system and this can increase the load on the works or inhibit biological treatment. It is possible this may have been the case in 2009-10.

For the future, we have set targets for the company based on performance over a number of samples. This will be less susceptible to extreme events or unidentified discharges to the sewerage system.

Highlights

- **NI Water has delivered consistent improvement in overall wastewater compliance but has not been able to meet the targets agreed for the period.**

5.0 Information and Data Integrity

NI Water needs robust data to enable it to target investment and manage its extensive infrastructure in order to deliver an efficient and effective service to consumers. We require good quality data to enable us to carry out our regulatory duty to safeguard the interests of consumers.

A number of data issues have become evident over the period:

- in 2007-08 NI Water incorrectly billed a number of its consumers following the transfer of its data to a new billing system;
- in 2008-09 deficiencies in systems and the integrity of data became evident. The company overestimated the number of non-domestic consumers in calculating charges; and
- in 2009-10 issues around procurement practices identified governance failures. Some of these pre-dated the establishment of NI Water.

The regulatory regime has highlighted the need for good data. In all cases actions have been taken to address shortcomings:

- the BIP has resulted in new systems and processes being developed and applied;
- a formal data quality undertaking has been given to the Utility Regulator by NI Water. This is focused on addressing data consistency, accuracy and reliability issues around consumer numbers and billing. Delivery of this undertaking, alongside a wider long-term data quality improvement programme, will help to address data issues; and
- a procurement manual has been developed and applied. This, together with other internal governance initiatives, will seek to mitigate against future procurement shortfalls.

In addition to these higher profile data shortfalls, the company is now addressing key data requirements. Better information is necessary to assist in targeting operational and capital resources to provide better front line services, value for money and consumer outcomes. An issue throughout the SBP was the need to verify the integrity of data in order to establish, monitor and report progress against the capital programme.

Areas of particular focus which continue to require improvement include:

- cleansing and improvement of consumer data;
- further development of the low pressure register;
- establishment of a robust out of sewer flooding risk register; and
- asset information – this would support the development of serviceability indicators which help justify and target investment by measuring asset performance over time.

A challenge for the Utility Regulator over the SBP period has been the lack of a clear baseline for either capital or operational expenditure. The absence of a comprehensive capital investment programme linked to SBP outputs has made it difficult to assess the success or otherwise of NI Water's delivery. We have sought to address this and other data quality issues for PC10.

Highlights

- **Weaknesses in the availability and integrity of data have been evident throughout the SBP period. We believe that steps are now being progressed to address these issues, although much remains to be done.**
- **NI Water needs robust data to enable it to target investment in order to deliver an efficient and effective service to consumers.**
- **We are focused on ensuring that there are adequate data improvements by the next price control.**

6.0 The Way Forward

6.1 Approach for the future

NI Water has made positive steps towards becoming a more efficient and output focused company since its establishment in April 2007.

We would encourage the company to remain focused on outputs for PC10 and subsequent price controls. More remains to be achieved in the coming years. The following are seen as key issues for both the company and the Utility Regulator if the further necessary improvements are to be realised.

1. Whilst the SBP period has seen increases in costs, we expect that NI Water will continue to drive efficiencies and reduce costs across the business. It is considered that the company is in a much better position to deliver these challenges, given the transformation of the business to date.

2. The company is anticipated to converge somewhat with other comparator companies in terms of relative efficiency and overall service level performance.

3. NI Water must focus on performance against output targets rather than forecasted budgetary performance. We have clearly set out the outputs expected in PC10 along with our expectations for capital investment monitoring. This ensures we have a clear baseline for PC10 and clarity for all stakeholders regarding the monitoring and reporting of progress.

4. NI Water's delivery of PC10 outputs depends on continued support for the capital works programme. Although capital efficiencies can be made, significant reductions in capital funding may have detrimental impacts on both targeted service delivery and the ability to achieve operational efficiency targets.

5. Data quality improvements are essential for both the company and the Utility Regulator. The company must now focus on addressing key data requirements. This should assist it to improve targeted operational and capital resources to provide better front line services, value for money and consumer outcomes.

6. PPP schemes must be monitored and managed by NI Water to deliver continuous improvement and efficiency. Partnership with the private sector now forms a significant part of the business. As such, it is essential that contract management is optimised to ensure NI Water achieves its objectives. The Utility Regulator will also remain focused on determining whether PPP costs passed through to consumers are efficient.

Governance and structure are also important issues. Any future Executive decisions may have an impact on the charging of domestic consumers and the charging and subsidising of non-domestic consumers for services they receive.

Annex A

Performance against the SBP KPIs

Table A lists NI Water's SBP KPI's. Colour coding has been used to indicate whether NI Water met its target (green) or failed its target (red) at the end of the period. The table also comments on whether absolute performance has improved or deteriorated since 2006-07.

Table A – NI Water SBP KPI's

KPI	Description	2009/10 SBP target	2009/10 Actual	Comments
KPI's which had targets set at the start of the SBP period				
1	% of properties experiencing unplanned interruptions to supply in excess of:			
	6 hours	1.00	1.30	See section 4.4
	12 hours	0.15	0.49	See section 4.4
	24 hours	0.01	0.29	See section 4.4
	Composite performance score[13]	1.17	2.37	See section 4.4
2	% of written complaints answered within 10 working days	98	99.86	Improving
3	% of billing contacts dealt with within five working days	98	98.06	Improving
4	% of bills based on metered readings	95	92.3	Improving
5	% of telephone calls answered in 30 seconds	96	96.68	Improving
11	Leakage (Ml/d)*	177	186.86	See leakage section
12	% operating margin	26.34	25.5	N/A
13	Comparative operating cost efficiency (£m) (06/07 prices)	53.8		See efficiency section
14	Comparative capital expenditure efficiency (%)	17		See efficiency section
17	Health & Safety – reduction in the number of 'days lost' accidents (% of previous three year average)	5	KPI dropped	N/A
19	Manpower numbers	1,412	1,369	Improving
21	Staff satisfaction levels	60	None	N/A
22	% compliance with water quality regulations			
	(a) accounting for authorised departures	99.81	KPI dropped	N/A
	(b) not accounting for authorised departures	99.80	KPI dropped	N/A
23	% MZC compliance for water quality at tap	99.77	99.74	Improving

13 Figures for this KPI include third party and overruns of planned interruptions and are therefore not comparable with the OPA figures which is based on unplanned interruptions only.

KPI	Description	2009/10 SBP target	2009/10 Actual	Comments
24	Average of % MZC for three water quality parameters (turbidity, iron and manganese)	99.00	98.9	Improving
25	Wastewater quality: compliance with Water Order Consents expressed as:			
	(a) percentage of works	91.0	88.0	Improving
	(b) percentage of population equivalent	94.0	91.4	Improving
26	Wastewater quality: compliance with Urban Waste Water Treatment Directive consent	92.4	93.0	Improving
27	Pollution incidents (high/medium) - based on a reduction from the 2004-06 average	37	55	Improving
28	Capex issues and initiatives - % completion of CWP schemes costing over £250k	90	96.39	N/A

** NI Water undertook a major reappraisal of leakage during 2008-09. Improvements in methodology and data resulted in higher reported level of leakage in the past (see section 4.4 for further detail). Target based on new methodology quoted.*

KPIs which had targets set during the SBP period

6	Ease of telephone contact			
	% of calls not abandoned	99.8**	97.4	Improving
	% of calls not all lines busy	100**	100	Improving
	% customer satisfaction (score out of five)	4.6**	4.6	Improving
16	Average number of debtor days outstanding			
	a) Measured (days' sales outstanding)	76**	132	N/A
	b) Unmeasured (debtor days)	58**	73	N/A
18	Health & Safety – the number of 'lost day' accidents[14]	12	11	Improving
20	Staff attendance %	95.7**	96.8	Improving

*** 2009-10 target data taken from NI Water Annual Report and Accounts for the year ended 31 March 2010.*

KPIs which did not have targets set during the SBP period

7	Sewer flooding – properties flooded internally due to overloaded sewers		None	N/A
8	Sewer flooding – properties flooded internally due to other causes		None	N/A
9	Sewer flooding – properties at risk of flooding by overloaded sewers, more frequently than once in 10 years		None	N/A
10	Inadequate pressure – % properties at risk of receiving low pressure		0.27	N/A
15	Billing			
	a. % bills issued within five working days of a meter reading excluding those requiring investigation		None	N/A
	b. % bills issued within five working days of a meter reading including those requiring investigation based on a meter reading		None	N/A

Where a non-applicable (N/A) has been recorded in the comment column this means that a trend has not been observed as data availability issues existed.

14 KPI definition and targets revised during the period.

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