

Staff Paper 13

Cost base assessment

13.1 Overview

This staff paper describes the Commission's assessment of the scope for capital procurement efficiency in Scottish Water's investment proposals for 2010-14. The Ofwat 'Cost Base' technique, which is used for this assessment, is introduced and explained. The output from the application of cost base is presented for a four-year and a five-year regulatory control period.

13.2 The cost base technique

The cost base was first introduced by Ofwat in its 1994 price review of the England and Wales companies. Since then, the technique has been used both in Scotland by the Commission and in England and Wales by Ofwat. The approach has been refined over the years to ensure that it remains current. It has also been vigorously tested by the Monopolies and Mergers Commission and by the Competition Commission. Both have found the cost base to be fit for its purpose.

The cost base consists of a database of costs, termed 'standard costs', for a range of standardised projects or units of work. This set of standardised projects reflects the typical range of capital investment in the water industry, covering both water and wastewater services.

Each standard cost submitted by Scottish Water is compared with the equivalent set of costs from the companies in England and Wales for the same activity. The difference between Scottish Water's costs and the benchmark standard cost for the England and Wales' companies provides an indication of the potential scope for efficiency.

This 'relative efficiency' between Scottish Water and the benchmark cost for an activity is weighted according to the level of capital investment proposed by Scottish Water in that area.

WICS uses a consolidation of this information to set the appropriate level of capital efficiency. It includes consideration of any company specific factors that might apply.

Our methodology is set out in more detail below. The methodology reflects the approach that is followed by Ofwat:

Step 1: Review of the cost base submission

As part of the business plan process in the Strategic Review of Charges, Scottish Water submitted its standard costs for the activities included in its capital investment proposals. This is referred to as the 'Cost base submission'. The standard cost templates completed by Scottish Water in its March 2009 business plan submission were the same as those issued by Ofwat to companies in England and Wales in its 2009 Periodic Review (PR09).

There were 80 standard cost templates available within the cost base process. Scottish Water submitted 58 standard costs in its March 2009 submission. For those standard costs not completed, Scottish Water explained that these were for unfamiliar activities (where it had no cost experience) or where capital investment is not planned for in 2010-14. It is standard practice for companies to omit standard costs which are not relevant to their submission or for which they have no reliable information on costs.

To ensure that the standard costs submitted by Scottish Water were directly comparable with the England and Wales companies, they were independently reviewed by Jacobs plc. Jacobs is an engineering consultancy which is currently, and has previously, carried out identical work for Ofwat on assessing the companies cost base submissions. Jacobs' review, along with that carried out by the Reporter, tested the completeness, compliance and consistency of Scottish Water's submission. Particular emphasis was placed on the technical content and provenance of cost estimates.

These assurances have allowed WICS to use Scottish Water's cost base submission with confidence.

Step 2: Assess any special factors identified by the company

As part of the cost base approach, the Commission invites Scottish Water to identify any unique characteristics of operating in Scotland (called 'special factors') which may reduce or increase the scope for capital efficiency. This could include factors such as Scotland's geography, population demographics or other features that could explain differences in the level of capital efficiency that can be achieved in practice.

Scottish Water did not identify any such special factors in its March 2009 cost base submission.

Step 3: Establish the appropriate benchmark

For the Draft Determination Scottish Water's unit costs were compared with those submitted by the England and Wales companies in their PR09 draft business plans. For the Final

Determination in November 2009 the analysis will be updated to take account of the companies' final business plan submissions.

For each standard cost, a cost range is established reflecting each of the company submissions. The median of this cost range is used as one 'benchmark cost' against which Scottish Water's unit costs are initially compared¹. Use of the median value is consistent with Ofwat's approach. Ofwat uses the median because it minimises the influence of unit cost outliers. The 'upper quartile' of the cost range is also used by the Commission as a benchmark cost. Upper quartile performance is consistent with Scottish Water's expected performance in other areas.

The relative efficiency, or 'gap', between Scottish Water's costs and the 'median' and 'upper quartile' benchmarks is established for each of the four capital investment asset groups: water infrastructure, wastewater infrastructure, water non-infrastructure and wastewater non-infrastructure. Once the efficiency gaps have been established in each of the four areas, they are weighted in proportion to the level of investment in each area in Scottish Water's investment programme – that way standard costs for projects that represent a large proportion of the capital investment programme have proportionally greater influence on the overall assessment and vice-versa.

Table 13.1 shows the outcome of this efficiency challenge assessment for both the Water and Wastewater Services for the median and upper quartile unit costs of the England and Wales companies. The overall efficiency gap is calculated by taking the weighted average of both the water and wastewater efficiency gaps.

Table 13.1: Determining the initial efficiency gap

	Expenditure²	Median benchmark efficiency gap	Upper quartile benchmark efficiency gap
Water	£418.0m	12.3%	16.5%
Wastewater	£487.6m	14.2%	19.2%
Total	£905.6m	13.3%	17.9%

¹ Scottish Water's costs were not included in the calculation of the medians to give the most objective cost comparison with England and Wales information.

² Excludes £92.5m for reasonable cost contributions, Seafield and strengthening the regulatory framework.

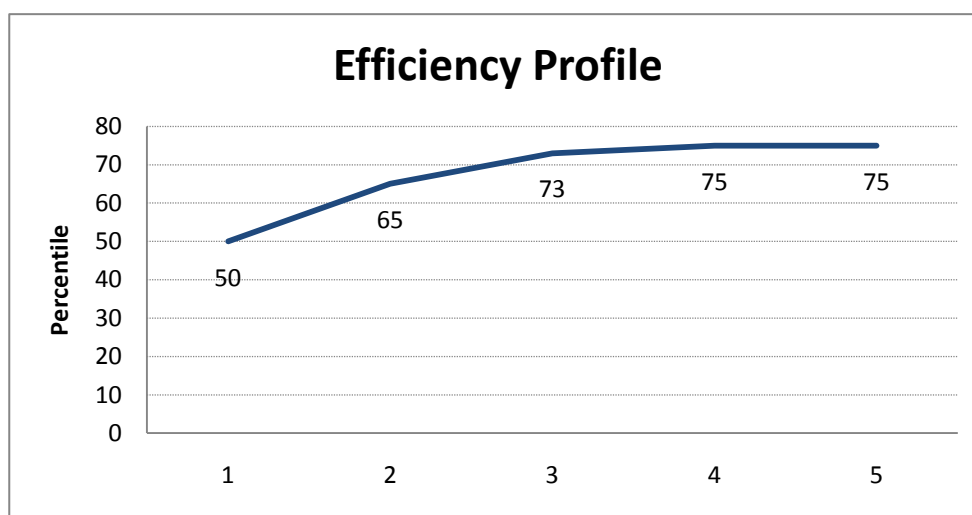
Step 4: Applying the scope for efficiency

The Commission expects Scottish Water to improve its performance, year on year, from the current level of performance, consistent with the improvements in efficiency achieved by companies in England and Wales. The efficiency challenge is therefore phased over the regulatory control period.

To reflect expected performance in other areas, the Commission has assumed that upper quartile efficiency will be achieved by the end of the regulatory control period. The median unit costs were used to determine the initial efficiency challenge in 2010-11.

This gives an initial efficiency challenge of 13.3% rising to 17.9% by the end of the regulatory control period. The phasing of the year-on-year increase in efficiency used by the Commission is shown in Figure 13.1 below. This approach results in an average efficiency of 16.2% over a four-year regulatory control period and 16.5% over a five-year regulatory control period.

Figure 13.1: The efficiency profile for Q&SIIIb



	2010-11	2011-12	2012-13	2013-14	2014-15	Average 4 years	Average 5 years
Unit cost percentile	50	65	73	75	75	-	-
Efficiency challenge	13.3%	15.9%	17.5%	17.9%	17.9%	16.2%	16.5%

13.3 Summary

The cost base approach provides a robust assessment of capital procurement efficiency. The standard cost information submitted by Scottish Water has been demonstrated to be fit for purpose for the cost base assessment. There was no requirement to consider any company-specific factors.

The Commission used the cost base to establish the efficiency gap for each of the four capital investment asset groups. When weighted in proportion to Scottish Water's investment plan proposals, this showed an overall efficiency potential range from 13.3% using a median company benchmark to 17.9% for an upper quartile benchmark.

The Commission has assumed a starting point of median efficiency rising to upper quartile capital efficiency by the end of the regulatory control period. This results in an average efficiency of 16.2% over a four-year regulatory control period and 16.5% over a five-year regulatory control period.