

## Staff Paper 10

### Leakage and other assumptions

**This staff paper has been produced by our office to assist stakeholders in responding to the Draft Determination. The material reflected in this staff paper has informed the preparation of the Commission's proposed conclusions. However, this staff paper does not form part of the Draft Determination. Accordingly, this staff paper should not be relied upon as expanding upon or replacing anything contained in the Draft Determination.**

This staff paper provides background material about Scottish Water's levels of leakage, its recent record in tackling leakage and the Commission's assessment of its scope to reduce leakage further. The paper then goes on to discuss the Commission's approach to assessing how inflation could affect Scottish Water's costs during the next regulatory control period, and how the potential impact on customers' bills of current volatility in levels of inflation could be mitigated.

#### 10.1 Leakage

##### **Approach to leakage at the last Strategic Review**

Historically, leakage in Scotland was very high compared with England and Wales. Companies south of the border made very significant reductions in leakage in the late 1990s and in the early years of this century. In Ofwat's view leakage in England and Wales is now at an economic level, where the cost of further reduction would be greater than the value of the water saved. Estimates of leakage across Scotland were uncertain, and the economic level for Scotland could not be assessed with any reliability. Such estimates as were available in the early 2000s indicated that more than 1,100 million litres per day (Ml/day), or around half of Scotland's public water supply, was being lost through leaks. This level was clearly not sustainable.

In the last Strategic Review Scottish Water was required to make significant progress in estimating the level of leakage and understanding the economics of leakage. It was also required to implement a number of initiatives to improve its understanding of the amount of water consumed by customers and to measure leakage in its distribution system. The Commission asked Scottish Water to provide a reliable estimate of its economic level of leakage (ELL) by December 2008.

The additional short-term costs of tackling leakage (which in the medium term would be self-financing) were allowed for in prices, including £40 million of capital and £16 million of operating costs (in 2003-04 prices) over the regulatory control period.

Subsequently the Commission set annual leakage targets, which were determined on the basis of the pace of reductions in leakage that companies had achieved earlier.

### **Scottish Water's leakage performance**

Scottish Water reduced its leakage in 2006-07 and 2007-08 but failed to meet its targets in both years. However, it appears that the target of 840 MI/day for 2008-09 has been outperformed. Scottish Water is making progress in understanding and measuring leakage, mainly by setting up 'district meter areas' that measure flows in local distribution systems. These district meter areas now cover more than 95% of Scotland's population.

Scottish Water submitted a report on its ELL to the Commission in December 2008. However, the Commission considers that the report's findings are not robust and intends to work with Scottish Water to improve understanding of the ELLs across Scotland.

### **Proposals on leakage**

The Commission continues to regard leakage as a priority. It expects Scottish Water first to determine robust estimates of its sustainable ELL and then to achieve that level by the end of the regulatory control period. The Commission considers that a level of leakage that is both economic and sustainable is likely to be well below 500 MI/day. Figure 10.1 compares Scottish Water's leakage with that of other companies. It uses two standard measures of leakage – litres per property per day and cubic metres per kilometre of water main per day. It shows the level of leakage for all England and Wales companies. This information was established from their Annual Returns.

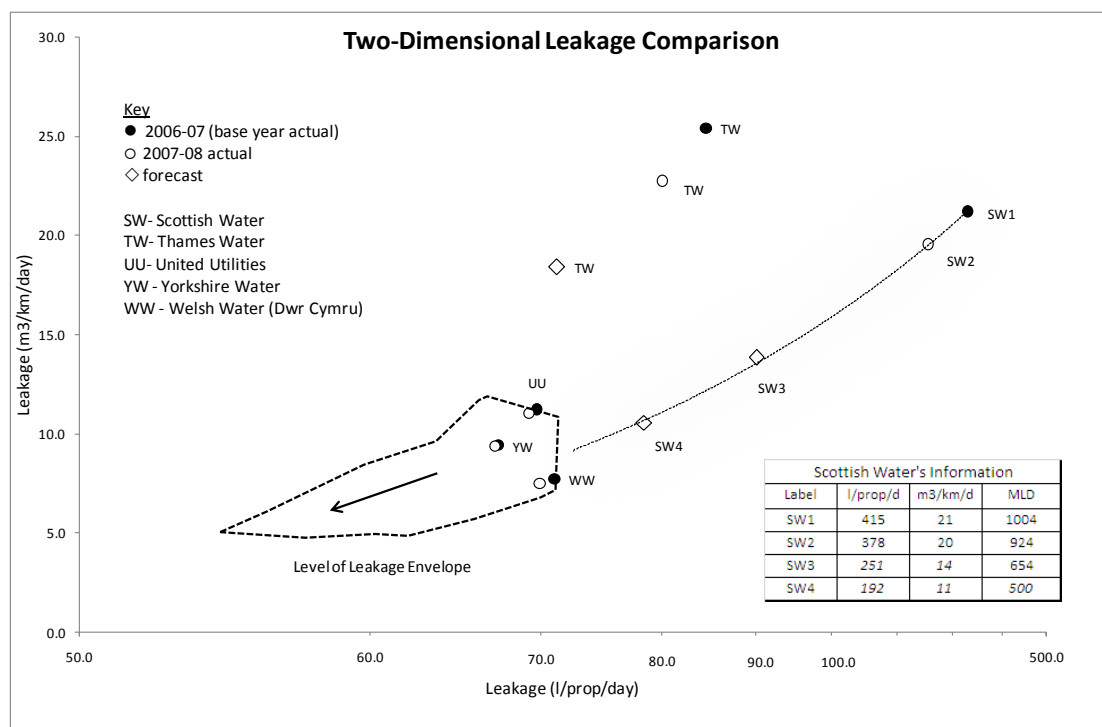
The majority of companies sit within the dotted envelope. Specific information is given for Thames Water (TW), United Utilities (UU), Yorkshire Water (YW), Welsh Water (WW) and Scottish Water for 2006-07 (●) and 2007-08 (○). The general trend is that all companies have incrementally moved to the bottom left of the graph as leakage is reduced. This movement is smaller for those companies considered at or near the ELL that is considered acceptable by Ofwat. There are two exceptions, Thames Water and Scottish Water. Both companies are known to be operating some way above their ELLs. Our assessment would suggest that, for Scottish Water, there is potential for further leakage reduction beyond the mid-range ELL value of 500 MI/d.

The Commission expects Scottish Water to understand leakage and its costs at a local level and to take local action where necessary. It is also important, however, that Scottish Water's leakage strategy is fully aligned with its asset maintenance and enhancement planning.

Through benchmarking costs with water and sewerage companies in England and Wales, the Commission proposes to allow for at least the level of capital and

operating costs that companies face in tackling leakage and keeping it at economic levels.

**Figure 10.1: Scottish Water’s leakage compared with other companies**



## 10.2 Retail price inflation

Scottish Water’s charges are set for each financial year (April to March) with respect to the annual retail prices index (RPI) measured in October of the previous year. The annual charge caps for 2010-11 until 2013-14 that will be set in the Final Determination will apply relative to actual RPI inflation each October from 2009 to 2012 or 2013.

In assessing Scottish Water’s costs, inflation needs to be taken into account. Whilst inflation across the economy will affect most of Scottish Water’s costs, it will not affect cash interest payments (which are on a fixed interest rate basis) and is unlikely to affect the level of public borrowing that the Scottish Government is prepared to make available.

Scottish Water attempted to forecast inflation in its business plan. The Commission considers that any forecasts of inflation over the next regulatory control period cannot be considered reliable. It also considers that such an approach could exacerbate the impact on customers of actual inflation. Rather than make forecasts that are likely to be proved incorrect, it is proposed to apply simple, stylistic assumptions that should be well understood by stakeholders. The Commission proposes to assume annual retail price inflation of 2.5% over the regulatory control period.

It is accepted that the outcome may be very different to this assumption. After all, the charge caps are being proposed in uncertain economic times. It is possible that retail price inflation may remain very low, particularly in the early part of this next regulatory control period. The Commission considers that it may be appropriate to freeze the nominal level of customers' charges and to reduce future nominal increases should such a situation develop<sup>1</sup>. This would help ensure that customer charges stay as stable as possible.

### 10.3 Capital outputs price inflation

The cost of Scottish Water's capital investment can be affected by factors that are not taken into account in RPI. For example, cost trends in the building sector of the economy can fluctuate more than in the economy as a whole. A separate inflation index, the Construction Output Price Index (COPI) is widely used to estimate inflation levels within the building and related sectors.

For several years until recently, COPI was generally higher than RPI. Scottish Water argued that the assumptions in previous reviews understated the rate of increase in COPI and so understated the costs of delivering its investment programme. The Commission accepts that published COPI figures were generally higher than had been assumed. However, recent COPI figures show zero inflation and there is every prospect of significant negative inflation in the sector. Scottish Water now argues that COPI may not reflect its investment costs as well as it previously thought.

Nevertheless, in its business plan Scottish Water proposed applying annual forecasts of COPI. As with RPI, the Commission does not consider such forecasts to be reliable. It proposes to apply the same simple, stylistic assumption for COPI as has been applied for RPI, that is 2.5% per year over the regulatory control period. The effect of this assumption is that charges would be unaffected by any differences between inflation in the building sector and inflation in the economy as a whole.

If Scottish Water benefits from low or negative inflation specific to the building sector (in other words COPI is below RPI) it may become necessary to reduce charges to take account of this. If the impact is large, the Commission would seek to use an interim determination to reduce charges. A small impact would be 'logged up' so that customers benefit only after the next Strategic Review. The same mechanisms would apply in the event that COPI is higher than RPI, but would increase rather than decrease charges to customers.

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<sup>1</sup> Such a freeze would be maintained until any upward movement was neutral in its impact on customers on a net present value basis. The discount rate to be used would be the adjusted weighted average cost of capital (WACC) of 4.1% proposed in the Draft Determination.