

Staff Paper 9

Calculation of charge caps and impacts on competitive retail market

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.

9.1 Introduction

This paper sets out information relating to the limits that the Commission has set on charges for the period beyond 2010. It outlines:

- the charge caps that have been set on Scottish Water's core business;
- the forecast movements in the default charges and how this may impact on the competitive retail market;
- proposed adjustments to the charge caps in order to increase the scope of activities carried out by licensed providers; and
- indicative cost allocations of Scottish Water's wholesale business.

9.2 Calculation of charge caps

Introduction

Charge caps limit the average change in prices in a tariff basket from year-to-year. When Scottish Water submits Charges Scheme proposals to the Commission for review, the proposed price changes are checked to ensure that they do not breach the maximum average increase.

The following steps are taken in order to set charge caps:

- establish overall level of revenue;
- analyse non-primary revenue;
- establish level of revenue from each customer group to unwind cross subsidies;

- subtract revenue from schedule 3 customers; and then
- calculate charge caps.

Establish overall level of revenue

In the Strategic Review of Charges, the level of revenue that Scottish Water requires in order to carry out its core functions is calculated. Scottish Water's core functions include water supply and waste water removal, but exclude retail services to business customers or any other ventures that Scottish Water may have.

The level of revenue is calculated using the RCV approach. In this approach, revenue is set equal to the sum of a series of 'building blocks'. It means that overall charges in a year are representative of the overall costs of providing services. Therefore, today's customers are not subsidising, nor being subsidised by, future customers.

A summary of the core revenue that has been allowed for in setting charge caps for Scottish Water is shown in Table 9.1, for a four-year price review and Table 9.2 for a five-year price review. During the period 2010-14, the level of revenue that has been calculated for Scottish Water is the same under both four- and five-year price reviews, although the assumptions about individual components are slightly different.

Table 9.1: Allowed for core revenue in this Draft Determination – four-year review – projected outturn prices¹

	2010-11	2011-12	2012-13	2013-14
Operating expenditure	£303m	£310m	£318m	£326m
PPP charges	£141m	£146m	£150m	£154m
Current cost depreciation	£278m	£285m	£302m	£316m
Infrastructure renewals charge	£118m	£121m	£124m	£127m
Cost of capital ²	£218m	£200m	£179m	£161m
Taxation	£14m	£11m	£7m	£2m
Core revenue	£1,072m	£1,075m	£1,080m	£1,086m

¹ Numbers may not add due to rounding.

² Including current cost working capital adjustment.

Table 9.2: Allowed for core revenue in this Draft Determination – five-year review – projected outturn prices³

	2010-11	2011-12	2012-13	2013-14	2014-15
Operating expenditure	£303m	£310m	£318m	£326m	£334m
PPP charges	£141m	£146m	£150m	£154m	£158m
Current cost depreciation	£278m	£285m	£301m	£315m	£309m
Infrastructure renewals charge	£118m	£121m	£124m	£127m	£130m
Cost of capital ⁴	£218m	£200m	£178m	£161m	£162m
Taxation	£15m	£12m	£8m	£4m	£0m
Core revenue	£1,072m	£1,075m	£1,080m	£1,086m	£1,093m

Analyse non-primary revenue

The charge caps relate only to the primary services that Scottish Water provides. These are the services that are generally provided on a continuous basis, such as the supply of water to households. Non-primary services, such as the emptying of domestic septic tanks, are generally bespoke services provided by Scottish Water in response to customer requests. Revenue from non-primary services is assumed to increase in line with inflation each year and is deducted from core revenue to set charge caps. This is set out in Table 9.3.

Table 9.3: Calculation of primary revenue (projected outturn prices)

	2010-11	2011-12	2012-13	2013-14	2014-15
Core revenue (from Table 9.2)	£1,072m	£1,075m	£1,080m	£1,086m	£1,093m
MINUS: retail non-primary revenue	£5m	£5m	£5m	£5m	£6m
MINUS: wholesale non-primary revenue	£3m	£4m	£4m	£4m	£4m
EQUALS: Primary revenue	£1,064m	£1,066m	£1,071m	£1,077m	£1,083m

Establish level of revenue from each customer group to unwind cross subsidies

From the primary revenue shown in Table 9.3, charge caps are set on five customer groups, known as tariff baskets. Figure 9.1 sets out the tariff baskets for which charge caps are set.

³ Numbers may not add due to rounding.

⁴ Including current cost working capital adjustment.

Figure 9.1: Summary of tariff baskets

Tariff basket	Includes
Tariff basket 1: household water	All household retail water charges: unmeasured charges for customers who pay in accordance with their council tax band and measured charges for the small number of household customers who have a water meter.
Tariff basket 2: wholesale water	All wholesale water charges: all charges are levied with reference to a volume of water. This includes properties currently paying charges related to their meter size and volumes of water consumed, properties that are being phased onto these metered arrangements and the properties that continue to have an assessed charge.
Tariff basket 3: household wastewater	All household retail waste water charges: unmeasured charges for customers who pay in accordance with their council tax band and measured charges for the small number of household customers that have a water meter, including roads and property drainage charges.
Tariff basket 4: wholesale foul sewerage and surface drainage	All wholesale waste water charges for foul sewerage, roads drainage and property drainage charges. For wastewater, this includes properties currently paying charges related to their meter size and volumes of wastewater consumed, properties that are being phased onto these metered arrangements and the properties that continue to have an assessed charge. Roads and property drainage charges are currently related to the rateable value of a property. Roads drainage charges are paid in respect of all premises connected to the waste water network. Property drainage charges are paid in respect of all properties that drain to the public sewerage network.
Tariff basket 5: trade effluent	All trade effluent charges (industrial-type waste discharges). These are charges levied with reference to the Mogden formula.

When charge caps are set for different customer groups, the Commission is keen that one group of customers does not subsidise services provided to another group of customers (known as cross subsidy). In its Principles of Charging Statement, the Scottish Government asked the Commission to make steady progress in unwinding cross subsidies. In general, the Scottish Government expect cross subsidies to be unwound over a regulatory control period, unless the impact on individual customers is so severe as to merit phasing over two regulatory control periods.

As part of the analysis for this Strategic Review, ranges of cross subsidy that may exist were examined and the conclusion reached that two main changes would be justified:

- The revenue from household customers needs to increase by around £50 million. This should ensure that there is no cross subsidy between households and non-households in the future.
- The revenue from trade effluent properties should increase by around £5 million. This will bring trade effluent revenue into the range of costs that has been analysed for Scottish Water providing trade effluent services.

The impact of these changes on the proportion of each tariff basket is set out in Table 9.4. It is assumed that the same end-point is reached over either the four-year or five-year regulatory control periods that have been proposed.

Table 9.4: Proportion of revenue from each tariff basket

Tariff basket	Proportion of revenue 2009-10	Proportion of revenue by end of review period
Tariff basket 1: household water	33.6%	34.5%
Tariff basket 2: wholesale water	11.0%	10.1%
Tariff basket 3: household wastewater	36.1%	39.5%
Tariff basket 4: wholesale foul sewerage and surface drainage	16.9%	13.0%
Tariff basket 5: trade effluent	2.4%	2.9%

It is assumed that these cross subsidies are unwound in broadly equal amounts over five years. The resulting revenue from each tariff basket is set out in Table 9.5.

Table 9.5: Revenue from each tariff basket (projected outturn prices)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Tariff basket 1: household water	£355m	£359m	£363m	£366m	£370m	£374 m
Tariff basket 2: wholesale water	£116m	£115m	£113m	£112m	£110m	£109m
Tariff basket 3: household wastewater	£381m	£390m	£399m	£409m	£418m	£428m
Tariff basket 4: wholesale foul sewerage and surface drainage	£178m	£171m	£162m	£154m	£147m	£141m
Tariff basket 5: trade effluent	£26m	£28m	£29m	£30m	£31m	£32m
Total (as per Table 9.3)	£1,057m	£1,064m	£1,066m	£1,071m	£1,077m	£1,083m

Subtract revenue from Schedule 3 customers

The charge caps that are proposed cannot apply to agreements that fall under Schedule 3 of the Water Services etc. (Scotland) Act 2005. These are agreements that Scottish Water (or its predecessor bodies) signed with business customers prior to 1 July 2005. Charge increases for these customers are limited by contract, not by the charge caps. The level of revenue for Scottish Water from Schedule 3 agreements that has been assumed is set out in Table 9.6.

Table 9.6: Expected Schedule 3 agreement revenue (projected outturn prices)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Tariff basket 2: wholesale water	£6m	£6m	£6m	£6m	£6m	£7m
Tariff basket 4: wholesale foul sewerage and surface drainage	£0m	£0m	£0m	£0m	£0m	£0m
Tariff basket 5: trade effluent	£17m	£7m	£8m	£8m	£8m	£8m
Total Schedule 3 revenue	£23m	£14m	£14m	£14m	£15m	£15m

The overall level of revenue from each tariff basket that is covered by charge caps is set out in Table 9.7. This is calculated by subtracting Schedule 3 revenue (Table 9.6) from primary revenue (Table 9.5).

Table 9.7: Revenue covered by charge caps (projected outturn prices)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Tariff basket 1: household water	£355m	£359m	£363m	£366m	£370m	£374m
Tariff basket 2: wholesale water	£110m	£109m	£107m	£105m	£103m	£102m
Tariff basket 3: household wastewater	£381m	£390m	£399m	£409m	£418m	£428m
Tariff basket 4: wholesale foul sewerage and surface drainage	£178m	£171m	£162m	£154m	£147m	£140m
Tariff basket 5: trade effluent ⁵	£ 9m	£21m	£21m	£22m	£23m	£24m
Total	£1,034m	£1,050m	£1,052m	£1,057m	£1,062m	£1,068m

Calculate charge caps

The Commission sets charge caps by balancing Scottish Water's required revenue with revenue from customers. The charge caps are therefore a function of a change in the revenue required and the change in the forecast underlying customer base. The customer base assumptions are explained in detail in Staff Paper 4. The annual percentage change in the underlying customer base is set out in Table 9.8 for each tariff basket.

⁵ Between 2009-10 and 2010-11, Scottish Water will have finished phasing out trade effluent discounts that formerly applied at business premises. These premises change from being classified as Schedule 3 premises (where charge caps do not apply) to Charges Scheme premises (where charge caps do apply). This accounts for the apparent jump in revenue between these years.

Table 9.8: Percentage change in underlying customer base (assuming constant 2007-08 tariffs)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Tariff basket 1: household water	-	+0.7%	+0.7%	+0.7%	+0.7%	+0.7%
Tariff basket 2: wholesale water	-	+0.5%	+1.2%	+1.3%	+1.2%	+1.2%
Tariff basket 3: household wastewater	-	+0.7%	+0.7%	+0.7%	+0.7%	+0.7%
Tariff basket 4: wholesale foul sewerage and surface drainage	-	-1.1%	-0.8%	+0.3%	+0.3%	+0.2%
Tariff basket 5: trade effluent ⁶	-	+117%	0%	0%	0%	0%

The charge caps that are proposed in the Draft Determination are set out in Table 9.9. These charge caps are expressed relative to the Retail Prices Index (RPI). In this way, differences between the inflation assumptions are taken account of in the annual Charges Scheme process.

Table 9.9: Proposed charge caps

	2010-11	2011-12	2012-13	2013-14	2014-15
Tariff basket 1: household water	-2.2%	-2.2%	-2.2%	-2.2%	-2.2%
Tariff basket 2: wholesale water	-4.1%	-4.1%	-4.1%	-4.1%	-4.1%
Tariff basket 3: household wastewater	-0.9%	-0.9%	-0.9%	-0.9%	-0.9%
Tariff basket 4: wholesale foul sewerage and surface drainage	-7.3%	-7.3%	-7.3%	-7.3%	-7.3%
Tariff basket 5: trade effluent	+1.0%	+1.0%	+1.0%	+1.0%	+1.0%

The charge caps outlined in Table 9.9 limit increases in a basket of tariffs. Individual tariffs within the basket – and consequently individual customers' bills – may move by an amount different to this average. For the majority of customers, the charge caps will give a reasonable indication of changes in their bill. However, for trade effluent

⁶ The apparently large increase is caused by the same impact outlined in footnote 5. If this impact is removed, there is no increase or decrease in customer base assumptions between 2009-10 and 2010-11.

supplies, there may be material differences between average charge caps and changes to individual bills. This is because there are currently cross subsidies between individual components of the Mogden formula⁷. The Commission will consult further on how to unwind these cross subsidies. It is likely to promote two initiatives.

First, the Commission may impose an additional requirement on Scottish Water that, in proposing charges each year, no trade effluent bill should increase by more than a third.

Second, the Commission wants the transition to broadly cost-reflective tariffs to be as smooth as possible. In particular, customers should not face unnecessary reductions, followed by larger than required increases in their bills. It may therefore impose a restriction on the discounts to default tariffs that licensed providers can offer customers who are experiencing an increasing transition in their bills.

9.3 Default charges

The charges outlined in Table 9.9 are those that apply to Scottish Water's core operations. Tariff baskets 2, 4 and 5 apply to wholesale charges that Scottish Water levies on licensed providers. This is different from the charges that are paid by customers.

Since April 2008, the water and sewerage bills that business customers in Scotland pay have been influenced by two main factors:

- the wholesale price that Scottish Water charges licensed providers; and
- any deals that customers have been able to negotiate with licensed providers for services they receive.

Licensed providers' revenue is determined by the difference between the wholesale charges that they pay to Scottish Water and the retail services that they bill to customers. In order to protect business customers, the Commission sets default tariffs that limit prices that can be charged by licensed providers (where they do not offer any additional services). Initially, these were set broadly at the level that Scottish Water would have charged had retail competition not been introduced. The Draft Determination proposes that these default charges should change in line with changes to household customers⁸.

The resultant changes in default charges are set out in Table 9.10. As with core charge caps, these are expressed relative to RPI.

⁷ A charging method for trade effluent.

⁸ Except for trade effluent, which will be the subject of a separate consultation.

Table 9.10: Proposed changes in default charge levels

	2010-11	2011-12	2012-13	2013-14	2014-15
Water	-2.2%	-2.2%	-2.2%	-2.2%	-2.2%
Waste water	-0.9%	-0.9%	-0.9%	-0.9%	-0.9%
Trade effluent	+1.0%	+1.0%	+1.0%	+1.0%	+1.0%

The difference between default charges and wholesale charges impacts the margin available for licensed providers to serve business customers. In the 2006-10 period, this margin was assessed to be around 11%, based on the costs that Scottish Water incurred in providing its limited retail service before the introduction of competition.

The charge caps proposed in the Draft Determination will allow this margin to increase. The Commission expects this to benefit customers as licensed providers compete to offer better service levels or lower prices to customers.

