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**THE DURATION OF  
PRICE CONTROLS:  
TO CHANGE OR NOT  
TO CHANGE?**

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A Water 2020 paper by Northumbrian Water





# THE DURATION OF PRICE CONTROLS

## A WATER 2020 PAPER BY NORTHUMBRIAN WATER

### Introduction

Water is a long term industry. So why does the industry operate on a cycle of 5 yearly price reviews (6 years in Scotland)? Would longer periods between reviews provide a better fit with asset lives, facilitate longer term planning for sustainable solutions and generate greater incentives for efficiency?

In fact at privatisation the review period was set at 10 years. However, this was changed to 5 years almost immediately. The duration of price controls across utility sectors internationally tends to be similarly short. Why is this?

The main factor seems to be the difficulty in predicting changes in costs and income years in advance, creating concern about a price control being set for a long period based on inaccurate assumptions. This might result in prices being too high for customers or returns too low for investors. Rules for re-opening controls can be introduced to address this concern. But this may increase uncertainty and could result in more frequent regulatory intervention than setting price controls for a shorter duration.

So what are the pros and cons of shorter or longer term price controls? Should the length of price controls really matter so much? Are there other regulatory changes that would reduce the cliff edge nature of reviews and allow companies to plan and deliver activity across review periods? In this short paper we aim to set out the key arguments.

### Background

This paper has been produced by Northumbrian Water in support of the Water 2020 consultation process. It is one of a suite of papers to be produced by companies in the water industry during 2015 and is intended to stimulate debate rather than advocate a specific viewpoint.

The paper sets out considerations that need to be taken into account when deciding whether to change the length of price controls or stagger control periods. We also consider the opportunities for disaggregation and redesign of price control periods with their implications.

Comments should be sent to:

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The paper covers the following areas:

- Section 1: Examples of price control lengths
- Section 2: Principles for determining the optimum length of a price control
- Section 3: How might 'periodicity' (negative impacts of the current 5 year control) be avoided?
- Section 4: Disaggregation of price control review periods: changing scope and length
- Section 5: Impact of market reform on the length of the price control
- Section 6: Conclusions

## 1 Examples of price control lengths

In practice, most price, revenue and rate of return regulatory regimes set controls for a regulatory period of four to five years. This is true of the RPI-X regimes used in Britain and in the majority of European and Australian cases.

**Table 1: Examples of length of control period**

Country / sector	Length of control period
<b>UK water &amp; sewerage</b>	
England & Wales	Originally 10 years at the first price setting following privatisation but prices were reviewed after 5 years and has stayed at 5 years thereafter

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Scotland	6 years
Northern Ireland	Currently 3 years
<b>UK other utilities</b>	
Energy RII0: transmission and distribution	8 years, with 4 year review
Airports, rail, post	5 years
<b>European regulators</b>	
Ireland energy	5 years
France gas transmission	2 – 4 years
Netherlands energy networks	3 years
<b>Australia</b>	
NSW water & sewerage	4 years
Victoria electricity	5 years

Note - In this paper, we have drawn from the Frontier Economics Report: *Future price limits — Form of control and regulated/unregulated business, a report prepared for Ofwat, July 2010.*

## 2 Principles for determining the optimal length of price control

The main principles that are relevant to a decision about the optimal length of a price control are described in 2.1 and 2.2 below.

### 2.1 Principles that could support a *shorter* control period or the *existing 5 year period*

#### 2.1.1 Legitimacy with customers

Longer price controls can increase customer concerns about sharing the benefits of company outperformance and could undermine the legitimacy of the RPI-X regime. If customers perceive that, for example, companies are making 'windfall profits' that will not be translated into lower bills for a considerable time, this could undermine their confidence in the regime.

#### 2.1.2 Linking performance to rewards and penalties

Outcome delivery rewards and penalties should be clearly associated with the performance that generated them in the eyes of customers, stakeholders and the water company itself. In-period incentives, where the action and incentive outcome follow closely, are a good example of this. With incentives paid at price controls, a longer control period might separate the delivery and timing of payments so much that it reduces customer legitimacy and blunts management incentives.

#### 2.1.3 Risk and cost of capital

A longer price control can leave a regulated firm exposed to greater risks associated with factors outside its control affecting its costs and returns. The regulated firm will face greater exposure to cyclical economic trends, increasing risk, which could feed through into a higher cost of capital. The potential implication of this for customers is that a regulatory headroom allowance is required to offset this risk which would feed into higher bills. Using an in-period cost of debt index might be a possible mitigation of this risk.

#### 2.1.4 Certainty over investment programme

In many cases the price control review is used to establish the future investment programme, for the next control period and beyond. If there is uncertainty over the scale or nature of future investment needs then this may favour a shorter control period. For example, the new National Environment Programme is on a 7 year cycle, so a longer control period than this might misalign investment funding with the programme of work required, increasing the likelihood of price control re-openers, which are usually not welcomed by customers.

#### 2.1.5 Smaller adjustments to bills for 'cliff edge' changes

The longer the control period, the more likely that unforeseen economic events, such as a change in the cost of capital, energy prices or taxation could accumulate to cause a large first year adjustment at the next Periodic Review, with a consequential impact on customer bills. See section 3 for more on avoiding 'periodicity'.

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### 2.2 Principles that could support a longer control period or the disaggregation of control periods

#### 2.2.1 Incentives for efficiency

A longer control period will usually increase incentives for efficiencies, as these can be retained for a longer period of time. Customers may however expect savings to be shared earlier.

#### 2.2.2 Tariff certainty for customers

A longer control also provides greater tariff/bill certainty which may help both consumers and potential competitors. However, with the move from price caps to revenue controls at PR14, the scope for tariff certainty has already been reduced.

#### 2.2.3 Dampening the regulatory cycle

The price control process can create a regulatory cycle involving swings in the volume of capital expenditure. It is possible that a longer control period would dampen the extent of this regulatory cycle.

#### 2.2.4 Regulatory burden and administrative costs

More frequent price reviews impose a greater administrative burden on both the companies and the regulator. Varying the length of controls so that separate activities have controls set at different times (e.g. wholesale/retail) could spread the workload over time. They could also divert management and investor attention from delivering operational improvements.

### 3 How might 'periodicity' (negative impacts of the current 5 year control) be avoided?

#### 3.1 Periodicity and the investment cycle

Since privatisation, suppliers have suggested the five year control period results in inefficient peaks and troughs in the capital programme, as typically investment profiles are dominated by planning in early years with delivery coming later in the cycle. This causes difficulty for suppliers in retaining staff in trough periods then struggling to meet demand in peak periods.

There have been changes made to mitigate this – regulatory 'early start' or 'late finish' mechanisms allowed delivery to straddle review periods. The PR14 move to totex and outcomes gives companies much more flexibility on the timing and type of investment made. The industry and regulators have recognised the issue and made conscious behavioral changes that do appear to be flattening the investment profile.

#### 3.2 Periodicity and long term investment

The water industry frequently makes long term decisions during relatively short (5 year) price control periods. Many investments have asset lives of 50 or more and are often financed with long term debt lasting 20 years or more.

As part of the PR14 process, most companies set out their 5 year proposals in the context of long term plans (25 years and beyond). Whilst not used directly in setting price controls, they do provide stakeholders with a longer term context for the company plans.

Historically, Ofwat have dealt with longer term investments through regulatory discretion. Company decisions to build long term assets committed to in Water Resource Management Plans are usually supported across review periods. Similar approaches apply in sewerage (Thames Tideway).

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The cost of debt in cost of capital calculations typically includes a 75% weighting for embedded debt, recognising that most debt is not financed at short term rates. These approaches have worked well in practice, but are not formalised.

One cause of periodicity (sharp changes every 5 years) is that regulatory policy evolves over time. The current Ofwat approach of setting an independent totex benchmark does not easily allow a regulator to explicitly recognise a specific long term company investment. Indeed, given the move to sub price caps, a company cannot be sure of how a long term investment will be treated over time in terms of financing (WACC changes) and efficiency (changing efficiency models).

An extension of the 25 year Water Resources Management Plan approach to other areas such as catchment and environmental enhancements, resilience schemes or strategic drainage plans might help both regulator and companies to understand and commit to plans that last beyond the 5 year period.

### 3.3 The impact of periodicity on customers

The move from price controls to revenue controls does avoid some of the larger effects of periodicity in revenue terms, as companies can react to customer demand variations by changing prices within the revenue control rather than accumulating them until year one of the next control period.

The flexible approach to PAYG and bill smoothing used at PR14 can also help avoid the year one cliff edge impact on customer bills after a review.

The largest single 'cliff edge' change in the 'building blocks' for price setting in PR14 was the reduction in the WACC from 5.1% to 3.7% (appointed). A large part of this was the change in the cost of debt. This change could be smoothed for future periods if some form of cost of debt indexation was introduced, similar to the Ofgem approach, although this might reduce incentives to secure the lowest cost finance available.

There are many ways to mitigate periodicity impacts that do not involve varying the price control period.

## 4 Disaggregation of price controls: changing scope and length

It is sometimes suggested there could be benefits from separating and staggering price control timings. This might be achieved by varying the length of different disaggregated price controls.

### 4.1 Possible options for changing price control periods

- 1 Change the length of all of the existing wholesale and retail controls.
- 2 Change the length of either of the wholesale or retail price controls, so the wholesale / retail price control review timings are separate.
- 3 Change the length of the water or sewerage wholesale price controls, so that the wholesale service price control review timings are separate.
- 4 Keep the lengths the same, but phase the wholesale / retail price controls so they are not at the same time (this would require a one off shorter period for one control to change the timing).
- 5 Set separate control periods for network plus or other activities within the current wholesale controls.
- 6 Set price controls for a longer period, but with some key elements eligible for a mid term review (Ofgem approach)

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### 4.2 Advantages of disaggregation

Disaggregation could allow companies, regulators and stakeholders to spread the workload of setting price controls. It may also allow for greater scrutiny of the separate components of the controls.

### 4.3 Disadvantages of disaggregation

One disadvantage could be the lack of a whole service overview for affordability and financeability. This would hinder review of these factors by Ofwat, Customer Challenge Groups and companies.

One of the advantages of all price controls being set at the same time is that this allows for an analysis of the aggregated impact of all price controls on customer bill affordability and company financeability. If these controls had different review timings, affordability and financeability checks could become piecemeal or even meaningless. Outcomes that span more than one control would also become difficult to assess.

Stakeholders such as the Customer Challenge Group may be frustrated in their inability to take an overview of customer bills and services, and their workload would increase significantly with separate price control reviews.

Another difficulty is that many controls are inter-connected. Retail controls for example include mark-ups on wholesale income (relating primarily to bad debt risk). Any retail control would thus need a view of wholesale charges, which may be changing over the retail control period.

Setting water and wastewater price controls at different times (as two complete packages) would reduce these disadvantages.

### 4.4 The possible impacts of disaggregation of the Wholesale Price Controls

Increased contestability in segments of the supply chain may also result in the disaggregation of regulation whereby separate price controls are applied to separate segments of the value chain.

These price controls could have different lengths. For example the water and wastewater treatment activities could be subject to shorter regulatory periods than the network segment. This could be because the distribution network is associated with less uncertainty around future investment.

This would result in the price controls for different segments of the value chain being reviewed at separate times. It is worth noting that such a situation could also arise even if all segments of the value chain had the same review length, but that for practical reasons these reviews were staggered.

It is possible that with prices being set at different times, uncertainty may increase for downstream firms, particularly in relation to:

- charges for upstream services – this would impact on costs and therefore the firms revenue requirements; and
- investment plans associated with upstream services – this may impact on any complementary downstream investment.

It would be important to consider how integrated and coordinated planning and delivery could be maintained given a more disaggregated supply chain and the influence that different price control frameworks might have on this.

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### 5 Impact of market reform on the length of the price control

A move towards greater market opening in parts of the value chain could have implications for the appropriate length of the control. It should be noted that fully contestable markets would be expected to have no price controls but there could be implications for transitional controls.

- A contestable segment of the value chain may be subject to greater volatility in volumes and costs (for example as customers switch to competitors or with water trading). This would strengthen the case for a shorter price control that mitigates against these risks.
- The development of effective competition may require a degree of tariff certainty for potential retail entrants, to assist them in evaluating the business case for entry. A shorter price control could be unhelpful if they are trying to agree longer contracts with end customers.
- The appropriate form of price control is, in itself, likely to evolve as the market opens. A shorter control period will also enable the appropriate form to be adapted to changing circumstances. The 2015-2017 two year price control period for the non household retail control is an example of this.

### 6 Conclusions

The paper sets out a number of considerations that would need to be taken into account in deciding whether to change the timing or length of price controls.

Any changes to price control periods will need careful consideration to ensure appropriate balance of risks and benefits and avoid unintended consequences. There are many options available and, as market opening develops, some of these options may become attractive in particular circumstances.

Any decision needs to take into account the prevailing position at the time, any other decisions being made concurrently and the potential for future relevant changes. For example, the two year control period set at PR14 for non household retail was a pragmatic recognition of the need for a shorter term review, at that time, as the market developed. This kind of thinking may be a key factor in appraisals regarding the timing or length of price controls in the future.

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### Appendix 1 - Regulating for in-period events

One of most important of these alternative tools is the option to reopen the price control to deal with exogenous events. This is often used to protect regulated companies from the downside risk of unforeseen circumstances occurring during the price control which may have cost implications.

The problem of interim reviews and re-openers is that if they are too regular, or the clauses that permit them to occur do not provide a sufficient hurdle, then the system will suffer from the same problems as if the regulatory period were too short.

In PR14, Ofwat said: *When a company is able materially influence the probability or magnitude of impacts, or mitigate the effect efficiently, then the risk should remain with the company, at least in part. We also noted that companies should not assume that the PR09 arrangements for logging up/down and shortfalling are retained.*

This suggests that a longer price control period may well increase the risk of cost increases for companies that they are expected to absorb.

### The Ofgem 8 Year control with mid-period review

#### Extract from RIIO Final Decision 2010:

*This included provision for a mid-period review of output requirements to enable any fundamental change in what is expected of network companies, for example due to a change in government policy, to be taken into account quickly. The mid-period review of outputs would only result in changes to the price control should there be a material change in what is required of network companies. We would not look to change incentive mechanisms, the allowed return or other price control parameters through this mechanism, unless it was required due to a change in the outputs.*

Thus, it does appear that the emphasis is on the 8 year control period, with the mid-period review focusing on any changes in required outputs. As these controls essentially apply to distribution and transmission businesses, there is a possible parallel with the network plus service in the water industry