

# Price Control for Water and Sewerage Services 2021-2027

Determination on use of a  
Revenue Cap  
25 January 2019



## About the Utility Regulator

The Utility Regulator is the independent non-ministerial government department responsible for regulating Northern Ireland's electricity, gas, water and sewerage industries, to promote the short and long-term interests of consumers.

We are not a policy-making department of government, but we make sure that the energy and water utility industries in Northern Ireland are regulated and developed within ministerial policy as set out in our statutory duties.

We are governed by a Board of Directors and are accountable to the Northern Ireland Assembly through financial and annual reporting obligations.

We are based at Queens House in the centre of Belfast. The Chief Executive leads a management team of directors representing each of the key functional areas in the organisation. The staff team includes economists, engineers, accountants, utility specialists, legal advisors and administration professionals.

### Our Mission

Value and sustainability in energy and water.

### Our Vision

We will make a difference for consumers by listening, innovating and leading.

### Our Values

Be a best practice regulator: transparent, consistent, proportional, accountable, and targeted.

Be a united team.

Be collaborative and co-operative.

Be professional.

Listen and explain.

Make a difference.

Act with integrity.

## Abstract

This document sets out the decision of the Utility Regulator for NI Water to continue to be subject to a 'revenue adjusted price cap' during the PC21 price control period. This document considers the detailed responses received following publication of our consultation paper on 26 October 2018. It then sets out the reasons for our decision in light of these responses.

## Audience

This determination is primarily of interest to the water sector and the consumers it serves. The water industry Principal Stakeholders (CCNI, DfI, DWI, NIEA, NIW and the UR). The general approach may also be of interest to other regulated companies, professional bodies and community/voluntary sector organisations.

## Consumer impact

Through the PC21 Price Control we will determine an efficient, consumer focused package of outputs and funding for NI Water for the period 2021-2027. To set this work in context, the revenue determined for NI Water in our last 6 year Price Control (PC15) was £2.3 billion, which is recovered through a combination of direct charges to non-domestic consumers and subsidy from the NI Executive in lieu of domestic charges. This decision will have a negligible impact on the determination of future allowances.

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## Foreword

The Utility Regulator's primary role within the Northern Ireland water industry is to promote and protect the interests of the consumer. One of our most important tasks is determining price controls that make sure consumers receive the best value for money. Our price control process results in a contract between the Regulator and the company which agrees the money the company requires to provide efficient services and how much it is allowed to charge. For domestic users that charge is met by Government subsidy but minimising the cost is just as important.

Price Control 2021 to 2027, referred to as PC21, will be our fourth price control for NI Water. Our initial price controls were of shorter duration and focused on closing the efficiency and performance gap between NI Water and its comparator companies. Our third price control PC15 began to address longer term sustainability within a six year price control period. This strategic approach aimed to promote long term planning and delivery of the aims and policy objectives of the long term water strategy "Sustainable Water", which was developed by the Department for Infrastructure working with other principal stakeholders. PC21 provides an opportunity for NI Water to deliver on the long term planning developed through the PC15 process.

We have developed our approach to PC21 on the assumption that the current arrangements for governance and funding will continue. The fundamental building blocks of our price control are clear outputs, a determination of efficient expenditure, a robust plan for delivery, and a focus on consumer service. All these, supported by robust benchmarking, will continue to be essential components of any good governance model.

This decision and the associated consultation process fulfils the commitment we made in our approach document, published July 2018, to decide whether or not a revenue cap would be an appropriate mechanism for the PC21 period, and to make that decision prior to the process of determining allowances and desired outputs commences.

# 1 Consideration of Responses Received

## 1.1 Overview of the Consultation Process

We published our consultation paper on 26<sup>th</sup> October 2018, with a closing date for responses of 4<sup>th</sup> January 2019. Two responses were received from:

- Northern Ireland Water (NI Water) – are content with the existing ‘revenue adjusted price cap’ and have material concerns with the impact a move to a revenue cap would have on a significant proportion of their Public Expenditure funding.
- Consumer Council for Northern Ireland (CCNI) – favour the existing ‘revenue adjusted price cap’ as they believe if properly implemented it could deliver most of the benefits of a revenue cap but with greater tariff stability and predictability.

In addition we also held further discussions with NI Water and CCNI during the consultation period. In the consultation paper we stated that before reaching a final decision we would engage with the Departments of Infrastructure and Finance on the interaction between Public Expenditure rules and any proposed new regime. Two meetings between ourselves and officials from these Departments were held during the consultation period. Where appropriate the insights gained from these discussions are reflected in this decision.

The discussion set out below follows the lay out of the consultation paper itself.

## 1.2 Discussion of Options – Current Arrangements

### Responses Received

In their response NI Water agreed that the current arrangements might best be described as a ‘revenue adjusted price cap’. NI Water noted that the introduction of a Mid-Term Review into the PC15 process provided an opportunity to adjust price caps half way through a price control period. They also noted that the PC15 Memorandum of Understanding and Consequent Written Agreement permitted the Utility Regulator to adjust the price caps for reasons other than revenue deviation. Mention was also made of reductions in the level of price caps for PC13 and PC15 to reflect deviations between forecast and actual outcomes from previous price control periods. In general NI Water felt that the consultation did not sufficiently reflect the revenue adjusting features of the current arrangements.

## **Our Response**

It is clear from the responses that ourselves and respondents have a similar understanding of how the current arrangements operate. In particular that they are best described as a 'revenue adjusted price cap' being a hybrid of both a 'pure price cap' and a 'pure revenue cap'. We note that at the time of the PC15 Mid-Term Review we chose not to adjust the level of the price cap to take account of accumulated revenue over recovery. But instead stated that we would adjust the Regulated Capital Value (RCV) as part of PC21 to take account of under / over recoveries accumulated over the entire PC15 period.

### **1.3 Discussion of Options – Overview of Options**

#### **Responses Received**

In their response NI Water state that the current 'revenue adjusted price cap' mechanism with adjustments to the price cap at the Mid-Term Review and the Price Control Determination ensures there is no deviation between revenues and costs that might be expected under a 'pure price cap'.

In their response CCNI stated that the current 'revenue adjusted price cap' could deliver the same benefits to consumers as a 'revenue cap' but would have the additional benefit of providing consumers with stable and predictable water charges for a period of three years between Price Control Determinations and Mid Term reviews.

#### **Our Response**

We note the strong support expressed by both respondents for the current 'revenue adjusted price cap'. We would agree with both respondents that the current mechanism if appropriately designed and implemented could deliver similar benefits for consumers as are available from a 'revenue cap'. We note in particular the view expressed by CCNI that predictability and stability of water charges is regarded as being a significant benefit that has led them to favour a 'revenue adjusted price cap'.

## 1.4 Interaction with Public Expenditure Rules

### Responses Received

In their response NI Water state that compatibility with the Public Expenditure framework is a key consideration. The part of NI Water's revenue that is recovered from water charges on non-domestic consumers forms part of the company's Resource DEL<sup>1</sup> budget. Any variation between actual and forecast revenue from this sector will therefore impact on the Resource DEL budget.

NI Water state that they agree with our assessment as set out in the consultation that a 'revenue cap' will restrict the impact of income variations to a single year. They note however that in the consultation paper we based our analysis on a situation of under recovery. They then assert that a situation of over recovery may not lead to an optimal outcome. In the following year allowed revenue would be reduced resulting in a Resource DEL deficit for that year to compensate for the Resource DEL surplus the previous year. Such Resource DEL volatility would be difficult to manage in a DEL constrained environment.

In their response NI Water note the example of 2015-16 which saw a £4.3m over recovery, which under a 'revenue cap' would have had to be returned to consumers in 2016-17 resulting in a potential £4.3m Resource DEL shortfall in that year. NI Water however did not raise water charges in 2016-17 as they were permitted, thus consumers benefited from higher demand while at the same time ensuring that NI Water could live within their Resource DEL allocation.

NI Water summarised this section of their response by stating that they believe that the current arrangements permitted them more flexibility to manage the Public Expenditure impact of 'under forecasting' demand (leading to revenue over recovery). While the facility to adjust prices at the commencement of the next price control period would protect the company from 'over forecasting' demand (leading to revenue under recovery).

NI Water confirmed that the subsidy derived from domestic consumers is 'Non Budget' and therefore variations in the level of this income stream are much less problematic from a Public Expenditure perspective.

In their response CCNI stated that we were correct to base our approach on the current governance and funding arrangements of NI Water. But that if these changed we should completely review the PC21 approach and mechanisms.

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<sup>1</sup> Resource Departmental Expenditure Limit (DEL) is the Departments budget for operating expenditure.

## **Our Response**

We note that NI Water's response does not include any statement to the effect that a 'revenue cap' could not be accommodated within the rules of the Public Expenditure framework within which they operate. We do recognise however that they have a strong preference for the 'revenue adjusted price cap' as they believe that it permits them to better manage their Resource DEL budget as it avoids the volatility they consider would be inherent within a 'revenue cap'. During our discussions with the Departments of Infrastructure / Finance very similar messages were communicated to us.

We are content therefore that a 'revenue cap' would be a perfectly feasible option for implementation during the PC21 period.

We remain to be convinced that the NI Water preference based as it is on the management of the Resource DEL budget would hold in all circumstances, in particular during a period of under recovery. However we are not party to all the various factors which may determine the preferences of either the management or shareholders of an individual company. We must accept the preferences freely expressed to us at face value. The decision we as a regulator must make is whether by facilitating a particular preference we less effectively facilitate the achievement of our statutory objectives.

The question we must answer therefore is whether an appropriately designed and implemented 'revenue adjusted price cap' can deliver similar or additional benefits to consumers as would a 'revenue cap'.

## **1.5 Incentives**

### **Responses Received**

In their response NI Water state that the current 'revenue adjusted price cap' mechanism greatly reduced the incentive to systematically under forecast demand in order to create revenue over recovery. They go on to state that the incentives offered by the current arrangements to connect consumers to the network and to identify those connected but not paying for the service are welcome. NI Water however did not see any basis for our assertion that a 'price cap' had the potential to divert management focus away from improving efficiency.

## **Our Response**

We welcome the broad agreement that would seem to exist between us and NI Water with regard to the various incentives that different mechanisms provide the company. We do remain of the view however that a 'pure price cap' may divert management focus from cost efficiency. However given that this mechanism is not proposed for the PC21 period this divergence of view is not consequential in this instance.

### **1.6 Alignment of Costs & Revenues**

#### **Responses Received**

In their response NI Water state that forecast variance is an inevitable feature of ex-ante regulation. Both a 'revenue cap' and a 'revenue adjusted price cap' will correct for these variances all be it over different timescales. It is noted that the Mid-Term Review provides the opportunity to make adjustments during a price control period. NI Water therefore does not agree that the current arrangements blur price signals or shift costs between different groups of consumers.

NI Water reject the idea that any additional incentives beyond the current arrangements are required to encourage them to grow the number of connected and or paying consumers in order to gain from scale economies. They also disagree with the assertion that the current arrangements prevent them from revising the structure of water charges within a price control period. NIW note that the structure of water charges may alter within one of the various baskets, provided that the resulting weighted average water charge increase does not exceed that baskets price limit.

In their response CCNI state that to avoid inappropriate inter-temporal transfers between different groups of consumers under a 'revenue adjusted price cap regime two key conditions needed to be met. Firstly charges must be adjusted at both the Mid-Term Review and the Price Control Determination to take account of under / over recoveries from the previous three year period. Secondly the value of under / over recoveries needs to be fully reflected in the adjusted charges. They do not consider adjustment of the Regulated Capital Value (RCV) to be an appropriate mechanism due to the extended time period over which any over recovery would be returned to consumers.

## Our Response

We remain of the view that a 'revenue cap' provides a better temporal alignment of costs and revenue. However we do recognise that in a situation where adjustments were carried out at each Mid-Term Review the 'revenue adjusted price cap' mechanism would give outcomes which were only marginally poorer. For this to be the case however any adjustment would have to be fully realised over the three years to the next Price Control Determination. In a situation where adjustments were made to the asset base and realised over the lifetime of the assets this would represent a poor outcome, for current consumers in a situation where an over recovery was being returned, and current investors in a situation where an under recovery were being recouped. We are therefore very much in agreement with the views expressed by CCNI on the appropriate design and implementation of any 'revenue adjusted price cap'.

We also remain of the view that a 'revenue cap' blunts the incentive to grow the business. However we recognise that in the degree of network maturity exhibited by NI Water any impacts are likely to be marginal in any event. The comments made by NI Water on this matter would appear to be at odds with their comments with regards incentives where they stated that they welcomed the incentive provided by the current arrangements to connect new consumers / identify those connected but not yet paying water charges.

### 1.7 Tariff Stability & Predictability

#### Responses Received

In their response NI Water state that a 'revenue cap' will inevitably lead to greater instability in the level of charges. They note that in PC15 a 'revenue cap' would have led to measured water volumetric charges decreasing by 11% in 2016-17 and then increasing by 7% in 2017-18. They recognise that the 'revenue adjusted price cap' mechanism could lead to the build-up of material revenue adjustments at the end of a price control period but argue that this could be mitigated by a smoothing mechanism. As evidence a graph showing stable water and sewage volumetric charges over a six year period covering two price control periods 2012-13 to 2017-18 is presented.

In their response CCNI were clear that this was the key consumer benefit which led them to favour a 'revenue adjusted price cap' over the 'revenue cap'.

## Our Response

Revenue volatility will mirror the volatility of the output measure on which charges are levied. As required revenues do not vary with output it might be expected that water charges should be levied on the least volatile measure of output available. This approach would minimise deviations between required and collected revenues and so deliver stable and predictable charges. However the charging structure adopted by NI Water is outside the scope of this consultation and so we need to take account of the present arrangements in making our decision.

The evidence presented by NI Water does suggest that a 'revenue cap' would lead to more unstable and less predictable charges than is currently delivered by the present 'revenue adjusted price cap'. If we assume that any forecasting error is randomly distributed, then maintaining charges at a consistent level over a period of years will result in a reduced overall forecast error, as over recovery in one year is compensated for by under recovery in another. A 'revenue cap' on the other hand might tend to amplify volatility from year to year. If for example an over recovery in one year requires reduced charges in the next year, but volumes turn out to be below forecast in that year, this would suggest an even greater increase in charges was necessary in the third year. This amplification problem could be addressed permitting either, within year adjustments or some form of smoothing mechanism from year to year. But this would represent an added layer of complexity.

The present 'revenue adjusted price cap' with charges adjusted at the Mid-Term Review does offer an opportunity to deliver predictable charges for periods of at least three years. The Mid-Term review would permit demand forecasts to be revised in the light of more up to date data which should give better outcomes than relying on a single unrevised set of forecasts for the entire price control period.

In addition we would encourage NI Water when considering any new charging structure to consider how they might be levied in such a way that they deliver more stable and predictable revenues from year to year.

## 1.8 Regulatory Burden

### Responses Received

In their response NI Water state that given the significant Public Expenditure impacts associated with a 'revenue cap'. Forecasting demand prior to any price control period would remain critically important requiring regulatory scrutiny.

### Our Response

We do not accept that a 'revenue cap' would continue to mean that regulatory scrutiny of demand forecasts was critically important. We make no comment on the importance of demand forecasts for Public Expenditure purposes. That is a separate matter from the experience of consumers, who would be assured that any over or under recovery accruing in a particular year would be taken into account in the following year.

In a similar way an appropriately designed 'revenue adjusted price cap' will reduce the need for the regulatory scrutiny of demand forecast as consumers would be assured that any over or under recovery accruing in a particular three year period would be fully taken into account in the following three year period.

## 1.9 Regulatory Comparison

### Responses Received

In their response NI Water made no comment on this matter.

In their response CCNI stated that an advantage of a 'revenue adjusted price cap' was that it was robust and aligned with the GB approach.

### Our Response

We believe that as a multi utility regulator we should be consistent in our approach to network regulation. However it is important to recognise that each utility has its own particular features and is at a particular stage of development. Effective regulation requires that mechanisms in individual utilities are designed appropriately to reflect these differences.

## 1.10 Impact on Cost of Capital

### Responses Received

In their response NI Water state that while they agree any potential impacts would be marginal. They believe that the current 'revenue adjusted price cap' mechanism would be viewed as being low risk by capital investors.

### Our Response

We continue to be sympathetic to the view that a 'revenue cap' is likely to result in a lower cost of capital but that any such benefit is likely to be marginal when compared to the present 'revenue adjusted price cap'.

## 1.11 Other Issues

### Responses Received

In their response NI Water state that they disagree with our statement on page 2 of the consultation paper that 'the price control process must (therefore) start with the public expenditure budget allocation in mind'. Rather they believe that the PC21 Business Plan should make the case for an appropriate level of funding necessary to safeguard public health, support economic growth and protect the environment. Only after the Business Plan has been determined upon can the impact of budgetary constraints be assessed.

### Our Response

The statement referred to by NI Water was taken directly from page 2 of Our Overall Approach Paper, published on 29 June 2018. In section 4.1 of that document we said.

*While, the price control process must start with the public expenditure budget allocation in mind, it is important that NI Water first sets out the activities and expenditure necessary to deliver the services which consumers, the environment and the economy requires and then build the financial case for investment around that. Only then is it possible to consider and prioritise a plan of work within any budgetary constraints and to assess the impact of such constraints on current and future consumers.*

It is on this basis that NI Water should prepare the Business Plan for submission during the price control process.

## 2 Summary Conclusion & Decision

### 2.1 Summary Conclusion

Based on the response of NI Water and our discussions with the Department of Infrastructure / Finance we are satisfied that a ‘revenue cap’ regime could be accommodated within the rules of NI Water’s Public Expenditure framework. We do however recognise that both NI Water and the Departments believe that the current mechanism, ‘revenue adjusted price cap’, permit them to more effectively manage their Resource DEL budget. We note that this view may have been influenced by the recent experience of over recovery.

We would broadly agree with NI Water that the current ‘revenue adjusted price cap’ if appropriately applied would deliver most if not all the benefits that we identified in our consultation. In particular we found the evidence provided by NI Water as to the volatility in water charges during the PC15 period under a ‘revenue cap’ mechanism to be significant. We note also the importance the CCNI place upon stable and predictable water charges as the reason for favouring a ‘revenue adjusted price cap’.

We have considered the two conditions that CCNI have identified that if met would deliver maximum benefit to consumers. These being that water charges are adjusted at both the Mid-Term and Price Control Determination and that the RCV is not used as the mechanism for dealing with previous under / over recoveries. We consider that complying with both these conditions will prevent inappropriate outcomes as they will align costs with revenue streams, prevent unwarranted temporal transfers between consumers and provide NI Water with an incentive to accurately forecast demand / develop charges which deliver stable and predictable revenues.

### 2.2 Decision

Based on the responses received and other discussions held during the consultation period we have determined that to better facilitate our statutory duties:

- NI Water will continue to be subject to a ‘revenue adjusted price cap mechanism’ during the PC21 price control period.
- Water charges will be reviewed at both the Mid-Term Review and Price Control Determination to avoid the build-up of over or under recoveries.

- We will consider again how any over / under recoveries accumulated during the PC15 period are to be returned to consumers during the PC21 period or beyond, this will form part of the PC21 determination process.
- Any licence modification required to give effect to this decision will be consulted on as part of the PC21 Determination process.
- We would encourage NI Water to consider revising their charges in order to avoid the build-up of amounts that will require adjustment in the future.

Appendix A – Option Comparison

	Price Cap	• Revenue Cap	Revenue correct price cap (current option)
<b>Interaction with Public Expenditure rules</b>	<ul style="list-style-type: none"> <li>As this mechanism has previously been operated successfully in Northern Ireland it is clear that this mechanism is compliant with Public Expenditure rules.</li> <li>Determination forecasts of future public expenditure requirements in future years are less reliable as they are based on demand forecasts made prior to the commencement of the price control period.</li> </ul>	<ul style="list-style-type: none"> <li>So long as deviations between allowed and collected revenue are accounted for in future time periods and not by retrospective adjustments to collected revenues in previous years it is not obviously clear why this mechanism should not be compliant with Public Expenditure rules.</li> <li>Forecasts of future public expenditure requirements in future years are more reliable as they can be updated annually on the basis of actual data during the price control period.</li> </ul>	<ul style="list-style-type: none"> <li>As a price cap mechanism remains in place during the price control period it is assumed that this mechanism will be in line with Public Expenditure rules.</li> <li>Determination forecasts of future public expenditure requirements in future years are less reliable as they are based on demand forecasts made prior to the commencement of the price control period.</li> </ul>
<b>Incentives</b>	<ul style="list-style-type: none"> <li>NI Water has a strong incentive to systematically underestimate demand forecasts.</li> <li>NI Water has an incentive to identify all existing consumers connected to the network early in the price control period as this</li> </ul>	<ul style="list-style-type: none"> <li>No incentive to systematically bias demand forecasts in either direction so long as the cost of carrying deviations in allowed and collected revenues from one period to the next is correctly priced.</li> </ul>	<ul style="list-style-type: none"> <li>No incentive to systematically bias demand forecasts in either direction so long as the cost of carrying deviations in allowed and collected revenues from one period to the next is correctly priced. Note however that as the</li> </ul>

Appendix A – Option Comparison

	<p>will maximise the period over which they can collect excess revenues. This was likely to be more relevant in earlier price control periods when NI Water was developing a comprehensive customer database.</p> <ul style="list-style-type: none"> <li>• NI Water has an incentive to connect new consumers to the network as quickly as possible as this will maximise the period over which they can collect excess revenues.</li> <li>• There may not be as strong an incentive to control costs as systematic under forecasting of demand provides an opportunity to outperform any price control determination.</li> </ul>	<ul style="list-style-type: none"> <li>• No incentive to identify either existing consumers and or connect new consumers as this will have no impact on allowed revenue.</li> <li>• A strong incentive exists to control costs as this is the only way for NI Water to outperform any price control determination.</li> </ul>	<p>carry period is longer than under a revenue cap mechanism the cost of carry is higher for two reasons. Firstly the cost of carrying money for a longer period incurs a higher annualised interest rate and secondly simply because any deviation is carried for a longer period.</p> <ul style="list-style-type: none"> <li>• No incentive to identify either existing consumers and or connect new consumers as this will have no impact on allowed revenue.</li> <li>• If the absence of any incentive to do so leads to fewer non domestics being identified / connected. Then potential scale economies are not realised and so average costs for all consumers will be higher than might otherwise be the case.</li> <li>• A strong incentive exists to control costs as this is the only way for NI Water to outperform any price control determination.</li> </ul>
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<p><b>Alignment of costs and revenues.</b></p>	<ul style="list-style-type: none"> <li>• The structure of incentives associated with this mechanism makes it likely that actual revenues will be in excess of actual costs / allowances. This excess revenue will be funded by both non-domestic consumers. And in the case of additional domestic consumers having been identified as connected to the network, taxpayers. This leads to economically inefficient outcomes.</li> <li>• Longer term the identification / connection of additional non-domestic consumers will lower average costs for all consumers as a result of increased scale economies.</li> <li>• As changes in the structure of tariffs can only be carried out at the time of a price control individual categories of consumers can end up with significant deviations between the costs they impose on the</li> </ul>	<ul style="list-style-type: none"> <li>• There is a close temporal alignment of revenues with costs / allowances.</li> <li>• If the absence of any incentive to do so leads to fewer non domestics being identified / connected. Then potential scale economies are not realised and so average costs for all consumers will be higher than might otherwise be the case.</li> <li>• Tariff structures can be amended at any point in time to ensure that costs and revenues associated with particular categories of consumer remain aligned.</li> </ul>	<ul style="list-style-type: none"> <li>• Allowed revenue in one price control period does not fully reflect the costs incurred in that period as it will be impacted by deviations in allowed and collected revenues from previous periods. If the impact is significant this blurs price signals and must therefore be regarded as sub optimal. It would also imply the transfer of costs between different consumers over time which would not be justified by cost structures over time.</li> <li>• As changes in the structure of tariffs can only be carried out at the time of a price control individual categories of consumers can end up with significant deviations between the costs they impose on the network and the revenues they contribute.</li> </ul>
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	<p>network and the revenues they contribute.</p>		
<p><b>Tariff Stability and Predictability</b></p>	<ul style="list-style-type: none"> <li>• Tariffs will be stable and predictable over the price control period as they are unaffected by actual outcomes. However total costs to taxpayers and consumers collectively will vary in line with deviations between forecasts and actual outcomes.</li> <li>• Tariff will only be adjusted between price controls to mitigate forecast error. No adjustment will be made to remove previous deviations between allowed and collected revenues. By the end of a price control period the level of tariffs maybe materially at variance with actual volumes requiring a significant shift in the level of tariffs between price control periods.</li> </ul>	<ul style="list-style-type: none"> <li>• Tariffs will be less stable and predictable over the price control period if there are significant changes in customer numbers and demand. However total costs borne by taxpayers and consumers collectively will be stable and predictable.</li> <li>• Tariff adjustments between price control periods will be limited and should only reflect movements in allowed revenues between price control periods.</li> </ul>	<ul style="list-style-type: none"> <li>• Tariffs will be stable and predictable over the price control period as they are unaffected by actual outcomes. However total costs to taxpayers and consumers collectively will vary in line with deviations between forecasts and actual outcomes.</li> <li>• Larger tariff adjustments will be required between price controls as these must not only mitigate forecast error but also previous deviations between allowed and collected revenues.</li> </ul>

**Appendix A – Option Comparison**

<p><b>Regulatory Burden</b></p>	<ul style="list-style-type: none"> <li>• No licence modifications required.</li> <li>• However the setting of price caps for different sectors at the start of the price control is quite complex and outcomes can vary significantly depending on assumptions.</li> <li>• Demand forecasts are a high priority and so should command significant effort by both NI Water and the Utility Regulator.</li> <li>• Structure of tariffs can only be amended at price control determination</li> </ul>	<ul style="list-style-type: none"> <li>• Licence modifications will be required but this may result in more transparent licence drafting.</li> <li>• The need to set price caps for different sectors at the beginning of the price control is removed.</li> <li>• Allowed revenue will need to be adjusted at the beginning of each year to include deviations between allowed and collected revenue from the previous year. However as prices need to be adjusted to take account of actual inflation any extra burden will be marginal.</li> <li>• Demand forecasts are not a priority and these forecasts can be updated during the price control period.</li> <li>• Structure of charges can be amended at any point in time.</li> </ul>	<ul style="list-style-type: none"> <li>• Licence modifications maybe required to facilitate a suitable adjustment mechanism, adding additional complexity to the licence.</li> <li>• Continues to require the setting of price caps for different sectors at the start of the price control is quite complex and outcomes can vary significantly depending on assumptions.</li> <li>• Accurate demand forecasts are a medium to a high priority to prevent large deviations in allowed and collected revenues building up over a six year price control period.</li> <li>• Structure of tariffs can only be amended at price control determination</li> </ul>
<p><b>Comparators</b></p>	<ul style="list-style-type: none"> <li>• Previously applied by Ofwat and Utility Regulator</li> </ul>	<ul style="list-style-type: none"> <li>• Common in energy sector, however with the</li> </ul>	<ul style="list-style-type: none"> <li>• This is the mechanism now adopted by Ofwat and</li> </ul>

**Appendix A – Option Comparison**

	to water and sewerage services but has since been abandoned in its pure form.	development of for instance RIIO by Ofgem allowed revenues may be impacted by various incentive mechanisms.	since the PC15 mid-term review applied to NI Water. Any under or over recovery generated during the PC15 period will be reflected when setting allowances for NI Water during the subsequent PC21 period. Details on the precise mechanism for achieving this will be consulted on as part of the PC21 process.
<b>Impact on Cost of Capital</b>		<ul style="list-style-type: none"> <li>• May lead to a marginal reduction as annual cash flows are stable and guaranteed</li> </ul>	<ul style="list-style-type: none"> <li>• May lead to a marginal reduction. Actual cash flows are guaranteed in the longer term as deviations in one price control period are accounted for in the next.</li> </ul>