Price Control for Water and Sewerage Services

2021-2027

Consultation on a Revenue Cap
26 October 2018



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 option of the Utility Regulator moving from a hybrid 'revenue adjusted price cap' to a full revenue cap' methodology for setting allowed revenue in each of the years subject to the PC21 price control determination. The document sets out in detail the reasons why this proposal is worth considering and seeks views from stakeholders on both the proposal and the reasoning that underpins it.

Audience

This consultation document 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 and timetable it contains may 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.

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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. In this context, we expect NI Water to set out a clear business strategy and 6 year plan for the delivery of water and sewerage services throughout the PC21 period which will underpin the health of our community, the quality of our environment and will support sustainable economic growth.

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

1 Introduction

1.1 Our role in the regulation of Northern Ireland Water

Our role is to promote the interests of water and sewerage consumers. One of the ways in which we do this is by setting allowances that allow NI Water to deliver water quality, environmental and customer service objectives at the lowest reasonable overall cost. We are a non-ministerial government department, accountable to the NI Assembly; we work closely with the Department for Infrastructure.

Our primary duties, which are defined in law, are to:

- protect the interests of consumers;
- ensure that NI Water carries out its functions properly; and,
- ensure that NI Water is able to finance its functions.

As the only statutory water company in Northern Ireland, NI Water constitutes a natural monopoly. Consequently, a regulatory framework has been put in place to protect the consumers who use its services. Within this framework, the determination of a constrained budget to deliver a defined set of outcomes over a set period is achieved through the price control process.

At present, domestic consumers are not charged directly for water and sewerage services and the decision on whether to change the arrangements has been deferred. As a result, NI Water is dependent on government subsidy for more than 70% of its funding. The company raises around 20% of its revenue from direct charges to industry, with the remaining 10% coming from charges for road drainage. As a Government owned company this level of public funding means that NI Water is defined as a Non – Departmental Public Body and its revenues are subject to the same public expenditure rules as similar public bodies.

The price control process must therefore start with the public expenditure budget allocation in mind. Working within that budget allocation, we must ensure that the contribution from consumers is proportionate and that outputs and improvements are maximised and clearly defined. In doing so, we seek to ensure that NI Water delivers best value for money for all consumers.

In carrying out price controls we follow the five principles of better regulation. These are accountability, consistency, proportionality, targeting and transparency.

1.2 Other principal stakeholders

When we carry out price controls we do not operate in isolation, but work closely with the principal water stakeholders under the Water Stakeholders Partnership Agreement[1].

Northern Ireland Water

NI Water is responsible for providing water and sewerage services in Northern Ireland. It is the only statutory water company in Northern Ireland; it operates in accordance with company legislation and is subject to economic and quality regulation.

NI Water is wholly owned by the government. The Minister for Infrastructure acts as both the sole shareholder and policy maker. Government provides a subsidy to cover the provision of water and sewerage services for domestic consumers. In view of the level of funding provided by government, NI Water is also classified as a Non-Departmental Public Body for public expenditure purposes.

The Department for Infrastructure

The Department for Infrastructure provides overall policy direction and is responsible, through the Minister and the Assembly, for the legislative framework for the water industry. The Shareholder Unit within the Department has responsibility for overseeing NI Water, and the company is directly accountable to the Unit for its performance.

In advance of a price control the Department publishes 'Social and Environmental Guidance' to inform the objectives and priorities of the price control. This Guidance includes the key long term strategic investment themes for the price control.

The Consumer Council (CCNI)

CCNI is the consumer representative for water and sewerage customers. Its role is to ensure that policymakers take consumers into account when making decisions. Its aim for the NI water sector is that water and sewerage services are fair, affordable and sustainable.

The Drinking Water Inspectorate (DWI)

[1] https://www.infrastructure-ni.gov.uk/sites/default/files/publications/drd/water-stakeholders-partnership-agreement-2012.pdf

The Drinking Water Inspectorate, which is a unit within the Northern Ireland Environment Agency, is responsible for regulating drinking water quality for public and private supplies.

Northern Ireland Environment Agency (NIEA)

NIEA is an agency within the Department of Agriculture, Environment and Rural Affairs (DAERA). It takes the lead in advising on and implementing the government's environmental policy and strategy. The Agency also regulates both abstractions of and discharges into water under the relevant legislation.

1.3 Purpose of this Consultation Paper

In our approach document published in July 2018 we committed to consulting on whether or not a revenue cap or some alternative should replace the existing price cap mechanism for the PC21 period. This consultation considers the appropriateness of a revenue cap or some other alternative mechanism as a means of regulating the revenues of NI Water during the PC21 period. Amongst other things it will first set out the basic design of a revenue cap, price cap or hybrid mechanism and how these might be applied to economic regulation of monopolies. Each mechanism will then be assessed in relation to a number of criteria including potential impact on consumers, alignment with Public Expenditure rules, regulatory burden and the incentives each mechanism provides NI Water with. Based on this assessment we then make our proposal to implement a revenue cap mechanism during the PC21 period.

1.4 Responding to this consultation paper

Responses to this consultation paper should be submitted by 12.00 noon on Friday 4th January 2019. Responses should be sent to:

Graham Craig
Utility Regulator
Queens House
14 Queens Street
Belfast BT1 6ED
Email: graham.craig@uregni.gov.uk

The Utility Regulator's preference would be for responses to be submitted by e-mail.

Individual respondents may ask for their responses (in whole or in part) not to be published, or that their identity should be withheld from public disclosure. Where either of these is the case, the Utility Regulator will also ask respondents to supply the redacted version of the response that can be published.

As a public body and non-ministerial government department, the Utility Regulator is required to comply with the Freedom of Information Act (FOIA). The effect of FOIA may be that certain recorded information contained in consultation responses is required to be put into the public domain. Hence it is now possible that all responses made to consultations will be discoverable under FOIA, even if respondents ask us to treat responses as confidential. It is therefore important that respondents take account of this. In particular, if asking the Utility Regulator to treat responses as confidential, respondents should specify why they consider the information in question should be treated as such.

This paper is available in alternative formats such as audio, Braille etc. If an alternative format is required, please contact the office of the Utility Regulator, which will be happy to assist.

2 Discussion of options

PC21 will be the fourth regulated price control for NI Water since the regulated company was formed in 2007. Since it was established, NI Water has made significant progress and has delivered improvements in customer service, drinking water quality and environmental compliance while continuing to reduce costs by improving efficiency. It has generally met or out-performed its price control targets. PC21 provides an opportunity to deliver further consumer benefits by building on the achievements delivered in the previous price controls which are outlined below.

2.1 Current arrangements

Traditionally in the United Kingdom the revenues of water and sewerage companies have been regulated through the use of a price cap mechanism. In this regime the Utility Regulator sets the maximum prices that NI Water can charge for its various services which when applied to forecast demand will recover the target revenue. Deviations between actual and forecast demand will then be fully reflected in deviations between actual and target revenues.

An alternative approach used widely in the energy industry is the application of a revenue cap. In this regime the Utility Regulator sets the maximum revenue that NI Water can recover from the provisions of its various services. Deviations between actual and allowed revenue in any year are taken account of by either adjusting allowed revenue in future years or by means of an end of year balancing charge which can either be positive or negative.

Both these pure mechanisms can be combined into a hybrid of specific design. For instance Phoenix, Firmus' and now SGN operated under a price cap mechanism in the early stages of network development as an incentive on them to grow customer numbers. However in instances where actual consumption varied from forecast by more than 15% the price cap and volumes could be rebased.

Both Ofwat and the Utility Regulator can now be described as operating a hybrid regime that might be best described as a 'revenue adjusted price cap,' in that the price caps for any price control period reflect under or over recoveries accrued in the previous period. At the time of the PC15 determination we considered whether Northern Ireland Water should migrate from a price cap to a revenue cap regime. But it was decided not to proceed on the basis of competing priorities taking precedent. However at the PC15 mid-term review we stated our intention to adjust the RCV

(Regulatory Capital Value) during the PC21 period as a means of returning to consumers any over recoveries accumulated during the PC15 price control period.

At the PC15 mid-term review we also stated that we would actively consider moving to a revenue cap for the PC21 control period. This has been reflected in our PC21 Approach document, July 2018, in which we stated that we would make a decision on which mechanism to apply in early 2019 well in advance of the PC21 final determination due for publication in December 2020.

2.2 Overview of options

In a situation where the long run marginal cost of providing an extra unit of the service equals the marginal revenue gained from providing that service a price cap regime would approximate to the conditions necessary for achieving economically efficient outcomes. That is the extra revenue from selling an extra unit of output, the unit price, would equal the extra cost incurred by the firm in producing that extra unit of output.

However the provision of water and sewage services is similar to other network monopolies in that, due to increasing scale economies the long run marginal cost of producing the extra unit of output is much lower than the long run average cost of providing that output. To recover the necessary revenues to maintain the business, tariffs are therefore set to match average rather than marginal costs. In this situation a price cap is likely to result in economically inefficient outcome as total revenues diverge from the level required to produce any given level of output.

Although many economic regulators have adopted a broadly revenue cap approach with regard to network monopolies the UK water industry has been regulated through a price cap mechanism. However it should be noted that the current approach cannot be described as a pure price cap in that past over or under recoveries are reflected in forward looking price caps. In the case of Ofwat the price cap in the next price control period is adjusted to take account of over / under recoveries from the previous price control period. This is similar to a revenue cap but with allowed revenue set for the entire price control period rather than for individual years.

In a similar way we stated as part of the PC15 mid-term review our intention to adjust the RCV during the PC21 period as a means of returning to consumers any over recoveries accumulated during the PC15 price control[2]. Both Ofwat and the Utility

[2] PC15 Mid Term Review para 4.3.7 (February 2018)

Regulator might now be described as operating a hybrid ‘revenue adjusted price cap’ regime.

The differences in outcome between a revenue cap, price cap regime and revenue adjusted price cap are a consequence of the variation between forecast and actual demand for the service on which tariffs are charged. If this variation results from random forecast error then the effect of either regime on company revenue and customer expenditure will be broadly neutral between the three regimes over the long term. However if the variation is a result of systematic forecast error or its impact is measured over a short period (such as a price control), then the price cap regime will lead to a transfer between consumers and the company in one direction or the other. Such transfers should be regarded as representing a sub optimal outcome. A revenue cap therefore reduces the importance of accurate demand forecasting as a requirement for achieving optimal outcomes.

Beyond this high level analysis we now consider each mechanism,

- price cap,
- revenue cap and
- revenue adjusted price cap

against a number of criteria. A systematic summary of this discussion is set out in Appendix A to this paper.

2.3 Interaction with public expenditure rules

Given that the majority (70%) of NI Water’s revenues are in the form of a Government subvention on account of the absence of domestic water charges. This is an important criterion against which any proposed mechanism must be judged in the context of NI Water. Any mechanism which does not adequately take account of these rules or in its interaction with them leads to outcomes that are disadvantageous to consumers should be regarded as sub-optimal.

Both the price cap and revenue adjusted price cap regime have previously or are currently in operation and both comply with the Public Expenditure rules that govern the majority of NI Waters revenues.

We have carried out analysis on the regimes and from this it is not clear that either regime is better or worse when considered in the context of these rules. We can find no bases to assume a move to a revenue cap is not appropriate in the specific

context of NI water. All three regimes result in a mis-match between allowed and actual revenue in any particular year which NI Water must absorb within year. No regime permits NI Water to carry over excess or deficit revenue from one year to the next in order to smooth out the firms expenditure.

Under a price cap or revenue adjusted price cap mechanism any over forecasting of demand will result in a revenue under recovery during the price control period. This under recovery will then need to be made up by the Department via increased Resource DEL(Departmental Expenditure Limit). In a revenue cap regime demand is reforecast at the start of each tariff year with any under recovery from the previous year being added to the allowed revenue for that year. Consequently the resetting of charges will mean that consumers rather than Resource DEL is used to make up any under recoveries[3]. Given the Public Expenditure rules the Department of Infrastructure is required to follow. This might attract it to a revenue cap regime, as it gives greater certainty as to the Resource DEL implications of any price control determination

Before making our final determination we intend to engage with the Department of Infrastructure, the Department of Finance and NI Water to discuss the interaction between Public Expenditure and the regime as well as carry out further analysis to ensure that they are both compatible and do not lead to distorted incentives..

[3] This analysis is not effected by the subvention that NI Water receives in lieu of domestic water charges. This subvention is Non Budgeted Expenditure and so is not subject to the same Public Expenditure rules as DEL.

2.4 Incentives

A price cap regime exposes the company to a higher degree of revenue risk as revenues are linked directly to demand. This provides the company with an incentive to systematically under forecast demand. While there is no evidence that NI Water has behaved in this way, it is difficult to ignore the powerful incentives that companies have to take advantage of their asymmetric information advantage. An independent forecasting body or some form of Information Quality Incentive might mitigate this effect but there is no certainty that this extra regulatory burden would be effective.

In a revenue cap regime this incentive is absent as revenues are entirely de-coupled from the level of demand. In a revenue adjusted price cap regime there should be no incentive to systematically under forecast demand so long as the cost of carrying any under or over recoveries is correctly priced. It should be noted that the carry cost in a revenue adjusted price cap regime is likely to be higher due to the longer period over which any deviations must be carried.

A price cap regime provides NI Water with an incentive not only to connect new consumers to the network as quickly as possible. But also to identify existing consumers who had previously not been billed. The earlier in a price control period these additional consumers can be added, the longer the period over which additional revenues can be collected. This incentive is likely to have weakened significantly over recent years as previously unbilled consumers have largely been identified. Such an incentive is absent entirely from a revenue cap or a revenue adjusted price cap regime. The absence of this incentive may lead to a lower rate of connection to the disadvantage of both new and existing consumers

An important objective of any price control process is to encourage the efficient delivery of outputs by means of cost reductions. Both a revenue cap and a revenue adjusted price cap provide a very direct and clearly understood incentive to make efficiencies, as this is the only way to maximise the margin between total cost and total revenue. In the case of a price cap however the incentive maybe blunter as there are other ways to maximise the margin. Either by systematically under forecasting demand, identifying existing customers not previously billed and or connecting new customers as quickly as possible. A price cap regime is therefore has the potential to divert management focus away from the primary objective of improving efficiency.

2.5 Alignment of costs and revenues

As noted above the structure of incentives inherent in a price cap regime is likely to result in outcomes where actual revenues exceed actual costs / price control allowances. This excess revenue will be funded not only by billed non domestic consumers but also by taxpayers through the domestic subsidy. This issue is absent in a revenue cap regime in so far as allowances are set in line with cost efficient delivery of outputs. In the case of a revenue adjusted price cap the issue is the total volume of under / over receives transferred from one price control period to the next. Shifting revenues from one price control period to the next not only blurs the price signals that influence consumer behaviour, but also represents a shifting of the cost burden from one group of consumers to another. Both these impacts must be regarded as resulting in sub-optimal outcomes.

It has also been noted that a price cap regime provides an incentive for NI water to grow its customer base. In the longer term this will allow existing customers to take advantage of scale economies and so reduce unit costs. In the absence of other incentives it maybe that these potential scale economies are not fully realised under either of the other two regimes.

In a revenue cap regime the structure of charges can be amended at any point in time to better facilitate the alignment of costs and revenues for individual categories of consumers. In the other two regimes amending the structure of charges can only occur at the time of a price control determination. For those categories with a relatively small number of consumers this can result in a significant deviation between costs and revenues leading to charges that are not cost reflective.

2.6 Tariff stability and predictability

In a price cap regime the level of charges will be stable and predictable over the price control period, as these will have been set in advance at the time of the price control determination. It should be noted that PC15 is a price cap and NI Water is permitted to and indeed has set charges below the price cap for certain specific categories of customer. While unit charges are predictable, total payments made by taxpayers and consumers will vary with deviations between actual and forecast outcomes. By the end of a price control period the level of charges maybe materially out of line with that which is necessary to recover required revenue in the next period. This will result in significant movement in the level of charges from one price control period to the next.

A revenue adjusted price cap regime will have the same effects as a price cap regime with regard to this criterion. However the need to take account of previous deviations in allowed and collected revenues in future price control period can either increase or reduce the movement in the level of charges from one price control period to the next. Depending on whether the movement to deal with previous under / over recoveries is in the same or opposite direction to the overall movement in the level of charges required by the price control determination.

With a revenue cap mechanism charges will be more unstable and less predictable from year to year if there are significant changes in customer numbers and demand. However the total payments made by consumers and taxpayers in aggregate will be more predictable across the price control period as a whole. This is because charges vary to take account of variations in customer numbers and demand and there is no accumulation of over / under recoveries during the price control period. It is predicted that this regime would require smaller movements in the level of charges between price control periods.

2.7 Regulatory burden

The implementation of the revenue adjusted price cap may require some licence modifications, depending on the precise details of the mechanism employed. The use of a revenue cap however will require significant modification to Part B of the licence. At this point we do not envisage that the necessary modifications would be particularly onerous or complex.

Overall our assessment is that moving to a revenue cap would reduce the regulatory burden. In particular it would reduce the number of critical activities required to deliver a successful price control determination. In particular with a price cap and to a lesser extent the revenue adjusted price cap the forecasting of future demand in advance of the price control period is critical to setting the price cap. As noted previously the incentives associated with a price cap mean that these forecasts are an area of some contention and challenge and will therefore require significant regulatory input from ourselves. With a revenue cap this requirement almost entirely disappears as firstly the incentive is removed and secondly forecasts are updated each year. While we would continue to have oversight of any annual tariff setting process it is likely that this might be categorised as light touch.

In addition a revenue cap regime allows for the structure of charges to be amended during the price control period rather than having to include this as part of a price control determination as is the case with the other two regimes. By reducing the concentration of regulatory activity linked to the price control determination will allow

all parties to focus on those areas likely to deliver tangible benefits for consumers, that is costs and outputs. As opposed to diverting effort to mitigating against the inappropriate incentives inherent in the design of a particular regulatory regime.

2.8 Regulatory comparisons

While both we and Ofwat have previously employed a price cap regime to water and sewage services, both of us have now transitioned to a revenue adjusted price cap regime. We have previously deployed a price cap regime in the regulation of Phoenix Natural Gas and Firmus Energy and currently do in the case of SGN Natural Gas. These were / are new distribution networks and a price cap provides a strong incentive to connect consumers as quickly as possible. The water and sewage industry however is a mature stable business with only marginal growth potential. Similar type networks in the energy industry will tend to be regulated using a revenue cap regime, although this is often augmented by appropriate incentive mechanisms for instance Ofgem's RIIO mechanism.

2.9 Impact on cost of capital

It has been suggested that, a revenue cap regime because it delivers more stable and predictable cash flows from year to year than either of the other two regimes, requires a lower cost of capital to attract the necessary capital investment. We are broadly sympathetic to this view but consider that the effects are likely to be marginal. As a large mature network business year on year revenue variations are likely to be of a similar magnitude irrespective of the regime chosen.

3 Next Steps

3.1 Next Steps

In both the PC15 Mid Term Review and again in our PC21 Approach document we indicated that we would consult on the possibility of introducing a revenue cap regime for the PC21 period 2021-27. This consultation attempts to address the broad practical and policy issues that are associated with applying a revenue cap regime to NI Water.

On the balance of evidence presented in this document we consider that in policy terms a revenue cap could be the most appropriate regime. However we recognise that before formally proposing such a development we wish to fully address the practical issue of whether or not such a regime would be compatible with the Public Expenditure rules applicable to 70% of Northern Ireland Water's revenue. Only if we are satisfied on this matter would we consider implementing such a change.

We welcome comments from stakeholders on any of the issues discussed in this paper. In the meantime we will engage further with NI Water and the Department to determine whether or not a revenue cap is fully compactable with Public Expenditure rules.

Following the close of this consultation we aim to publish our conclusion in early 2019. Should we then propose to apply a revenue cap regime then we would need to develop appropriate licence modifications for statutory consultation later in 2019. Only after this statutory consultation will we make our final determination to introduce a revenue cap regime for the PC21 period. We will engage with NI Water when developing any licence modifications for statutory consultation.

Any licence modification would only become effective on 1 April 2021 in line with the price control period.

4 Appendix A

See below

Appendix A – Option Comparison

	Price Cap	• Revenue Cap	Revenue correct price cap (current option)
Interaction with Public Expenditure rules	• As this mechanism has previously been operated successfully in Northern Ireland it is clear that this mechanism is compliant with Public Expenditure rules. • 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.	• 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. • 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.	• 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. • 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.
Incentives	• NI Water has a strong incentive to systematically underestimate demand forecasts. • NI Water has an incentive to identify all existing consumers connected to the network early in the price control period as this 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. • NI Water has an incentive to connect new consumers to the	• 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. • No incentive to identify either existing consumers and or connect new consumers as this will have no impact on allowed revenue. • A strong incentive exists to control costs as this is the only way for NI Water to outperform any price control determination.	• 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 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.

	network as quickly as possible as this will maximise the period over which they can collect excess revenues. • 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.		• No incentive to identify either existing consumers and or connect new consumers as this will have no impact on allowed revenue. • 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. • A strong incentive exists to control costs as this is the only way for NI Water to outperform any price control determination.
Alignment of costs and revenues.	• 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. • Longer term the identification / connection of additional non-domestic consumers will lower average costs for all consumers as a result of increased scale economies.	• There is a close temporal alignment of revenues with costs / allowances. • 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. • Tariff structures can be amended at any point in time to ensure that costs and revenues associated with particular categories of consumer remain aligned.	• 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. • As changes in the structure of tariffs can only be carried out at the time of a price control individual categories of

	• 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.		consumers can end up with significant deviations between the costs they impose on the network and the revenues they contribute.
Tariff Stability and Predictability	• 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. • 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.	• 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. • Tariff adjustments between price control periods will be limited and should only reflect movements in allowed revenues between price control periods.	• 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. • 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.

Regulatory Burden	• No licence modifications required. • 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. • Demand forecasts are a high priority and so should command significant effort by both NI Water and the Utility Regulator. • Structure of tariffs can only be amended at price control determination	• Licence modifications will be required but this may result in more transparent licence drafting. • The need to set price caps for different sectors at the beginning of the price control is removed. • 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. • Demand forecasts are not a priority and these forecasts can be updated during the price control period. • Structure of charges can be amended at any point in time.	• Licence modifications maybe required to facilitate a suitable adjustment mechanism, adding additional complexity to the licence. • 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. • 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. • Structure of tariffs can only be amended at price control determination
Comparators	• Previously applied by Ofwat and Utility Regulator to water and sewerage services but has since been abandoned in its pure form.	• Common in energy sector, however with the development of for instance RIIO by Ofgem allowed revenues may be impacted by various incentive mechanisms.	• This is the mechanism now adopted by Ofwat and 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.

Impact on Cost of Capital		• May lead to a marginal reduction as annual cash flows are stable and guaranteed	• 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.