Strategic Review of Charges 2021–27
Final Decision Paper

Prospects for Prices

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Executive Summary

This Final Decision Paper sets out the Water Industry Commission for Scotland's (Commission) views of an appropriate range for the charge caps that should apply for the 2021-27 regulatory control period. The 2040 deadline for Scottish Water to achieve net zero emissions will require Scottish Water to transform its business, to adopt a clear focus on the long-term and identify how best to communicate its progress to its customers and other stakeholders. The transformation required is much greater than that required by the merger of the three water authorities in 2002. The Commission is commited to establishing a regulatory framework and setting charges consistent with allowing Scottish Water appropriately to undertake the necessary transformation to meet its 2040 targets.

It is now for Scottish Water to seek to explain how it expects its business in 2027 (at the end of the next regulatory control period) to be different. What is certain is that it will have to be significantly different. Scottish Water will have to take ownership of its strategy, demonstrate that it alone is accountable for its performance and its progress towards meeting the long-term goals of the Scottish Ministers. In the absence of the traditional regulatory hard budget constraint, stakeholders will need confidence that sufficient progress is being made towards meeting the long-term objectives of the Scottish Ministers throughout the 2021-27 regulatory control period.

The Commission's analysis suggests that advancing the deadline for Scottish Water to achieve net zero emissions to 2040 places an additional upward pressure on charges. This upward pressure can be partially offset if Scottish Water can improve further the efficiency of its operations, financing and management of the PPP contracts.

The Commission has concluded that average annual charges have to increase by at least 1% and, potentially, up to 2% above the rate of Consumer Price Inflation (CPI). The Commission considers that increases in the top half of that range are most consistent with the long-term challenges that Scottish Water has to meet. In reaching this final guidance on charges before its Draft Determination, the Commission wants to highlight that Scottish Water should develop a transformation plan of its organisation and activities and expect to have to evidence its progress.

The Commission is asking the Customer Forum to discuss with Scottish Water landing points within three ranges:

- Targeted annual investment of between £1.0 and £1.1 Billion (in 2017 prices) by 2040.
- An annual efficiency challenge of between 0.75% and 1.5% for Scottish Water's expenditure on operations (including repairs and routine maintenance), financing and PPP management.
- An allowance for the potential additional cash outlays (from £0 million to £150 million annually) that could result from including emissions in appraisals[1].

1 This allowance is designed to cover those situations where Scottish Water opts for an intervention that requires it to commit more cash because its overall net present value is lower when the value of emissions is taken into account.

This allowance for additional expenditure arising from including emissions in appraisals is important. The Commission recognises that Scottish Water has committed to seeking to absorb these costs – but it also appreciates the potential for there to be a perverse incentive to have less regard to the costs of social and public benefits if it were to be seen adversely to impact the cash costs faced by asset managers. The Commission therefore recognises that, if it were not to allow for the possibility of these additional costs, it may be more difficult to deliver the extent of transformation that the Commission sees as essential to meeting the net zero emissions and asset replacement challenges. It would certainly not be in customers' interests if the impact of addressing emissions was understated, given that the 2040 date cannot be missed. As such, the Commission has concluded that while it is possible that there may not be any such costs, an allowance perhaps in the upper half of the range – should be allowed for. This allowance could be ring-fenced in each year with its release subject to agreement, for example, by the Investment Planning and Prioritisation Group.

The actual change in average annual charges will depend on where in these three ranges Scottish Water and the Customer Forum land following their discussions. The Commission will provide a model to Scottish Water and the Customer Forum that allows the impact on price profiles of landing points within these ranges to be understood.

In this Decision Paper, the Commission discusses the importance of Ethical Business Practice and Ethical Business Regulation. It is clear that, given the change in the Commission approach to regulation, there will need to be ongoing candid discussions between all stakeholders to build and to maintain the confidence that customers' money will be used effectively and efficiently.

The Commission wants to see Scottish Water take advantage of the opportunities of the new regulatory framework. Moving away from the immediate pressure of the hard budget constraint over a regulatory control period and offering the opportunity to think long-term should allow Scottish Water to review other opportunities to improve its efficiency – particularly where the pay-back on investment may be substantial but take longer than a single regulatory control period.

The Commission also recognises the importance of Scottish Water engaging with the customers and the communities that it serves. It should aim to take customer and community involvement to a new level, commensurate with the overall transformation of its business that meeting its 2040 obligations will require. It should, for example, have involved customers and communities in some detail before it commits to the delivery of a particular project. It is important to emphasise that the Commission's expectation is that there be a fundamental change in the level of customer involvement in how decisions are being made – it is much more than a reaffirmation that what Scottish Water is doing in research and engagement is 'good' or 'best practice'.

Scottish Water has consistently risen to the challenges that it has been set since it was formed in 2002. Transforming its business in line with the principles of Ethical Business Practice and delivering on its net zero emissions target by 2040 is its biggest challenge yet. It will have to be very focused on demonstrating its progress and its efficiency and effectiveness. Given the extent of the challenges in addressing the climate emergency, highlighted by the Scottish Government, Scottish Water should have the right to expect customers, communities and stakeholders to support it – provided, of course, that Scottish Water provides the evidence that it is worthy of their support.

Introduction

This Decision Paper is the latest (and last) in a suite of papers that the Commission is publishing on key topics relating to the outcome of the Strategic Review of Charges 2021–2027 (SRC21). These papers set the framework for the forthcoming discussions on charges between Scottish Water and the Customer Forum.

This paper sets out the prospects for prices for SRC21 and subsequent regulatory periods.

The Commission published its assessment of the asset replacement challenge in July 2019. That Decision Paper outlined the Commission's view on the sustainable level of investment required in light of the asset replacement challenge and the commitment to net zero emissions by 2045. This final Decision Paper builds upon that analysis, given that the deadline for achieving net zero emissions has been advanced to 2040.

The Scottish Government has published its final draft of the Ministerial Objectives and Principles of Charging for SRC21 for consultation[2]. These make it clear that the Scottish Government wants the industry to act for the long-term, not least by addressing the climate change emergency. These Ministerial Objectives and Principles of Charging set the policy framework for the industry.

The final draft of the Ministerial Objectives and Principles of Charging also includes a long-term water sector vision which was developed by stakeholders to describe the future industry that the Scottish Government, Scottish Water and stakeholders are working together to build. The development of a long-term vision is unprecedented in economic regulation in the United Kingdom and is in line with the recent recommendations of the Scottish Infrastructure Commission.[3]

Consistent with addressing the long-term challenges that it faces, Scottish Water has developed its Strategic Plan with its stakeholders. It published this plan on 5 February 2020. The Commission is pleased that the Customer Forum has agreed Scottish Water's Strategic Plan in principle and is now ready to move on to discuss the level of charges that should apply.

This Decision Paper takes account of the emerging evidence on the challenges that Scottish Water faces and the Scottish Ministers' expectations for the water industry in Scotland. The Commission's view on the appropriate range for charges reflects these challenges. It is not about minimising charges in the next regulatory control period and leaving future customers to pay higher prices. This would be inconsistent with the Commission's duty to future customers. To meet these challenges, Scottish Water will have to transform how it operates

2 https://consult.gov.scot/energy-and-climate-change-directorate/water-services-final-consultation/

3 Scottish Infrastructure Commission (2020), 'Phase 1: Key findings report', January, p.112.

and how it manages its assets, how it invests and how it plans for the future. The transformation is much greater than that required by the merger of the three water authorities in 2002.

Scottish Water will have to evidence to its customers and other stakeholders that it is making appropriate progress towards net zero emissions on a sustainable basis by 2040. It will have to plan and act for the long-term. It can no longer count on the certainty of six year programmes of investment – it will have to be much more flexible – but it can count on the resources being available to make the right investment decisions for the longer term.

The Commission considers that Scottish Water should now develop a draft of a transformation plan identifying how its organisation, procedures and practices will be different at the end of the 2021-2027 regulatory control period. Such a plan should clearly outline the resources required and key milestones. This plan should be more than a collection of initiatives or work streams – it should focus on how Scottish Water will have to be different as an organisation and provide as full an understanding as is possible of what will need to be done and by when. It should be a 'living document' which evolves as Scottish Water's understanding of all the challenges it faces grows; not least the need to improve efficiency, better understand asset replacement and meet net zero emissions.

The Commission has adopted the principles of Ethical Business Regulation, which encourages candour and transparency in all interactions between the regulators, the regulated and other stakeholders. The Commission expects Scottish Water to embed the principles of Ethical Business Practice in all that it does. This will require it proactively to demonstrate that it is performing well and in the best interests of its customers and wider Scottish society. The Commission returns to this issue later in this Decision Paper.

This Decision Paper sets out the Commission's views on:

- The importance of Ethical Business Practice and regulation in creating a framework that allows the industry to plan for the long-term and to transform the way in which it operates.
- The level of prices for the next regulatory control period required for Scottish Water to deliver, at the lowest reasonable overall cost, the Scottish Ministers' Objectives for the industry, consistent with their Principles of Charging.
- The likely level of prices that will be required in the regulatory control period after 2027 given the requirement on Scottish Water to achieve net zero emissions by 2040.
- The challenges that Scottish Water faces to meet the challenges of maintaining service and achieving its net zero emissions target by 2040 – and some of the steps that it will likely have to take.
- The importance of ensuring a smooth transition in prices, consistent with research into customers' preferences.

Scottish Water has published details of the customer research that has informed the development of its strategy. This research has been managed jointly by stakeholders. The Commission has drawn on the work on behavioural insights in coming to its views in its Decision Papers. In doing so, the Commission has had regard to the interests of current and future customers.

This Decision Paper now provides the basis for the Customer Forum and Scottish Water to discuss the charge caps for the next regulatory control period, how they should be implemented and how the interests of future customers will be fully respected. If the Customer Forum and Scottish Water can reach an agreement that is consistent with the Scottish Ministers' Objectives and Principles of Charging, this Decision Paper and the Commission's other Decision Papers, the Commission is minded to accept this agreement as its Draft Determination. The Commission plans to publish its Draft Determination for consultation in May 2020. It will publish its Final Determination after the Scottish Ministers have finalised their Objectives and Principles for Charging and in the light of responses to its Draft Determination. It plans to publish the Final Determination in September 2020.

What the Commission has said previously

2017 Decision Papers

The Commission published its Methodology for the Strategic Review of Charges 2021–27 in April 2017:

- It set a clear direction of travel for Scottish Water to look beyond compliance and to seek to meet the needs and expectations of the customers and communities it serves.
- It adopted the principles of Ethical Business Regulation, signalling that it wanted to see a more open and collaborative approach rather than relying upon the traditional 'parent and child' relationship between regulator and regulated company.
- It expressed a clear view that the Commission wanted to have a more complete understanding of the levels of expenditure that would be required to maintain long-term service levels. The Commission was unable to identify any sector[4], subject to economic regulation, where there was such an understanding. The Commission expressed its view that current regulatory frameworks are not providing the right incentives to address this issue.
- The Commission made a clear commitment to work jointly with Scottish Water and industry stakeholders to develop an approach for capital maintenance and appropriate levels of expenditure in this area.

Between June 2017 and July 2019, the Commission published a series of Decision Papers outlining its views on key parameters for the Strategic Review of Charges. These Decision Papers sought to build a common understanding on the key regulatory inputs and the likely challenges the industry will face in the 2021–27 period and long into the future.

The Commission's Initial Decision Papers (2017) were already clear that it was highly likely that Scottish Water would have to invest more in future regulatory control periods (Initial Decision Paper 2). In Initial Decision Paper 7, the Commission concluded that the regulatory framework had not focussed sufficiently on the effective maintenance of long-term assets. The Commission also set out its analysis that Scottish Water would have to spend more on maintaining and replacing its assets. It explained that joint work with Scottish Water was underway to understand the likely need for investment in this area.

In Initial Decision Paper 2, the Commission noted that early indications from the Scottish Government suggested that the average annual level of borrowing available would be lower in the next regulatory control period (it is now going to be £50 million a year higher on average – doubtless a positive response to the investment challenges faced by Scottish Water). The combination of a need for more investment and lower borrowing made it highly likely that increases in charges would be necessary. Although more borrowing will be available, the need for investment over the long-term is now understood to be much higher

4
The Commission also received valuable input from the Organisation for Economic Cooperation and Development (OECD).

than in 2017 – as such, there was still a need for increases in charges (albeit by less than would otherwise have been necessary).

2018 Decision Papers

The Commission's Decision Papers in 2018 revisited several of the themes covered in 2017. They confirmed that the continuing work to understand the investment need made it more likely that charges would have to increase in real terms. The Commission began explicitly to look at how charges could be transitioned over time in order that Scottish Water could meet its future challenges and that the impact on customers could be kept as manageable as possible. The Commission is very conscious of its statutory duty to have regard to the interests of future customers – in addition to those of current customers.

In 2018 Decision Paper 5, the Commission also suggested that Scottish Water could consider offering to 'ring-fence' some proportion of its allowed for revenue and introduce some form of assurance to maintain the confidence of its customers and other stakeholders. The arrangements for managing the impact on the potentially higher cash outlay on investment from including emissions in appraisals (discussed later in this paper) is a good example of when an allowance could reasonably be ring-fenced.

In November 2018 the Commission published refinements and clarifications to its Methodology. The Commission felt that its continuing work on asset replacement, the pressure to respond to climate change and the need to think about transitioning charges over time meant that it should clarify some aspects of its original methodology for the Strategic Review of Charges. The long-term level of investment required made it even more important to think about how charges should be transitioned over time. The Commission revised its view and suggested such a transition should take place over around three regulatory control periods (i.e. around 18 years).

The Commission provided more detail on how it planned to change its approach to economic regulation of the water sector and further explained its views on how the regulatory framework will need to change if it is to be sufficiently flexible to meet these challenges and ensure that charges are as stable as possible.

The Commission welcomed Scottish Water's commitment to develop its Strategic Plan with its stakeholders – and the analysis it was doing to understand its long-term need for investment to replace its assets at the end of their useful lives. Notwithstanding these positive steps from Scottish Water, the Commission reiterated its view that some proportion of the investment expenditure allowed for should be ring-fenced until Scottish Water could demonstrate that it would be delivered efficiently and effectively – and consistent with addressing its long-term challenges.

2019 Decision Paper

In July 2019, the Commission published the most important of its Decision Papers. The 2019 Decision Paper set out the asset replacement challenge. This current Decision Paper uses that paper as the basis for its analysis of the prospects for prices in the next regulatory control period and beyond.

The asset replacement paper outlined the Commission's analysis that over the long-term Scottish Water would have to invest between £1 billion and £1.1 billion per year if it was to operate with net zero emissions by 2045 (which has now been brought forward to 2040) and continue to do this on a sustainable basis.

The Commission's analysis was based on Scottish Water's current understanding of its assets. Following further review of the Scottish Water's asset lives (subsequent to the publication of that Decision Paper), this level of investment appears more likely to understate, rather than overstate, the asset replacement challenge. The Commission was particularly concerned that progress be made in the management and replacement of short and medium life assets. Such assets are typically critical to the levels of service and environmental performance expected by customers and communities. Addressing this issue made it imperative that average levels of investment would – as a minimum – have to increase by around 40% within the next two regulatory control periods.

Conclusion

The full suite of Decision Papers demonstrate the careful process that the Commission has undertaken to ensure that it understands both the extent and the implications of the long-term investment pressures that Scottish Water faces. It has responded decisively to the declaration of a climate emergency by the Scottish Government and the accelerated targets that Scottish Water is now expected to meet. The Commission approach to economic regulation is firmly rooted in doing what is right for the longer term. But this does not mean a reduction in the regulatory challenge faced by Scottish Water. Indeed the converse is true. This is the strength of using the principles of Ethical Business Regulation.

Ethical Business Practice and Regulation

Successes of the water industry in Scotland

The Scottish water industry has come a long way since economic regulation was introduced in 1999. At the time, the industry's costs were much higher than those of the privatised companies in England and Wales. Its performance, whether that be in water quality, environmental outcomes or levels of service to customers, was much worse than that of the companies south of the border.

Today, Scottish Water's overall performance is comparable with the best performing companies in the United Kingdom[5]. At the same time, Scottish Water has:

- delivered the largest investment programme per head of population of all of the water and wastewater companies in England and Wales;
- increased its borrowing by the second least of any of the companies; and
- reduced average household bills by 9% in real terms – compared to an average increase of 11% in England and Wales.

The industry has succeeded because it has never sought to rest on its laurels. At the start of each regulatory control period, the industry has reviewed what it has done, sought to improve what went well, corrected what went not so well and set new, and more demanding, challenges.

Why radical change is necessary

Notwithstanding its successes, the water industry in Scotland faces substantial (and even greater) long-term challenges. These include:

- **The "Climate Emergency" declared by the Scottish Government in May 2019.** The water industry will have a vital role to play in the Scottish Government's target of achieving net zero emissions by 2045. It is hard to imagine an organisation with a larger operational and embedded carbon footprint in Scotland than Scottish Water. The Scottish Ministers have already required Scottish Water to achieve this milestone by 2040 – five years before the Scotland-wide target. This is a seriously demanding challenge – even if there is no further acceleration of the target for net zero emissions.
- **Asset Replacement.** It is difficult to see how Scottish Water could achieve net zero emissions if it is not operating, refurbishing and replacing its assets in an economically optimal way, taking into account the costs of emissions. Moreover, customers and communities will expect service levels to improve over time. As such, the industry will need to transition to the point where Scottish Water has the opportunity to manage its assets in an economically optimal manner. Joint work by Scottish Water and WICS has identified that expenditure on asset replacement may eventually have to increase three-fold from current levels.

5
Scottish Water has, for example, achieved an industry leading OPA score in the range of 393 – 406 (out of a maximum of 418) over the past six years.

WICS has realised that it cannot continue to regulate as it has done previously. To do so would make it all but impossible for Scottish Water to make progress towards addressing these long- term challenges. The Scottish Infrastructure Commission identified similar issues in its first report to the Scottish Government published earlier this year.

As an example, the 'hard budget constraint'[6], which has traditionally been the foundation of economic regulation in the United Kingdom, requires a regulated company to minimise its use of cash during a regulatory period. This creates an incentive to take forward interventions which require the lowest cash outlay (often assuming that the use of available capacity is a 'free' resource) even if they do not have the lowest whole life cost. It is inimical to appropriate consideration of non-cash costs, such as emissions.

The regulated company does not have easy access to cash to invest in improving its business – even when such 'spend to save' projects could save customers money.

The traditional regulatory model has also not paid sufficient attention to wider economic costs. It is not possible to monetise reductions in emissions or other benefits captured in a 'six-capital' framework[7] while maintaining a 'hard budget constraint'. Addressing longer term challenges therefore requires a fundamental change in approach.

Ethical Business Practice and Regulation

In considering alternative approaches, WICS examined the concepts of Ethical Business Practice (EBP), company purpose and Ethical Business Regulation (EBR).

EBP is defined as:

An organisation in which the leaders consciously and consistently strive to create an effective ethical culture where employees do the right thing, based upon ethical values and supported by cultural norms and formal institutions. EBP requires people who can recognise ethical dilemmas, challenge constructively, speak up if they know or suspect unethical behaviour, and who use mistakes and wrongdoing as an opportunity to learn and improve. Engagement with EBR then requires the organisation to be open with its regulator and provide evidence of EBP.[8]

The concept of EBP also aligns with the latest thinking on redefining company purpose as advanced by Professor Colin Mayer and the British Academy.[9] Professor Mayer, for example, recognises that companies should not profit from creating problems for people and the planet. Companies should instead have clear purposes which provide a commitment to their stakeholders such as the environment, customers, employees and suppliers. Professor Mayer's research suggests that it is the pursuit of such clear purposes, which deliver value over time.

Implementing pure EBP is not straightforward – it requires a company to go well beyond operating in an 'ethical' way. It involves businesses continually demonstrating evidence of their commitment to open, fair and candid behaviours that builds and maintains the trust of its stakeholders. This is a very high bar – but one which, as a public corporation, Scottish Water must achieve.

6
The hard budget constraint refers to the discipline of constraining the cash available to a regulated company over a regulatory period. It encourages a regulated company to reduce its costs in order to maximise its outperformance. It also protects customers from the company spending more than the regulator assumed in setting the price cap. It therefore provides efficiency incentives.

7
The six capitals are: financial, manufactured, natural, human, intellectual and social.

8
Hodges C. and Steinholtz R. (2017), 'Ethical Business Practice and Regulation', first edition, Hart Publishing.

9
See, for example, Mayer C. (2018), 'Prosperity', first edition, Oxford University Press. Professor Mayer also leads the British Academy's work on the future of the corporation. British Academy (2019), 'Principles for Purposeful Business', November.

Ethical Business Practice requires transparency. An EBP company would report clearly to all its stakeholders. It should explain what it has done, why it has done it and how it has managed those elements of its performance that may have fallen short of what it had sought to deliver. It should never be the case that a shortfall in performance is not proactively identified and explained by the company.

Similarly, an EBP company has to set out a clear picture of what it intends to do, how it will deliver its plans and how it will ensure that it meets the needs and (as far as possible) the expectations of all of its stakeholders. Where the expectations of stakeholders are not met, an EBP company has to find a way of proactively assuaging the potential for disappointment. A good example of such reporting is that of Berkshire Hathaway – its level of candour and clarity of reporting would be a reasonable aspiration[10].

Ethical Business Practice requires the company to own its performance. Previously, and not unjustifiably, regulated businesses have sought to 'hide' behind Government or Regulators. In the absence of a 'hard budget constraint' and a fully defined list of projects to be delivered, stakeholders are trusting an EBP company to explain and evidence the choices that it makes. It has to demonstrate that customers, communities and other stakeholders should trust it with ever increasing investment funds.

Implementing and sticking to EBP represents a very considerable challenge. It is transformative. It will take time to implement fully. It is not an option for Scottish Water to continue to do what it has always done and seek to package its activities and processes differently. Scottish Water should be able to evidence how its investment choices in the coming regulatory control period were different to what it would have done had there been the previous approach of a defined list of projects signed off before the start of the regulatory control period.

Implementing EBP

In addition to the 'warts and all' reporting and disclosures, discussed above, Scottish Water will face several challenges in transitioning to this pure EBP approach. Amongst the most obvious would seem to be:

1. **Reassurance.** Scottish Water will have to provide customers, communities and stakeholders with reassurance that it is spending the income from customer charges and public borrowing effectively and efficiently. It will also likely be important to reassure stakeholders that it is making sufficient progress in implementing EBP. Such reassurance is likely to be critical – and especially so in the early years while Scottish Water is building trust in its reporting of its performance.

2. **Asset Management.** Improving further its asset management will be a challenge. It will likely involve a transformation in the understanding of its assets and the approach to maintaining and replacing them. Stakeholders will want to have confidence that Scottish Water appraises rigorously the interventions that it makes and ensures that it has involved customers at each stage of this process.

10
See for example www.berkshirehathaway.com/letters/letters.html.

3. **Involvement.** Scottish Water will likely have to demonstrate how they involve customers and communities in decisions on interventions as far as is practicable. Communities will likely want to understand what may be planned for their area and Scottish Water will have to facilitate this engagement. The acid test would be that the customer and community view has played at least an equal role to the vital engineering input in deciding on a future intervention.

Taking these steps will require Scottish Water to strengthen its capabilities in several areas. It requires a move away from an organisation that delivers to defined instructions to an organisation that is focused on meeting the expectations of customers and society more broadly. It will also involve making significant changes to its behaviours and corporate culture. The Commission sets out some of its thinking below.

Implementing EBR

In theory, EBR should be the regulator's response to a business demonstrating a consistent track record of EBP.

The principles of EBR – as advanced by Professor Christopher Hodges of the University of Oxford – follow on from his forensic review of regulation and the application of sanctions[11]. Professor Christopher Hodges concluded that a regulatory framework based on trust should result in better quality decision making and better outcomes for customers.

In adopting EBR the regulator is, of course, only placing its powers on 'stand-by mode'. Under EBR, the regulator will act only when the regulated 'company ship' deviates from a reasonable 'shipping lane'. Provided there is a clear explanation of what it is doing, intervention by the regulator is unlikely.

However, the regulator could still "break the glass in emergency". This may happen if, for example, trust is lost and attempts to restore it have failed. It is only the regulator that can break the glass and trigger the fire alarm. While it may be painful for the regulator to have to respond decisively to enforce its regulatory powers, it is the regulator's duty to do so should it become necessary. The consequences for those that allowed the fire to take hold would be serious.

Challenge for WICS in adapting EBR

WICS has extensive powers. These range from powers over information collection right the way through to the power to adjust price caps if it considers such an intervention to be necessary.

EBR means that the regulator no longer relies solely on those (disciplining) powers. It is therefore a considerable step for the regulator to adopt EBR before Scottish Water has fully implemented EBP. The economic regulator is taking EBP on trust and relying on the company to be sufficiently candid in all that it reports and to involve customers and communities as effectively as possible.

WICS has committed to EBR because it considers that if Scottish Water adopts and implements EBP, the combination of EBP and EBR should enable the water industry in Scotland to meet the challenges that lie ahead as effectively as possible and to do so long into the future.

11
See C Hodges: 'Law and Corporate Behaviour, Integrating Theories of Regulation, Enforcement, Compliance and Ethics', Hart Publishing 2015

Scottish Water's Strategic Plan

Scottish Water's Strategic Plan is an important first step. It is the first time that there has been a clear statement of the longer term challenges that the water industry in Scotland will have to address. Importantly, Scottish Water makes a clear statement that it is committed to meeting these challenges and to do so efficiently, ensuring that increases in charges are no higher than they need to be.

The Strategic Plan starts with a clear vision and explains the challenges that it faces:

- Mitigating climate change;
- Adapting to climate change;
- Replacing its assets in an economically efficient manner; and
- Supporting the needs of Scotland's households and businesses.

The Commission's View

The Commission is looking to Scottish Water to take clear ownership of its strategy and the means by which it will deliver the shorter and longer term Objectives of the Scottish Ministers. As it moves forward, the Commission would expect Scottish Water to set out how it plans to achieve its targets and identify milestones that would provide confidence to all of its stakeholders that it is on track. In this regard, it will also be important for Scottish Water to be clear about the prospect for charges and explain how it would use the money that it receives. It will be critical that Scottish Water is seen to improve further the efficiency and effectiveness of its activities.

The following pages provide more detail on the Commission's view on the prospects for future prices for the 2021–27 period.

The Strategic Review of Charges 2021–27 Timeline

Milestone	Date
The Scottish Government publishes the Commissioning letter for the Strategic Review of Charges 2021–27	February 2017
WICS publishes its methodology document	April 2017
Customer Forum established	May 2017
WICS publishes its initial Decision Papers on initial ranges for the key inputs to prices	June to October 2017
Scottish Water publishes its draft Strategic Projections for consultation	February 2018
The Scottish Government issues its draft Principles of Charging and Investment Objectives	April 2018
WICS publishes its 2018 Decision Papers	July to November 2018
WICS publishes its methodology refinements and clarifications	November 2018
The Scottish Government publishes a revised Commissioning letter for the Strategic Review of Charges 2021–27	June 2019
WICS publishes its 2019 Decision Paper on Asset replacement	July 2019
The Scottish Government consults on its updated draft Principles of Charging and Ministerial Objectives	January 2020
Scottish Water publishes its Strategic Plan	February 2020
The Customer Forum agreed Scottish Water's Strategic Plan in principle	February 2020
Next steps WICS publishes its decision paper on the prospects for prices	February 2020
The Customer Forum seeks to agree the price profile required to deliver the Strategic Plan, within the ranges set by WICS.	April 2020
WICS publishes its Draft Determination	May 2020
The Scottish Government publishes its final Principles of Charging and Ministerial Objectives	June 2020
WICS publishes its Final Determination	September 2020

Introduction

At the start of the current Strategic Review of Charges, the Commission set out its views on how the regulatory framework should evolve...

- Economic regulation has proved effective in improving the efficiency of both public and private sector entities.
- Economic regulation has traditionally sought to establish a hard budget constraint for the period for which prices are being set. In so doing, it has been quite effective in mimicking market forces.
- There has been a general acceptance that keeping a regulated entity tightly financially constrained encourages efficiency. Indeed, the evidence strongly suggests that regulated companies subject to this discipline have reduced their operating costs and improved their operational effectiveness and efficiency.
- Setting clear regulatory targets, and closely monitoring their delivery, has provided significant reassurance that regulated companies have delivered the intended benefits for customers and the environment.

However, the Commission also identified issues where traditional regulation may no longer be fit for purpose...

- Traditional economic regulation establishes a regulatory contract which the regulated utility agrees to deliver. As such the regulatory relationship is similar to that of a parent and a child. There is a consequent risk that the regulated utility lacks ownership of its strategy and, for example, cites lack of regulatory funding as a reason for not having done something.
- Regulators have focused on funding regulated businesses for a regulatory control period to establish and maintain the hard budget constraint. In so doing, regulators and utilities have not been able to have full regard either to the long time horizon of investment or the application of whole-life cost analysis. It is important to note that the hard budget constraint addresses just cash costs – it does not address non-cash costs such as environmental externalities.
- Such externalities have typically not been included in setting the charges of regulated utilities and, not surprisingly, regulated companies have had little focus on reflecting non-cash costs into their investment choices.
- The focus on a regulatory control period makes it more difficult to address longer term challenges. Cash in excess of immediate need is not consistent with a hard budget constraint, but not allowing for it makes it more difficult to transition charges over time or achieve longer term outcomes, beyond that regulatory control period.
- Traditional economic regulation is therefore inconsistent with enabling Scottish Water to meet the long-term challenges set out in the Objectives of Scottish Ministers in an effective and efficient manner.

This focus on cash and returns is a key weakness of traditional economic regulation. It has – perhaps not surprisingly – made regulation an adversarial process and caused asymmetries of information.

In its methodology and Decision Papers for the current Strategic Review of Charges, the Commission concluded...

- It had to find a way of beginning to address longer term challenges such as climate change and asset replacement in its upcoming price review: a change in its approach to regulation was required.
- Addressing these challenges will require Scottish Water to increase its annual level of investment significantly – to deliver on the Objectives of the Scottish Ministers and play its full part in addressing climate change.
- To fund this additional investment, the Commission could either:
  - **Accept the time inconsistency of the regulatory control period and adjust prices only when there is a demonstrated and fully defined need to commit expenditure; or**
  - **Take a longer term perspective and work in detail with the regulated industry to understand the potential needs and a transition route (to the higher investment levels that are likely to be required).**
- The Commission concluded that it had to take the longer term perspective.

To address these longer term challenges, the Commission has committed to Ethical Business Regulation...

- Ethical Business Regulation (EBR) supports taking a longer term approach by requiring candour in all conversations and interactions between the regulator and regulated company. It seeks to avoid, or at least reduce substantially, the asymmetries of information and the risk of time inconsistency.
- The EBR approach contrasts with the previous focus on how much money was spent. It is regulatory action by exception rather than by regulatory control period – the onus is on the regulated company to explain and to deliver: to demonstrate to all of its stakeholders that it is operating effectively and efficiently.
- Evidence of the regulated company's performance should be consistently compelling. The regulator's focus is now on how and why the money is spent – and that the interests of the current and future generations are protected. The regulated company will need to demonstrate to stakeholders that it is spending customer's money effectively and efficiently. If it is doing so, then the regulator should reflect this evidence in its decisions on future charges.
- An approach of regulatory action by exception is consistent with customer research and the application of behavioural insights. These suggest that customers expect regulators to take proactive steps to avoid sudden bill increases and that any increases in bills should, where possible, be phased.

Ethical Business Regulation is a response to a company following the principles of Ethical Business Practice...

- Scottish Water must earn and maintain the trust of its regulators. Regulators respond not just to their observations of how a company is delivering but also how the company's customers and other stakeholders view its performance.
  - **As such, Scottish Water has to be open and honest about its successes and its shortcomings; and**
  - **It has to tailor its messaging to the wide range of customers and communities that it serves.**
- Customer and community complaints should reflect only relatively small and genuine human errors. There should be no systematic issues that could be identified by a review of customer and community contacts.
- Scottish Water should involve and empower customers in all that it does. Full empowerment of customers means that all interventions – whether operational or in terms of capital expenditure – have fully embedded the views of the customers and communities that will be impacted. It is a step function change – it is not just relying on peer review or an assurance process.
- No strategic intervention should happen without a customer view having played a broadly equal role to the vital technical engineering input. When Scottish Water advances projects to its delivery list, the customer and community view of what should be done should already have been taken into account in determining the outcome.
- Recognising that sometimes there will be negative effects for some customers or communities, Scottish Water should seek proactively to mitigate the impact on those affected.
- Scottish Water should report its performance and prospects regularly and transparently. It should be demonstrably consistent with the implementation of its strategy and set out clear expectations of what it will achieve (both with regard to organisational change and in meeting expectations of its stakeholders) in the short, medium and long-term; this goes beyond meeting the needs of its regulators when it comes to the completeness of the information it provides.
- The context and explanation of information should be exemplary, allowing the regulators to see consistent, evidenced trends of improved performance. The evidence of a shortfall in behaviours would also become increasingly obvious.
- Scottish Water should take the difficult steps required to take full ownership of everything that it does and build and maintain trust in all that it does. As such, it would develop a transparent internal assurance process, which shares its conclusions (initially 'warts and all') with all who are interested. The way it is perceived to behave will be a clear indicator of the likely level of reassurance that stakeholders will have.

What Ethical Business Regulation means in practice...

- Under EBR, the regulator intervenes by exception. The regulator will act only if the regulated company deviates from a reasonable path. Provided the regulated company has clearly explained what it is doing, and why, such interventions are unlikely. The regulator will no longer come close to micro-managing the performance of a regulated company.
- This requires the regulator to have trust in the regulated company – and to be able clearly to justify a more informed and less intrusive method of intervention.
- Of course, the regulator retains a clear potential to intervene robustly; if trust (and any and all attempts at restoring it) has failed. A robust intervention is, de facto, a failure of the regulatory framework. Such an intervention (particularly after a period of reactive regulation) will, of course, be far from easy.
- Such an intervention (particularly after a period of reactive regulation) will, of course, be far from easy. The pressures on the regulator, who has to act fully in line with its statutory duties, are no less demanding than the expectations of a regulated company if it is to act in line with EBP.
- The regulator now defends the customer and community interest differently but equally robustly. The regulator now focuses on a wide range of sources of information – beyond that which comes directly from the regulated company – drawing on reported information, frequent conversations with a full range of stakeholders and a thorough understanding of what has been achieved in other jurisdictions and sectors.
- There may be times when matching or improving on best practice in other jurisdictions or industries will appear to be daunting. It may not be clear how such an improvement can be made or, indeed, funded. But any such issues need to be discussed objectively and analysed.
- Regular and frank discussion of performance, recognising that performance expectations will always change and become more demanding, will likely be key to success.
- The regulated company has to promote an honest discussion of its purpose, aspirations, values, current performance and plans for improvement.
- Just as customers expect better service from a company that they regard highly – so too will expectations of a highly performing industry be more demanding.
- The regulated company must set out clear plans – accessible to all. It must accept that expectations will likely become ever more demanding.
- In this regard, the regulator has an important role: it must be reasonable in judging and evidencing its assessment of performance; but must also support, where the evidence is good, Scottish Water's plans for meeting the expectations of the customers and communities that it serves.
- The industry must be seen to embrace these challenges as an opportunity – and to do so in a positive and constructive light.

Scottish Water's Strategic Plan

Scottish Water's Strategic Plan is much clearer and more focused than its previous regulatory business plans...

- The Commission regards the Strategic Plan as an important first step in Scottish Water taking full responsibility for its future strategy and performance.
- It starts with a clear vision.
- It explains future challenges and commits to addressing them effectively:
  - **Mitigating climate change;**
  - **Adapting to climate change;**
  - **Replacing its assets in an economically efficient manner;**
  - **It commits to supporting the needs of Scotland's households and businesses.**
- The Strategic Plan is based upon an extensive programme of research, the use of innovative behavioural insights approaches and wide consultation. This programme of work has been shared regularly with other stakeholders.
- The Strategic Plan also reflects the detailed, open and collaborative approach pursued by Scottish Water. There will likely be no surprises about those issues that are covered in the Strategic Plan.
- The Strategic Plan commits to deliver the vision and address the future challenges as efficiently as possible and commits to ensuring that price increases are no higher than they need to be.

However, the Commission considers that a root and branch transformation is required to deliver the outcomes set out in the Strategic Plan...

- By 2027, 40% of the time available to achieve net zero emissions will have elapsed. As such, making substantial progress in this next period, and being seen to do so, will be critical given the ambition of achieving net zero emissions by 2040.
- Scottish Water should want to be more than 40% of the way towards its 2040 net zero emissions by 2027 given that the last steps towards net zero are likely to be the most difficult.
- In the spirit of EBR, Scottish Water should be able to evidence that it is seeking to make clear progress in the transformation of its organisation: as such, the Commission considers that Scottish Water should produce a transformation plan.
- In such a plan, it is important that Scottish Water sets out clearly:
  - **How its organisation, procedures and practices will be different at the end of the 2021-2027 regulatory control period, including a clear description of the resources required and key milestones;**
  - **How it is improving its asset management: it will now have to balance proactively engineering, customer and community and economic pressures;**
  - **How it plans to control its costs and to demonstrate – not least to its economic regulator – that it is operating as efficiently and effectively as possible;**
  - **How it reports on its performance; and, perhaps most importantly,**
  - **How it provides targeted and comprehensive reassurance to stakeholders that it is making appropriate progress towards addressing the long-term challenges that it has set out clearly in its Strategic Plan, beyond achieving straightforward performance indicators or milestones.**

The Commission accepts that this transformation will not be easy and has to be appropriately funded...

- As noted by the Infrastructure Commission, there will need to be a radical change to how reducing emissions and other benefits to society are included in appraisals and broader asset management processes. This will have to be the focus of the organisation and not just a series of initiatives, however well coordinated.
- Scottish Water should look to involve customers and communities in its decision making whenever it is realistic to do so. It should be clear that its primary purpose is to meet the water and waste water needs and expectations of the Scottish Government, and both its current and future customers.
- To deliver net zero emissions, Scottish Water will have to prioritise how it uses its resources, decide the right things to do and to be able to explain and justify them to its stakeholders. Being excellent at delivering a very defined set of outputs for a defined price in a defined time period will no longer be good enough.
- Such evidence based decisions will likely require Scottish Water to build additional capability and capacity in its strategic thinking, programme management, analytical functions and in involving customers and communities. This may take time. As such, it is important that Scottish Water sets out clearly how it intends to evidence its progress against its transformation plan to its customers, communities and other stakeholders.
- Scottish Water could usefully take steps to explain how it intends to involve customers and communities more impactfully.

The Commission is clear that, by 2027, there will need to be both substantial progress in reducing emissions and in transitioning charges towards the levels required in 2040.

A successful transformation will be underpinned by, as a minimum, addressing four key strategic issues: firstly, the prospects for charges…

Strategic issue	Description of issue
Prospects for charges	• Scottish Water has to be able to deliver the Objectives of the Scottish Ministers within the profile of price caps that it accepts. • There should be a transformation plan that sets out how the Scottish Water of 2027 will be different from that of today. • Such a plan should evidence its progress towards meeting the longer term targets with deadlines beyond the end of the next regulatory control period. • Customers and communities will expect clarity around what will happen with their charges over the short, medium and longer term. • Customers and communities should understand why their bills are increasing and need to be confident that their money is being spent efficiently and effectively.

Secondly, the effectiveness and efficiency of Scottish Water...

Strategic issue	Description of issue
Maximising effectiveness of delivery	• Scottish Water will need to transform the way it operates and invest to achieve the net zero emissions target. At a minimum, Scottish Water should be able to explain how its organisation will be different by 2027 and how this will contribute to achieving the twin challenges of net zero emissions and efficient and effective asset management. • Achieving net zero emissions will have major implications for how Scottish Water manages its assets. • The extent to which Scottish Water can improve its efficiency has a critical impact on future prices. • There will also likely be similar implications for how it delivers required improvements to water quality and how it reduces the environmental impact of its activities. • The strategic plan commits to the efficiency range that underpins the financial analysis in this Decision Paper. However, it does not set out how it plans to achieve these savings and what the implications are likely to be.

Thirdly, how Scottish Water will report on its performance and provide an appropriate level of reassurance…

Strategic issue	Description of issue
Reporting on and reassuring stakeholders about performance	• Does the company truly understand how it is perceived by its customers, communities and other stakeholders? • Successful companies not only tend to report meaningful performance indicators, but also provide significant context and narrative in their commentary on performance. • Effective reporting is a dynamic process and involves continuing communication, a proactive 'no surprises' approach and an openness to discussion with stakeholders. • Given the need to increase investment and the efficiency challenge that Scottish Water will have to deliver, there is likely to be a need to build (and then maintain) the confidence of stakeholders. Effective assurance is not just an audit exercise…

Finally, how Scottish Water will involve customers and communities...

Strategic issue	Description of issue
Involvement of customers and communities in decisions	• Scottish Water taking ownership of its strategy will have implications for how it seeks to involve customers and communities in its decisions and priority setting. Its strategy will of course have to meet the Objectives of the Scottish Ministers. • Adapting the traditional approaches to engagement of an economic regulator – whether written consultations, working with stakeholder reference groups or negotiated settlement – is unlikely to be sufficient to discharge the requirement for Scottish Water to 'own' its strategy and be fully accountable for its performance. • A clear transformation plan with defined milestones will support effective meaningful discussion with customers and communities. • Ultimately, the successful delivery of the industry vision and Ministerial Objectives requires customers and communities to be reassured that their views are being taken into account in Scottish Water's approaches and decisions.

*Tier 1 expenditure includes operating, PPP, interest, repair and refurbishment costs.

Scottish Water faces a substantial challenge: it will have to build and maintain high levels of trust with its customers, communities and other stakeholders...

- Scottish Water will now have to agree an appropriate price profile with the Customer Forum. Subject to the achievement of the Ministerial Objectives and sufficient progress being evidenced on its longer term targets, this will involve trade-offs between:
  - **what Scottish Water believes it can deliver;**
  - **what Scottish Water considers will build and maintain the confidence of stakeholders;**
  - **expectations of customers and communities with regard to current prices and service levels; and**
  - **expectations of customers and communities with regard to future prices and service levels.**
- Looking beyond its transformation plan, a future Scottish Water strategy could reasonably build upon the first Strategic Plan in four areas:
  - **Prospects for charges;**
  - **Maximising the effectiveness of delivery;**
  - **Reporting on and reassuring stakeholders about performance; and**
  - **Involvement of customers and communities in decisions.**
- This Decision Paper will now set out the financial and economic constraints that are consistent with Scottish Water meeting the Objectives of the Scottish Ministers.
- There is scope for consideration of how the challenges are addressed, subject to the achievement of the Ministerial Objectives; for example, in the balance between targeted investment levels, efficiency and allowances for any additional cash outlay resulting from including emissions in appraisals.

Managing the required transition in funding

Scottish Water will have to increase its annual capital expenditure significantly if it is to meet the Objectives of the Scottish Ministers...

- The Commission has to ensure that Scottish Water can deliver the Objectives of the Scottish Ministers at the lowest reasonable overall cost. The Commission expects Scottish Water to evidence consistently and proactively that it is addressing the long-term challenges that it faces.
- The Scottish Government has made it clear that it wants the industry to be financially sustainable for the long-term. Such financial sustainability will require Scottish Water to be adequately funded to meet its future challenges such as asset replacement and achieving net zero emissions.
- The Commission notes that the Scottish Ministers have now tasked Scottish Water with facilitating a 50% increase in the generation of renewable energy from its land and assets by 2030; and to achieve net zero emissions by 2040 – five years before the Scotland-wide net zero target. This reduces the time available to transition to the level of investment consistent with sustainable performance.
- As explained in the Commission's asset replacement Decision Paper, a critical enabler of meeting its emissions reduction commitment will be that Scottish Water is able to meet its asset replacement needs when it is efficient to do so. Otherwise, Scottish Water may have to rely on short-term interventions which would likely result in higher carbon and resource use.
- Average annual levels of investment are the most important driver of prices. The Commission's analysis shows that the earlier deadline for net zero emissions (and consequent reduction in the time available to transition charges) places an upward pressure on charges.

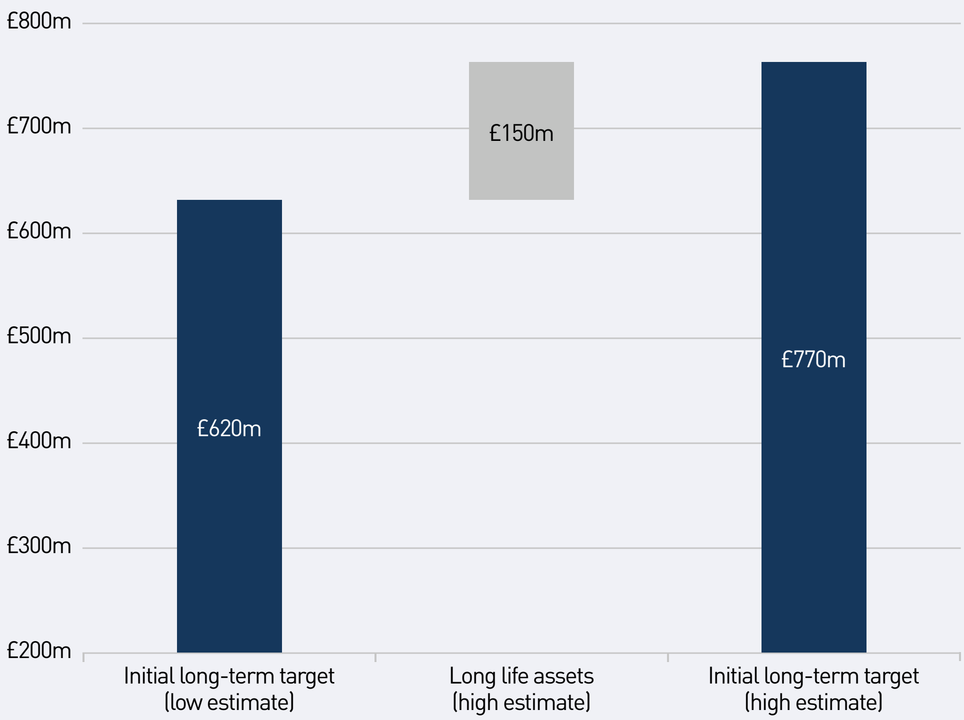
Scottish Water will have to improve the efficiency and effectiveness of its capital expenditure if it is to meet the Objectives of the Scottish Ministers...

- The Commission has considered the scope for efficiency carefully and sets out its expectations below. The Commission can rely on observed evidence to estimate a reasonable efficiency target for the operating, asset maintenance and financial expenditure of Scottish Water.
- Capital expenditure efficiency can only be assessed over a substantial portfolio of projects and over time. Its assessment will be complicated significantly by the need to include emissions in appraisals and the (potentially) resulting increase in the cash outlay that Scottish Water may have to make.
- To avoid any potential incentive to cut corners or not to appraise options appropriately, the Commission believes that its assessment of the potential for capital expenditure efficiency should not change until there is compelling evidence that it is either too harsh or too lenient.
- The Commission welcomes Scottish Water's stated intention to seek to absorb any additional cash costs arising from including emissions and other public benefits in its appraisals and adopting alternate solutions with lower net present cost but a higher cash outlay.
- However, at the same time, the Commission recognises that, if it were not to allow for the possibility of there being additional costs arising from including the costs of emissions in Scottish Water's investment decisions, it may be more difficult to deliver the extent of transformation that the Commission sees as essential to meeting the net zero emissions and asset replacement challenges.
- The Commission therefore considers that it would be prudent to make an allowance for such additional cash costs.

Achieving net zero emissions will require Scottish Water to replace its assets when it is efficient to do so, taking appropriate account of the cost of emissions...

- The Commission's Asset Replacement Decision Paper published in July 2019 explained that Scottish Water has to make progress towards meeting its estimate for the annual allowance that it will, in future, need to commit to the replacement of its long-lived assets.
- Scottish Water's analysis suggests a range for the replacement costs of long-life assets of between £620 and £770 million.
- However, Scottish Water will now have to achieve this no later than 2040 given its new target date for net zero emissions.

Initial long-term target range for replacement



The Commission reviewed carefully what other industry experts had assumed for asset lives...

- The Commission has now reviewed the estimates of asset lives used by other organisations, including, Deloitte, Atkins, JASPERS and UKWIR.
- JASPERS (Joint Assistance to Support Projects in European Regions) advises the European Investment Bank (the biggest lender to the UK water industry) on asset management, asset lives and individual projects. These are some 25% to 40% lower than that advanced by Scottish Water and reviewed by the Commission. Using these asset lives would increase Scottish Water's expected total annual asset replacement expenditure by just over £300 million (c. 40%).
- IPART (the economic regulator for the state of New South Wales in Australia) commissioned Atkins to review the asset lives of State Water for its 2009 price review. Using these asset lives would increase Scottish Water's total annual replacement expenditure by up to £130m (c. 15%)[12].
- The ACCC (Australian Competition and Consumer Authority) commissioned Deloitte to review State Water's assets in 2013. Using these asset lives assumed would result in broadly similar estimates for Scottish Water's total annual replacement expenditure[13].
- Work carried out by UKWIR (UK Water Industry Research) would appear to indicate that average asset lives for water mains could be around 70–80 years. Such an estimate (on its own) would increase Scottish Water's expected total annual asset replacement expenditure by around £50 to £80 million a year (c. 10%).

12
Atkins (2009), 'Review of the Weighted Average Asset Life of State Water Corporation Assets', December.

13
Deloitte (2013), 'Final report - asset lives for State Water's 2014 pricing proposal, December.

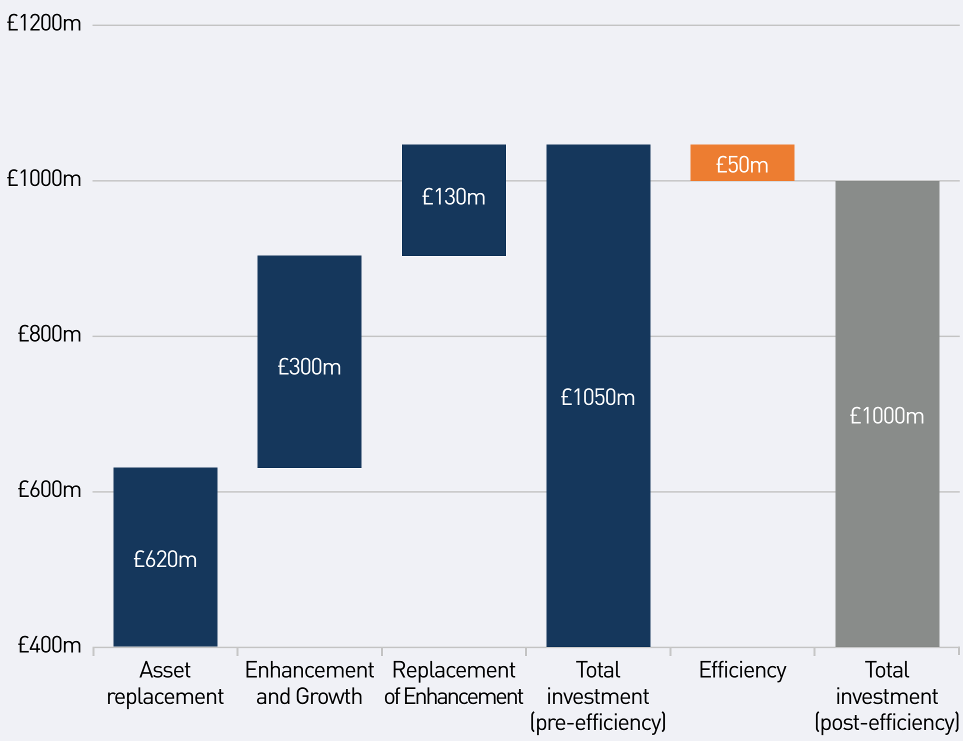
The Commission concluded that Scottish Water did not appear to have overstated its likely need for investment...

- The Commission concluded from its review of other experts that Scottish Water's estimates of the likely level of investment that would be required to replace its assets on a sustainable basis were not unreasonable and consistent with its obligations to achieve net zero emissions by 2040.
- Expenditure in the next several years will be much more certain on the shorter life assets that Scottish Water manages and operates. This suggests that by around the end of the next regulatory control period, Scottish Water may have to make difficult choices about the timing and prioritisation of enhancement projects given the proposed transition in charges over at least the next two regulatory control periods.
- The Commission recognises that Scottish Water faces a challenge to manage its assets in such a way that it can achieve the asset lives that it has used in its analysis. The Commission concludes that customers are best served by there being a very high confidence that there will be appropriate resources available to Scottish Water to address asset replacement when the time comes. Such resourcing will be critical to the achievement of net zero emissions.

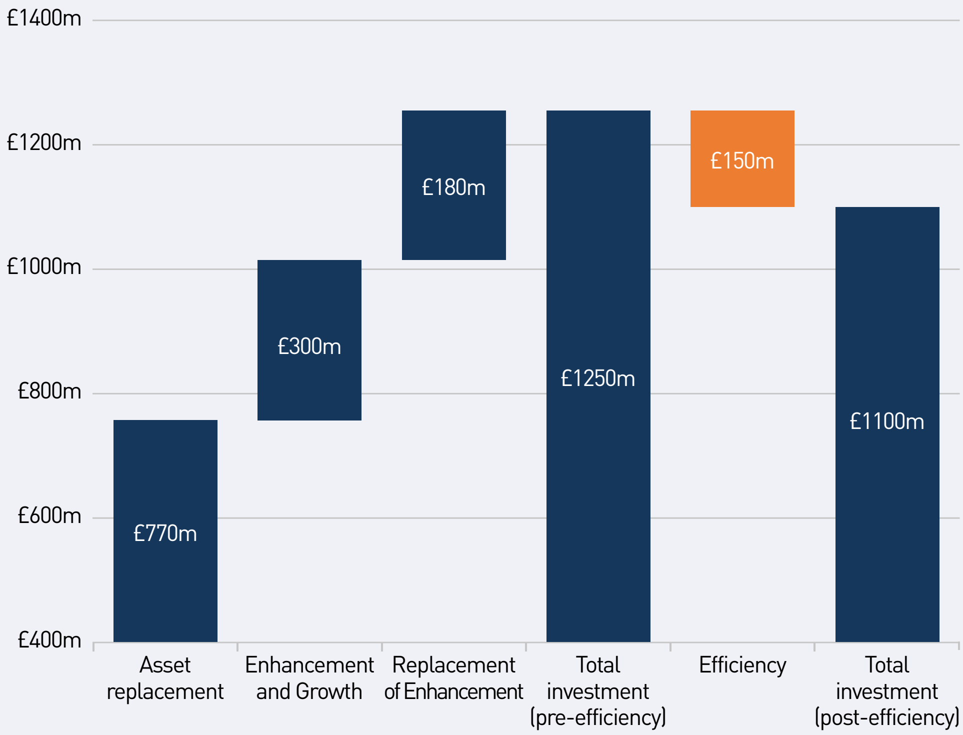
The Commission's Asset Replacement Decision Paper identified that the minimum likely level of investment in 2045 would be approximately £1,000 to £1,100 million…

- The 2045 deadline has now been brought forward to 2040. All else equal, this revised deadline places an upward pressure on charges.
- The minimum cash need for investment, assuming, as Scottish Water currently plans, that emissions do not add to the cash cost of alternative solutions, should be in a range from £1.0 to £1.1 Billion by 2040. This includes investment to improve water and wastewater quality and funding future growth of £300m per annum.
- It also includes future replacement need arising from improvement investment which could reasonably be expected to require additional funding of £130–180 million a year by the 2040 deadline.
- If Scottish Water is unable to absorb the additional cash cost of alternative solutions (the potential result of having adopted an alternate solution with a higher cash outlay because of the cost of emissions included in appraisals), the £1.1 Billion could increase.

Target total replacement, enhancement and growth investment (low estimate)



Target total replacement, enhancement and growth investment (high estimate)



Scottish Water faces a substantial challenge to meet its net zero emissions target by 2040…

- Scottish Water will likely have to be investing some £1.0 to £1.1 Billion each year (2017/18 prices) by 2040 to operate sustainably and with net zero emissions. It seems highly unlikely that Scottish Water could invest less and still achieve its target.
- To meet this challenge, Scottish Water will have to:
  - **transform as an organisation; and**
  - **provide confidence to its customers and to other stakeholders that it is on track to meet its long-term challenges and that it is committing customers' money as effectively and efficiently as possible.**
- Charges will have to rise to fund the increased level of required investment. The Scottish Government would wish for an appropriate balance to be struck between the financial impact of increased charges on current customers and on future generations.
- The Commission's analysis shows that total investment in Scottish Water's assets is currently less than the annual economic depreciation of the existing asset base. As such, the Commission notes that current customers pay less than the annual economic cost of providing the service. Asset quality is modestly declining even if Scottish Water is getting much more effective at managing its assets. Future generations should not be left with poorer assets and higher charges to allow for the lower charges that are being enjoyed by customers at the current time.
- Subject to the Ministerial Objectives and the Principles of Charging, Scottish Water will need to decide on an appropriate trade-off between:
  - **a smooth transition in current customers' bills;**
  - **the interests of future customers who may inherit higher bills, higher levels of debt and a backlog in asset replacement;**
  - **its ability to commit increased resources effectively in the near term; and the need to explain the challenges that it faces and how it plans to meet them.**
  - **the need to explain the challenges that it faces and how it plans to meet them.**
- The Commission now sets out what it considers to be a reasonable range for average charges.

Implications for prices

The Commission's financial modelling involves considering the cash resources available to Scottish Water…

- There are, in practice, only a small number of variables that materially affect the level of funding that Scottish Water requires. These are:
  - **The Scottish Government's proposed changes to the Water Charges Reduction Scheme (WCRS);**
  - **Growth in the household customer base;**
  - **Growth in the non-household customer base;**
  - **Net new borrowing;**
  - **Operating, maintenance, financial and other expenditure;**
  - **Capital investment including enhancement, growth and replacement;**
  - **The efficiency challenge; and**
  - **Cost inflation.**
- In modelling price profiles, the most material variable is the appropriate level of capital investment.

The first four inputs impact on the cash available to Scottish Water...

Cash in	Range	Rationale
The Scottish Government's proposed changes to the WCRS	Household revenues reduce by around £7m in 2021/22	In line with the Scottish Government draft Principles of Charging
Household growth ('Band D equivalents')	0.7% to 1.1% per annum	In line with historic averages over the long-term (1997 to 2018)
Non-household growth	0.5% to 1.0% per annum. The Commission will work with Scottish Water to look at the allocation of non-household costs to services. This may result in some incidence effects that would have to be managed.	Consistent with the growth rate in new businesses in Scotland from 2000 to 2018 and Scottish Water estimated expenditure on growth. Non-household customers should continue to fund a share of costs that can reasonably be attributed to them.
Borrowing (cash terms)	£170m per annum	In line with the Scottish Government draft Principles of Charging

These inputs impact on the costs that Scottish Water incurs. Increases will put an upward pressure on charges to customers.

Cash out	Range	Rationale
Operating, maintenance financial and other expenditure (pre-efficiency, 2017/18 prices)	£870m to £930m which includes: • operating costs and PFI expenditure • contributions to developers • responsive repair and refurbishment • projected interest on embedded debt in 2021 • interest on new debt of 1% above CPI • tramlines around the baseline allowance of +/- £30m	In line with historic averages
Cost inflation as measured by consumer price index (CPI) inflation	1.8% to 2.2% per annum	In line with the Bank of England inflation target
Transition time frame	Must reach within 19 years	As explained on the next page

In having regard to the interests of future customers, the Commission seeks to facilitate the required transformation...

- The Commission recognises that funding additional investment will require customers' charges to rise.
- To mitigate the impact on customers, the Commission has sought to model a transition in charges over the full 19 years available from the start of the next regulatory control period to the net zero emissions deadline of 2040.
- The customer interest would seem to be best served by targeting a high confidence that Scottish Water will be appropriately funded in 2040. Scottish Government has also sought this assurance. The Commission's modelling is therefore based on ensuring a high level of assurance (90%) that the required funding will be available:
  - **Delay in achieving the 2040 net zero emissions target is not an option; and**
  - **Other industry experts assume shorter asset lives than those advanced by Scottish Water. Scottish Water's estimates of the required investment may therefore prove to be optimistic.**
- There are three factors that can materially affect the average annual increase in charges that could be required:
  - **The efficiency improvement required of Scottish Water;**
  - **Whether any ex-ante allowance for the additional cash costs arising from including emissions in investment decisions should be allowed for; and**
  - **The target level of investment post-efficiency in 2017/18 prices.**
- The Commission considers that its ranges cover all points that are theoretically possible. However, whilst delivering a 1.5% efficiency target for a year or two might be possible, it would be highly unlikely to achieve this consistently over the next 19 years. In the most comprehensive review yet undertaken of total factor productivity in the water industry, Professor David Saal estimated that the UK water companies improved no more than 1% a year in the period 1994 to 2017[14].

14
Saal and Frontier Economics (2017), 'Productivity improvement in the water and sewerage industry in England since privatisation', September.

The Commission recognises that there is uncertainty about the impact on cash costs of including emissions in appraisals...

- If Scottish Water is operating efficiently, valuing emissions (and other non-cash costs) in appraisals can only increase the cash cost of investment.
- The Commission welcomes Scottish Water's intention to seek the additional cash cost of alternate solutions adopted when it includes emissions in its appraisals. Absorbing these cash costs would be in addition to its cash efficiency challenge. At this stage, it is not yet possible to say whether this intention will ultimately be fully deliverable.
- There is no robust way to estimate how significant any such increase may be. Scottish Water should report proactively on the progress that it is making in this area.
- It is also clear that were it not to allow for such additional cash costs, it may inadvertently impede progress in including emissions robustly in appraisals.
- The Commission therefore believes it is prudent to allow for the possibility of an increase in additional cash costs arising from including emissions in appraisals – whilst recognising that there is a possibility that Scottish Water may prove able to absorb them.
- Such an allowance should not cover separate initiatives that Scottish Water will have to take to achieve net zero emissions, simply those where including emissions in the appraisal results in a different choice from what would have been made previously.
- This allowance could be ring-fenced in each year with its release subject to agreement, for example, with the Investment Planning and Prioritisation Group (or some such similar assurance mechanism).

The most material three impacts include efficiency, the level of investment and the potential cash impact of including emissions in appraisals...

Cash out	Range	Rationale
Investment (enhancement, growth and replacement in 2017/18 prices), post-efficiency	£1.0 Billion to £1.1 Billion	Consistent with the Commission's Decision Paper on asset replacement
Additional cash costs from including emissions in appraisals (2017/18 prices)	£0 Million to £150 Million	Capped at £150 Million in line with Commission's Decision Paper on asset replacement
Efficiency challenge applied to operating, maintenance, financial and other expenditure	0.75% to 1.5% per annum	In line with past improvements achieved in Scotland and England and Wales.

The Commission has analysed the real change in charges required under each combination of inputs...

Scenario	Target post-efficiency Investment Level in 2040	Operating Expenditure Efficiency	Additional cash cost of emissions	Average annual real change in charges
1	£1,000m	0.75%	£0m	1.3%
2	£1,000m	0.75%	£150m	1.7%
3	£1,000m	1.5%	£0m	0.9%
4	£1,000m	1.5%	£150m	1.4%
5	£1,100m	0.75%	£0m	1.6%
6	£1,100m	0.75%	£150m	2.0%
7	£1,100m	1.5%	£0m	1.3%
8	£1,100m	1.5%	£150m	1.7%

The Commission concludes that CPI+1% to CPI+2% represents the theoretical average annual range for price caps in the 2021–27 regulatory control period.

- Of the eight scenarios, seven suggest that average annual real changes in charges of between 1% and 2% would provide 90% confidence that the targeted required level of investment would be available by 2040.
- Reducing the confidence level has only a marginal impact on the required level of charges, but potentially a detrimental impact on future customers. The Commission considers that such an approach would not be consistent with its statutory duty.
- Real price increases of between 1% and 2% annually allow between 5% and 12% more capital expenditure in the next regulatory control period compared with the latter half of the current regulatory period.
- As such, the Commission's view is that for the 2021–27 regulatory control period, Scottish Water should recognise that it will need to increase its charges by at least CPI+1% each year.
- However, an annual change of less than CPI+1.5% relies on combinations of inputs that, taken together, is likely to be too optimistic.
- Indicatively, the Commission considers that a similar price cap is likely to be appropriate for the 2027 to 2033 regulatory control period.

The Customer Forum should ensure that its discussion with Scottish Water focuses on achievable and prudent targets for the 2021–27 period and takes appropriate account of the interests of future customers...

Implementing required price changes

Scottish Water will have between 5% and 12% more investment in the next regulatory control period.

- Scottish Water will likely find it challenging to accelerate its prioritisation and delivery of investment. It is important that Scottish Water is able to demonstrate that it is making the best possible use of the resources that are available to it.
- During the transition to higher levels of investment delivery, Scottish Water could use some of this increased capital expenditure to pursue longer term 'spend to save' projects. This is a clear benefit of the new regulatory approach of the Commission as Scottish Water could not previously have pursued longer term initiatives without the agreement of the regulator before the start of a regulatory control period.
- For example, the spend to save projects could include additional initiatives to improve operational or asset management efficiency or to target benefits that come from up-front investment such as:
  - **exploring options for debt refinancing (repaying the principal of higher interest debt and reborrowing could both extend the term of debt and reduce future interest payments to the benefit of customers);**
  - **optimising management of the PFI contracts (there may be scope to manage the contracts differently given the new flexibility available to Scottish Water); and**
  - **maximising investment in renewable energy sources across the Scottish Water asset base.**

The Commission has carefully considered how changes in charges should be phased...

- Scottish Water should be able to take advantage of these spend to save opportunities and commit any additional resources available in the early part of the next regulatory control period efficiently. The Commission's focus is therefore on the transition of charges over time.
- Analysis by ESRI suggests that, all else equal, customers prefer required increases in charges either to be phased in steadily or to be implemented quickly. They prefer not to store up any required increases for the future.
- As such, the Commission sees merit in ensuring a smooth transition in bills but also recognises that Scottish Water still has work to do to explain the challenges that it faces and how it plans to meet them.
- Looking forward, the Commission is clear that Scottish Water should be able to explain why it has chosen its preferred profile for charges and be able to explain and justify its implications both to current and to future customers.

The Commission has concluded that agreeing charges in the upper half of the range that it has allowed for is likely to be prudent...

- Scottish Water faces a real challenge to achieve net zero emissions by 2040 – however, falling short is not an option.
- Accordingly, the Commission's current expectation is that Scottish Water would want to agree an average annual price cap in the upper half of the potential range.
- This expectation also reflects:
  - **the extended asset lives advanced by Scottish Water;**
  - **the substantial uncertainties that exist about the cash cost of including emissions in appraisals; and**
  - **the very challenging efficiencies required to meet the likely cost of maintaining zero emissions.**
- For example, if Scottish Water were to increase charges at 1.0% real on average during the 2021–2027 regulatory control period but, at the end of this regulatory control period, it turns out that the annual average change should have been 2.0%, charges from 2028 would have to increase at 2.5% real each year in subsequent periods until 2040. In other words, the consequences of delaying progress towards achieving the appropriate level of funding will inevitably impact on future charges.
- Scottish Water should now seek to discuss and agree a profile of charges with the Customer Forum. In the event that an agreement is reached (and the agreement is consistent with the Objectives of the Scottish Ministers and the Commission's Decision Papers), the Commission would be minded to accept this agreement as its Draft Determination.

Conclusion

In summary, the Commission sees a need for an industry transformation to ensure that the Objectives of the Scottish Ministers are met...

- By 2027, 40% of the time available to achieve net zero emissions will have elapsed. As such, making substantial progress in this next period, and being seen to do so, will be critical given the ambition of achieving net zero emissions by 2040.
- Scottish Water should want to be more than 40% of the way towards its 2040 net zero emissions by 2027 given that the last steps towards net zero are likely to be the most difficult.
- Scottish Water requires certainty in its funding if it is to take the steps necessary to meet the Objectives of the Scottish Ministers – most particularly the requirement to transform its capabilities to implement EBP and achieve net zero emissions by 2040.
- Scottish Water would likely reassure its stakeholders if it could explain clearly how its organisation and processes will look different in 2027, how such a change contributes to the achievement of its strategic objectives and what would remain to be done to achieve net zero emissions.
- It should produce a transformation plan with annual or bi-annual updates. Such a transformation plan should set out how its organisation, procedures and practices will be different at the end of the 2021-2027 regulatory control period, clearly outlining the resources required and key milestones.
- The Commission has made the first move. It has reformed how it regulates Scottish Water precisely to give Scottish Water the opportunity to think long-term, transform its organisation and meet the challenge of net zero emissions by 2040. Scottish Water must now take clear ownership of its performance and meet the challenges that it faces.

The Commission also recognises that Scottish Water will have to prioritise its resources...

- Subject to the achievement of the Ministerial Objectives and sufficient progress being evidenced on its longer term targets, Scottish Water's charges will have to trade-off:
  - **what Scottish Water believes it can deliver;**
  - **what Scottish Water considers will build and maintain the confidence of stakeholders;**
  - **expectations of customers and communities with regard to current prices and service levels; and**
  - **expectations of customers and communities with regard to future prices and service levels.**
- Scottish Water intends to absorb the additional cash costs of emissions associated with choosing lower carbon solutions in appraisals. At this stage, it is not yet possible to say whether this intention will ultimately be fully deliverable.
- The Commission recognises that there is no robust way to estimate how significant any such cost increase may be – but were it not to allow for such additional cash costs, it may inadvertently impede progress in including emissions robustly in appraisals. The Commission therefore considers that it would be prudent to make an allowance for such additional cash costs.
- Modelling suggests that, under any scenario, Scottish Water will have to make difficult choices in prioritising its investment by the end of the next regulatory control period. In the interim, there are spend to save options that should allow customers to be reassured that their money is being used wisely.

The Commission has identified a range of CPI+1% to CPI+2% as theoretically possible. Prudency suggests that an annual average in the top half of that range is appropriate...

- Whilst the Commission considers that a range 1.0% to 2.0% above CPI inflation is theoretically possible, it believes that it would be prudent to set prices in the top half of that range. This is because of:
  - **the extended asset lives advanced by Scottish Water;**
  - **the substantial uncertainties that exist about the cash cost of including emissions in appraisals; and**
  - **the very challenging efficiencies required to meet the likely cost of maintaining zero emissions.**
- The Commission considers that it would currently be prudent to expect similar charge increases in the next Strategic Review of Charges after 2027.
- The Commission sees merit in ensuring a smooth transition in bills but also recognises that Scottish Water still has work to do to explain the challenges that it faces and how it plans to meet them.
- Looking forward, the Commission is clear that Scottish Water should be able to explain why it has chosen its preferred profile for charges and be able to explain and justify its implications both to current and to future customers. It should also be able to explain how it is making progress in ensuring that the organisation has the capacity and capability to meet the considerable challenges that lie ahead.
- Scottish Water should now seek to discuss and agree a profile of charges with the Customer Forum. In the event that an agreement is reached (and the agreement is consistent with the Objectives of the Scottish Ministers and the Commission's Decision Papers), the Commission would be minded to accept this agreement as its Draft Determination.

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February 2020