Waste not, want not – making the best use of our water

Water today, water tomorrow

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OFWAT

"Customers want an efficient, safe, reliable supply of water at a reasonable cost now and in the future and everything else is of markedly less importance"
(Deliberative research concerning consumers' priorities for PR09, 2008)

This is one of a series of occasional focus reports. It highlights the work we are doing on a particular policy area, with the aim of encouraging wider debate and discussion.

Contents

1. Safe and reliable supplies

Water is essential to life, yet most of us take it for granted. We turn on the tap and clean, fresh water is there for us. But safeguarding reliable water supplies in an uncertain future will need new thinking.

Many people view water as the definitive renewable resource. Whatever we use, it eventually returns to the environment. But it does not always return to the right places at the right time or in the right condition. Some of our wetlands are already under pressure because we take too much water from them and return too little.

New challenges will add to these pressures. A changing climate makes it uncertain how much water will be available for supply in the future. We could see more droughts like the one we had in the mid-2000s. Water demand is becoming more uncertain too, with changing weather patterns, population growth, and lifestyle and demographic shifts. The water and sewerage sectors in England and Wales will need to work in new ways to secure reliable supplies and make sure that clean, used water returns to the environment where it is needed most.

What customers want

Most water companies do not guarantee unlimited supplies for all uses under all circumstances. Their customers do not want to pay for that with much higher bills. Instead, the companies must ensure essential supplies and manage the risk of having to restrict other uses during droughts. For example, Thames Water plans on the basis that its customers should not experience a hosepipe ban more than once in every 20 years.

We expect each company to maintain reliable supplies in a way that delivers best value to its customers and the environment. They have to look at new sources of water, such as reservoirs, groundwater or bulk supplies from other water companies. They also have to look at managing leakage better and helping consumers to use water more efficiently. This is part of a twin-track approach – increasing supplies when needed, while also keeping demand down by cutting wasteful water use.

Who does what?

Most people in England and Wales receive their water from one of 21 private monopoly water companies. The Government provides the overall policy framework within which these companies operate. The Environment Agency manages water resources in England and Wales by licensing water abstractions. It makes sure that supplies are sustainable and reliable for people and businesses, while also protecting the environment. As the economic regulator, we make sure that the companies maintain reliable supplies at best value to water customers and the environment.

By 2014-15, the companies will be saving enough water to fill Wembley Stadium more than 85 times a year

What the water and sewerage sectors are delivering

In the 21 years since privatisation in 1989, 12 companies have not imposed a hosepipe ban at any time. And no individual company has had to impose a ban more than three times.

The sectors have made progress in cutting waste. Leakage was too high when we started setting targets in the mid-1990s. It has fallen 35% since then. And more than a third of household customers now have a water meter, paying for what they use and wasting less as a result.

Under the price limits we set in 2009 for the period up to April 2015, the companies will be able to maintain reliable supplies while keeping bills stable overall. They will achieve this by saving more water than they will add to supply capacity by developing new resources. By 2014-15, the companies will be saving 281 million litres a day, compared with current water use. That is more than 2% of all the water they deliver to customers, or enough to fill Wembley Stadium more than 85 times a year.

The savings will come from promoting water efficiency, reducing leakage and through the companies' planned meter installation programmes. By contrast, the companies will add only 159 million litres a day to supply capacity over the same period.

Planning for the future

Every regulated water company has to prepare a water resource management plan setting out how it intends to maintain secure supplies over a 25-year period. These plans aim to identify the best mix of actions. In their current form, they will reduce leakage by about 10% compared with 2009-10. And they assume that per capita consumption will fall by only 7% on average.

These plans already take some account of future pressures from population growth and climate change. But, as we discuss in the next chapter, we think the companies and their customers might need to do even more to save water over the long term.

In this document, we consider what more can be done to reduce leakage and promote water efficiency. We highlight some of the work that we are doing to address these issues and seek feedback on what more we can do. We also identify some questions that we need other stakeholders to consider.

2. Using water efficiently in the long term

The water companies have to update their water resource management plans periodically. There are a number of reasons why we think future plans could need more emphasis on measures to control leakage and promote water efficiency.

Protecting wetlands

The Environment Agency has identified areas where over-abstraction is causing lasting damage to the environment. So the companies may need to take less from rivers or aquifers in some water catchments.

In addition, new evidence from the UK Climate Impact Programme (UKCIP) could mean that reliable water supplies from some natural sources will be lower in the medium and long term. For example, river flows in summer may be much lower in future.

Since water is already scarce in many regions, the companies may have to focus more on saving it.

Dealing with uncertainty

The new climate change evidence from UKCIP provides more than a new set of projections for our climate. It also considers the probabilities of different outcomes for things like precipitation and temperature.

The impact of climate change has always been uncertain, but this new analysis will help the companies to understand it better. This could make a significant difference to their plans. Investing in large, new resources is risky when the scale of the problem is uncertain. The greater the uncertainty, the stronger the case for flexible solutions like leakage control and water efficiency.

Taking wider costs and benefits into account

We already expect the companies to consider wider social and environmental costs and benefits in their planning. But they can do this better and improve their understanding of these issues. In particular, there is a unique opportunity for water companies to work with the energy sector to understand how saving water in the home and elsewhere can also cut energy consumption and greenhouse gas emissions.

The companies use energy when they treat and distribute water. And, on average, 25% of the energy that people use in their homes is for heating water. So using less water, particularly hot water, can also save energy and reduce emissions.

What is at stake?

If the sectors realise the potential to manage water demand, we will benefit from lower bills, a better environment and more secure supplies.

Saving water can help us adapt to climate change and mitigate it. If we change our water use now, we could make a difference that will benefit generations to come.

If we change our water use now, we could make a difference that will benefit generations to come

Save water, cut emissions

If we all cut our water use by 20 litres a day, the companies could reduce their yearly greenhouse gas emissions by up to 8%. This is roughly equivalent to the annual emissions from 90,000 cars, or from supplying the population of Liverpool with electricity for a year. On top of that, the reduction in greenhouse gas emissions from households would be even greater – the equivalent of annual emissions from 620,000 cars, or from supplying nearly half the population of Greater London with electricity for a year.

3. Waste not, want not: the issues

We want the sectors to secure our future water supplies, while keeping customers' bills and environmental damage to a minimum. To achieve this, we must use water and other resources wisely. That means minimising waste, as well as taking water from – and returning it to – the environment at the right place and the right time.

Some areas enjoy a surplus of water, while others face future shortages. Where transport and carbon costs are sufficiently low, transferring water between areas is a good way to maintain secure supplies. Our report, 'Harnessing upstream water markets – what's to play for?' (March 2010), highlighted opportunities to redistribute water in this way, and explained how markets could help to encourage that redistribution.

This chapter focuses on what the companies can do to control leakage and to encourage consumers to use water wisely. We describe our approach to these issues, and how we can build on it for the future with help from others.

Efficient leakage control

Stopping leakage is difficult and costly. Even if it were physically possible, stopping it altogether would mean much higher bills for customers (see page 10). It would also mean higher social and environmental costs from materials, energy and traffic disruption, with all the associated carbon costs.

On the other hand, leakage is wasteful if it is cheaper and better for the environment to reduce it than to collect and treat more water. The companies had allowed leakage to rise to wasteful levels before we began to set targets in the mid-1990s. It has fallen by more than a third since then, driven by close regulation. Between 1994-95 and 2008-09, total daily leakage in England and Wales fell by more than 1.8 billion litres, or 12% of the water that the companies put into the distribution network.

We set targets for each company to make sure that leakage is neither wastefully high nor wastefully low. They have to compare the costs of reducing leakage with the costs of other measures to secure reliable supplies, taking into account wider social and environmental issues. The balance of costs can change over time, and leakage targets should change with them. We have set annual targets reflecting the companies' long-term plans to provide reliable supplies. They are an important discipline, and companies must meet them.

But the ultimate goal is to make sure that the companies deliver reliable supplies at best value. This is the context within which we monitor their performance in controlling leakage.

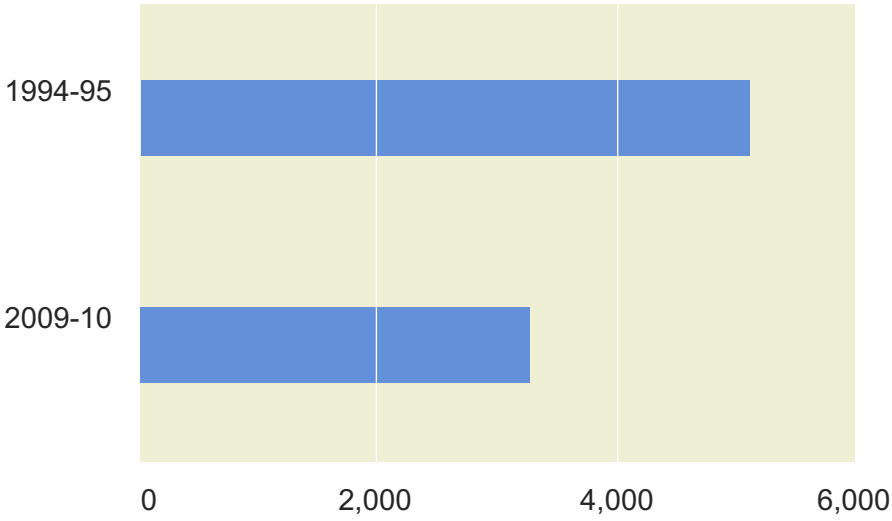
In any given year, factors outside of the companies' control will affect their ability to meet leakage targets. In 2000-01, for example, they had to deal with the effects of flooding, a foot and mouth outbreak, a cold winter and a fuel crisis. Similarly, in

2009-10 they experienced the most severe winter since 1978-79.

When the companies fail their targets, we consider these wider circumstances and how effectively they have maintained reliable supplies before we decide what action to take.

Between 1994 and 2009, total daily leakage in England and Wales fell by more than 1.8 billion litres, or 12% of the water that the companies put into the distribution network

Total water leakage in England and Wales (millions of litres per day)



Dealing with failure

In 2006, Thames Water had failed its leakage target for three successive years. The company was in our lowest category for performance in maintaining reliable supplies. As a result, we required it to complete its planned programme of replacing 1,235 km of mains sooner than its 2010 deadline. We also required it to replace an additional 368 km of mains at shareholders' expense. The company committed to spend an extra £150 million to achieve this, which was more than double the maximum possible fine that we could have imposed at the time.

Stopping all the leaks

The water distribution network in England and Wales includes some 340,000 km of underground pipes. Laid end to end, they could circle the equator eight and a half times. Natural pressures on these pipes and their joints can cause leaks, for example when the ground freezes and thaws. Water flowing through the pipes also exerts pressure on the joints, causing countless weeps and seeps.

Using current technology, it would cost the companies about £100 billion to replace all of their existing pipe networks and every customer's supply pipe. This compares with about £8 billion that the companies have invested in their water networks over the past 20 years. The disruption caused by digging up public roads and private land across England and Wales would add a significant cost to the economy, and increased carbon emissions would harm the environment. But all that effort would be unlikely to reduce leakage by more than half because even new pipes begin to leak soon after they have been installed.

If the companies were to try to prevent all leakage, they would have to use much more expensive technology. For example, they might have to use specialised steel pipes instead of plastic ones. This would increase the cost of materials. It would also require more expensive installation processes. Total costs, and the impact on customers' bills, would be several times higher.

Future leakage targets

The principles that underpin our broad approach to leakage targets are sound. But in the increasingly uncertain future that we all face, we want to seek ever better ways for the sectors to deliver the best outcomes for consumers and the environment over the long term.

We have already refined and improved our approach in recent years. For example, we require the companies to take account of social, environmental and carbon costs when they assess the appropriate level of leakage, and we have published guidance to help them do that. Yet there is more work to do.

The charges that the companies pay to the Environment Agency to take water out of the environment are currently based on the costs of administering the Agency's abstraction scheme. They do not reflect the underlying value that the water would have in other uses, or if it were left in the natural environment.

If abstraction charges reflected this value of water more closely, the companies would have a more reliable basis for comparing the costs of leakage control with the costs of schemes to develop new water resources. We could then be more confident that leakage targets were delivering the best outcomes for consumers and the environment.

We are working with the Environment Agency to understand what the value of water means, and what mechanisms could reveal it. This might include new ways of charging to reflect the different value of water in different locations at different times. And it might involve markets in which willing traders reveal the value of water.

Work to control leakage should form part of a best value plan to maintain reliable supplies to consumers. That means that the companies have to make an unbiased comparison between leakage control and other options to maintain reliable supplies. We started to set leakage targets in the mid-1990s because companies were not taking a balanced approach. Leakage was too high. The sectors have made dramatic progress since then, cutting leakage by more than a third. But it remains a constant challenge for us and the Environment Agency to make sure that the companies strike the right balance. We can deal with this in three ways.

We can:

- continue to improve the guidance for the companies' water resource management plans;

- reveal the value of water to make sure companies get the right balance between leakage control and other options to maintain reliable supplies; and

- try to remove any incentives for bias.

On page 16, we describe our work to improve incentives.

Once we have set leakage targets, we also need to monitor and police them to maximise their benefits to consumers and the environment. We already take a rigorous approach to this. For the future, we want to consider whether we can improve that approach, retaining its rigour but encouraging the companies to respond more flexibly to changing circumstances. For example, the companies might need to cut leakage by more than usual following a dry winter when water resources are lower than normal. One option would be for us to revise our approach to annual targets – and the three-year rolling average – so that companies can adapt faster as changing conditions affect their ability to maintain reliable supplies.

What role is there for consumers?

There are good reasons to think that we can use less water than we do now

Most consumers have a responsible attitude to water, particularly in times of drought. But there is plenty of scope for us all to use water more wisely. In England and Wales each of us currently uses about 150 litres of water a day on average. Countries such as Germany, Austria and the Netherlands use fewer than 130 litres per person each day. Such comparisons can be misleading, but still indicate what we might be able to achieve.

We cannot say what the right level of per capita consumption would be in England and Wales, but there are good reasons to think that we should use less than we do now. In principle, we should use water when it gives us at least as much benefit as it costs to supply, including wider social and environmental costs. When the benefit we get is less than the wider cost of supply, we are wasting a precious resource. As consumers, we can only make these judgements if we are fully informed about the wider cost of water, and about how we can save it. We are simply not in that position yet.

Metering and charging

Metered charging rewards customers for using water wisely, and it is widely perceived as the fairest form of charging. Households usually use less water when they have a meter. More importantly, if they use less hot water they will also save energy and carbon, making two bill savings.

Metering is increasing steadily. We are considering the case for it to increase faster to secure these benefits sooner. But metering more quickly means incurring the costs sooner, and it increases bills significantly for some customers. So, we are reviewing how best to manage the transition to metering, as Anna Walker recommended in her independent review of charging for household water and sewerage services.

With help from stakeholders, we are also considering whether smarter meters will bring greater benefits to justify their higher cost. They could provide better information to consumers and the companies about water usage, helping to reduce waste. The energy sector will be installing smart meters in every home by 2020, perhaps sooner. These meters will send information to companies and consumers through a new communications network. This could present an excellent opportunity for the water companies to share this new network, bringing benefits to consumers in both sectors.

Most metered households in England and Wales pay a fixed charge and a volume-related charge for their water. We are reviewing approaches to charging to see if the companies could use different charging arrangements to send better signals about the real cost of water supply. The work we are doing with the Environment Agency to reveal the value of water will be relevant to this.

Whatever the outcome of all this work, we think that there is a need for the Government to review the legal framework for metering. More and more households will have a water meter in the future. The challenge is to manage the transition to more widespread metering in a way that maximises the benefits and minimises the costs. We may well need new legal tools if we are to achieve this, for example, increasing the scope for the companies to meter their customers.

Why bother if it is free?

By the end of 2009-10, 63% of households in England and Wales did not have a water meter. These households pay a fixed annual fee for their water, in most cases related to the rateable value of their property. This provides individual consumers with no incentive to use water wisely. Unmetered households pay the same for their water however much they use. Each additional unit is free. Imagine if motorists paid a fixed annual fee for their fuel. They would make more journeys and drive less economically. Roads would become more congested and manufacturers would sell fewer fuel-efficient vehicles. Flat rate charges result in a waste of valuble resources.

Improving incentives for water companies

Whatever charging arrangements companies adopt, the price signals they send will be ineffective if consumers are unaware of, or do not care about, their water use and their bills. Research suggests that even metered customers are often unaware of what they pay for their water or how much they use.

Until recently, the companies had no financial incentive to encourage metered customers to cut use. When consumers use less water, the companies usually save only the operating costs of producing and delivering it. Yet metered charges cover fixed costs as well, so the revenue that companies lost was usually greater than the costs they saved. Selling less water was bad business for companies.

We have introduced a revenue correction mechanism to address this issue. It compensates the companies when they receive less revenue over a five-year period than we assumed when we set price limits, but it allows them to keep any cost savings. In the interests of fairness, the mechanism is symmetrical. If companies sell more water, they have to return the extra money to customers and we do not compensate them for the extra costs they incur. As a result, the companies now have an incentive to encourage consumers to use less water.

As part of our review of the way that we set price limits (our future price limits project), we will consider the incentives that the companies face when they choose between different ways of delivering services to consumers.

We want to establish a genuinely level playing field. So, there should be no reason for bias as companies choose between developing new resources, redistributing existing resources, controlling leakage and helping consumers save water.

Our review will also consider incentives for the companies to become continuously more efficient. We want to maximise incentives for them to achieve this overall, and to make sure that those incentives are not skewed towards particular activities.

One common concern is that the current framework focuses too much on saving operating costs (including water efficiency and some leakage control activities). At the same time, there is a view that it encourages the companies to invest excessively in capital assets like reservoirs. Another concern is that there is too little reward for innovation.

We are exploring these issues and seeking input from other stakeholders to help us resolve them. If you want to contribute to that debate, you can find more information on the future price limits pages on our website.

The Walker review

In August 2008, the Government asked Anna Walker to carry out a review of household water and sewerage charges. The review examined the effectiveness and fairness of current and alternative methods of charging, and considered social, economic and environmental concerns in relation to charging. It also looked at the issues of debt and affordability. The Walker review published its final report in December 2009 and the Government will now consider how to implement its recommendations. We are also taking forward some of the recommendations through our future water charging project.

Helping consumers to save water

We have set targets for the companies for the work they must do to help consumers save water. The targets are made up of four elements.

- An annual target for each company to save at least one litre of water per property a day, on average, by promoting water efficiency.
- A requirement to provide information to consumers on how to use water more wisely.
- A requirement that each company actively improves the evidence base for water efficiency.
- An additional company-specific target to promote water efficiency as part of a best value solution to securing reliable supplies.

One of the most important aspects of the targets is that they will help to build an evidence base showing how effective water efficiency measures are in reducing water use. The companies have often been reluctant to invest in activities to help consumers save water because the benefit from such activities has been uncertain. Waterwise, an independent body and leading authority on water efficiency, collates information from the companies' water efficiency activity into an evidence base. The more comprehensive the evidence, the more powerful this will be as a decision-making tool. It will help to give the companies confidence in the benefit from water efficiency activity. It will also help them to identify the most effective forms of activity. We support this initiative financially and are a member of the steering group for the project.

We want to explore how we and others can join up policy to promote efficiency in both water and energy use

The water efficiency targets we have set are an important step forward, but they are just that – a step on a journey. We need to look much more closely at what we can achieve, particularly from the connection between water and energy efficiency. When consumers save hot water, they save both water and energy, and they reduce greenhouse gas emissions. That is good for the environment, and it is a dual benefit for customers' bills.

This overlap between water and energy presents opportunities for water and energy companies to work together, and we want to find ways to encourage them to do that. For example, energy suppliers will provide every household in the United Kingdom with information about energy efficiency as part of the roll-out of smart energy meters in the period up to 2020. This presents an excellent opportunity to provide water efficiency information at the same time.

More generally, we want to explore how we and others can join up policy to promote efficiency in both water and energy use. There are a range of schemes to promote energy efficiency in homes, while

we have introduced water efficiency targets for the water and sewerage sectors.

We need to improve water and energy efficiency in new and existing homes and businesses across the country. As new homes become more efficient at using energy to power appliances and heat spaces, the energy they use to heat water will take a bigger share of total energy use. According to the Energy Saving Trust and the Environment Agency, it could rise from about a quarter to more like three-quarters of the total. So, there are good reasons to think that such policies could yield benefits for all. But this will need joined-up thinking over the next few years from regulators, regulated companies and Government policy makers.

Mandating change

There are two approaches to becoming more water efficient. One is to encourage and incentivise consumers to change their water use. The other is to require more efficient water fittings and appliances. We do not have to choose between these approaches. We can pursue them both.

Much of the discussion in this document is about encouraging consumers to change. There are powerful social arguments for favouring an approach that supports consumer choice. But there is still a role for mandating changes to water fittings, as long as they do not limit personal freedom unduly. For example, regulations have limited toilets to a six-litre flush when 7.5 litres used to be normal. Measures of this kind have little, if any, bearing on consumers' experience, so they have no material impact on personal freedoms. Yet they can make a valuable contribution to using water wisely.

Policy makers will have to decide whether to do more to mandate changes that will help us become more water efficient.

4. Next steps

We want secure water supplies for this and future generations. To achieve this, we will need to contain the demands we place on our water resources. The companies will need to control leakage and get better at doing this. They will also need to send clear price signals, and engage actively with consumers to help them use water wisely. Only then will they be able to maintain secure supplies, while keeping customers' bills and environmental damage to a minimum.

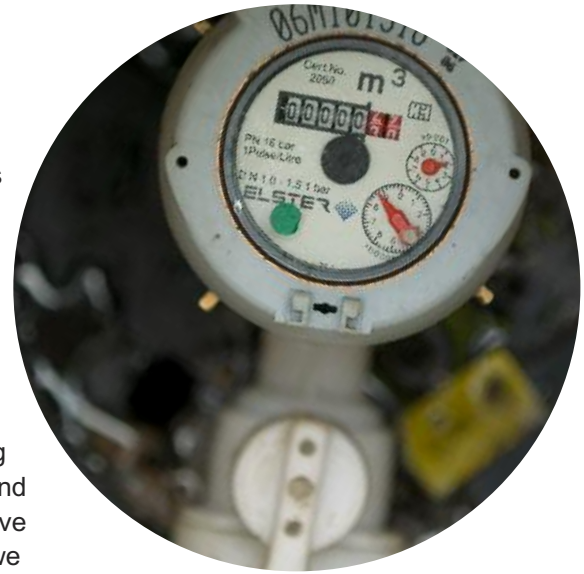
We think that the companies will need to do more in future to reduce leakage and to encourage consumers to use water wisely. In this chapter, we describe some of the issues we are exploring, and we identify some of the questions that we and others will need to address.

Wider work

- We will continue our work with the Environment Agency to reveal the value of water. This will help the companies to understand better the true relative costs of different options to secure reliable supplies. This work could also help the companies to send better price signals, encouraging consumers to use water wisely. This will present challenges as well as opportunities. We want consumers to make sensible decisions about their water use, but we also want water to remain affordable. We will need to find a way to reconcile these objectives.

- As part of our future price limits project, we will review the package of incentives that influence the companies' behaviour. This will tackle a number of questions. Is there a bias towards capital expenditure? If so, what causes it and how can we solve it? What barriers to innovation currently exist? How can we encourage the companies to innovate in ways most likely to generate benefits for consumers? We will review our approach to incentives, making sure that the regulatory framework supports innovation and encourages companies to select best-value solutions. We will publish a focus report on this issue shortly.

Developing our approach to leakage



- We need to do all that we can to make sure that the companies have incentives to improve leakage control processes and technology.
- Working with the Environment Agency, we will review the quality of the companies' efforts to assess environmental and social costs and benefits, and look for ways to improve this.
- We want to consider whether a different approach to monitoring leakage performance could encourage the companies to respond more flexibly to changing circumstances. Any change would have to deliver greater benefits without losing any of the rigour that we currently apply.

Developing our approach to metering, charging and water efficiency

There is a whole range of issues to address around the transition to more water metering. We will cover them in greater detail in a future focus report, but we touch on some of them below.

- We will strengthen the framework for assessing the costs and benefits of accelerated metering, and carry out our own high-level assessment. We will work with Defra to consider what changes to legislation could enable more comprehensive and coherent approaches to metering when in customers' long-term interests.
- There is a pressing need to improve the evidence base on the effectiveness of metering, and complementary measures, in managing demand. We will work with Southern Water to gather meaningful data on demand responses as it meters most of its customers over the period 2010-15. And we will explore with the Environment Agency how we can learn more from the tariff trials that some companies are already conducting.
- We will consider the case for more intelligent water meters. Smarter meters bring benefits, including lower operating costs, greater charging flexibility and better information for consumers, but they are more expensive to manufacture. With the help of the smart metering group that we

have established, we will review the case for smart metering in water. This is a complex area with limited evidence, and we will need insights from both the energy sector and other stakeholders and experts.

- We think that there is substantial scope for the water and energy companies to work together. We are already working with Ofgem to see how the sectors might share infrastructure to support smart meter networks. We also see potentially significant benefits from combining advice about water and energy efficiency.

- If the companies are to succeed in helping consumers change their water use, they will need to communicate effectively, recognising consumers' needs and preferences. Much of this work is for the companies to do themselves. However, as a regulator, we also need to understand consumers' needs and preferences so that we can encourage the right kinds of behaviour from the companies. This will inform the work we are doing to improve incentives.

- We will review the companies' progress with the new water efficiency targets that we have set, and support the evidence base on water efficiency that they are building. We will work with them, Waterwise and other stakeholders to consider how to improve targets and incentives for the companies to promote efficient use of water by consumers.

- The Government can require manufacturers and housing developers to make water-using devices more efficient. It already does this, but will need to decide whether to do more in the future.

You can help

We recognise that this is a long list of issues. Yet it is by no means comprehensive. We do not expect to find answers to all of these issues on our own. If you have any suggestions after reading this document, we would welcome your ideas. Please send any comments to waste.not@ofwat.gsi.gov.uk.

5. Further information

Water resource planning

'Water resources planning guideline', Environment Agency, November 2008.

'The economics of balancing supply and demand', UKWIR, June 2002.

Leakage

'Review of leakage target setting', RD 16/08, Ofwat, August 2008.

The Walker review and our responses

'The independent review of charging for household water and sewerage services: Final report', Department for Environment, Food and Rural Affairs, December 2009.

'Ofwat's response to the independent review of charging for household water and sewerage services' (response to the interim Walker report), Ofwat, October 2009.

'Ofwat's response to the Walker review call for evidence', Ofwat, February 2009.

Price review information

'Future water and sewerage charges 2010-15: Final determinations', Ofwat, November 2009.

'Deliberative research concerning consumers' priorities for PR09', Water industry stakeholder steering group, 2008.

'Water supply and demand policy', PR09/20, Ofwat, December 2008.

Water and energy

'Quantifying the energy and carbon effects of water saving: Summary report', Environment Agency and Energy Saving Trust, 2009.

Water efficiency

'Water efficiency and the water companies: A 2010 UK review', Waterwise, March 2010.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We are responsible for making sure that the water and sewerage sectors in England and Wales provide consumers with a good quality and efficient service at a fair price.

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