MAY 2016

THE WATER REPORT

POLICY | REGULATION | COMPETITION

There is integrity and value in both the South West and Bournemouth brands.
- Chris Loughlin, CEO, Pennon Group

Grow West

Integration fuels Pennon's drive for growth

The more we look, the more we see parallels and opportunities
- Stephen Bird, MD, South West Water

COMPETITION WATCH

- CMOS in action.
- Retail strategy: compete or exit but don't wait and see.
- Household market: prospects for cross subsidies to unravel.
- Policy update: licence changes, self supply, customer protection.

THE WATER REPORT COMPETITION WATCH

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Publisher: Kew Place Limited

EDITOR'S COMMENT

Cake and eat it?

What might we expect from Water 2020 on 25th?

Big surprises seem unlikely. Ofwat consulted extensively before publishing its December paper, so unless any genuinely new evidence has come to light, there is no real reason to expect a fundamental shift. And ideologically, Ofwat is committed to market solutions, tougher efficiencies and more choice.

This is a legitimate stance. The question is, can Ofwat have its cake and eat it? Can it maintain the industry's attractiveness to investors while delivering more competition, dynamic efficiencies and, potentially, lower returns? It seems very unlikely that the industry's historic investment proposition will remain unchanged.

In terms of the specifics, the policy proposals around customer engagement have found widespread and sometimes enthusiastic support. And more clarity on CCG arrangements is pretty much universally welcome.

On the CPI transition issue, many investors have been genuinely frustrated and are understood to be in discussions up to the wire. There is very little prospect of the regulator abandoning its plan to move away from an index it says is widely considered defunct. So the discussions will be about timing, mitigation measures and transition. Ofwat has responded to calls for model sharing on cost and value neutrality. Has it done enough to maintain investor confidence?

There has been little vocal opposition to the new sludge and water resources markets proposed. But there has been little overt enthusiasm either. Clearly the treatment of the RCV is the main sticking point. To generalise, a sludge market seems to have more support than a market for water resources, though even here some fundamental questions have been posed. Do water companies actually have spare sludge capacity they could exploit in a competitive environment? How exactly would regulatory arrangements for sludge work?

All the signposting points to a reasonably hard PR19 for companies – with tough efficiencies and a tough cost of capital. The other thing to look out for is the delivery model Ofwat opts for. Its partnership with PWC for PR14 got it out of a hole and seemed to run smoothly but must have been expensive. With the role of chief regulation officer now gone, the load for PR19 could be spread out more within the top team. Exactly how external support is structured in light of this – and potentially in light of closer working with other regulators – remains to be seen.

Karma Ockenden, editor,
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Feedback, comments and suggestions very welcome.

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GROW WEST

Acquiring Bournemouth Water is just the start of a growth agenda at a refreshed and more integrated Pennon Group. An interview with Chris Loughlin and Stephen Bird.

One year in to AMP6 and South West Water is really feeling the benefit of achieving enhanced status at PR14. Chris Loughlin, its former chief executive and now chief executive of parent company Pennon Group, said at the time that while the financial reward that came with fast tracking was welcome, it was the process reward – being able to get on with business – that was the real prize. He says now: "Having been through the process and the first year, that is actually even more important than I thought."

Firstly, enhancement enabled South West Water to get an early start on planning the delivery of its 2015-20 business plan. Loughlin, who has also this month joined the board of British Water, explains: "It was our business plan that we had researched with our customers, so we were there implementing from a very early stage while our friends and colleagues were still discussing and modifying their business plans with Ofwat. For example, bringing forward a £22m investment to make sure we were ready for the new bathing water standards was possible because we had the plan approved six to nine months earlier than the rest of the industry."

But enhancement has also given the company time for matters beyond business as usual. South West Water managing director Stephen Bird picks up the theme: "The integration of Bournemouth Water has gone smoothly because we had time to think and plan and do the analysis and engage the workforce and then deliver what was their solution as well as our solution. We wouldn't have had that luxury if we'd still been busy on the final knockings of our business plan which many people were. So it gave us the first mover advantage in relation to consolidation.

"We've also spent quite a lot of time preparing for market opening. We've had a data cleanse, and a team set up for a while now both on the wholesale side and the retail side. You'll find on the last MOSL heat map, we are where we wanted to be [in terms of readiness]. It wouldn't surprise me if some companies are struggling to catch up if they were embroiled in finalising their final business plans rather than working on market opening."

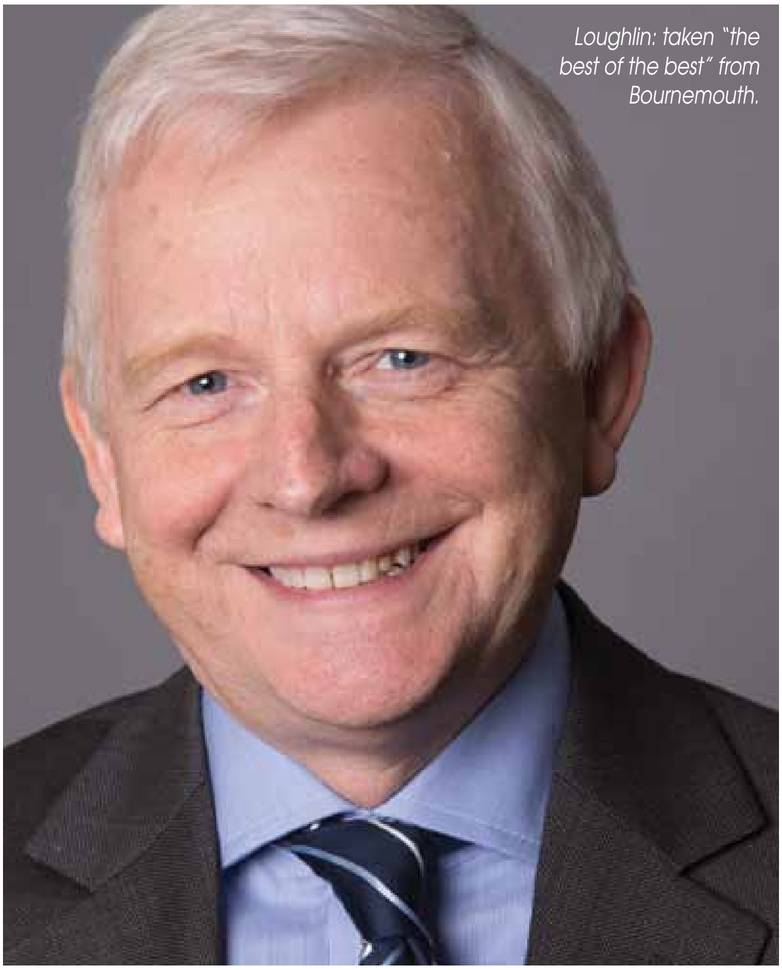
Bournemouth integration

As Bird indicates, South West Water is no longer the company it was at PR14. It has successfully acquired Bournemouth Water: clearing a CMA referral cleanly and, since 1 April, merging the companies under a single licence and completing the first phase of integration on time. The Bournemouth Water name is being retained and the merged company will deliver the separate South West Water and Bournemouth Water 2015-20 business plans.

Pennon had twin motives in pursuing the purchase: a desire to grow its regulatory capital value (RCV) and to pursue frontier performance, through both efficiency savings and drawing on each company's strengths. Bournemouth is renowned for being strong on service, for instance, and is consistently near the top of the SIM league.

Back office and support systems have now been centralised, which has enabled Bournemouth's back office staff to be reduced by around a quarter. The company has taken care not to make the integration all South West win and Bournemouth lose though – for instance, it has opted to locate its combined non household (NHH) retail operation in Bournemouth not Exeter, and for Bournemouth's retail director Richard Stanbrook to head it up. More broadly it has offered new roles across the merged business to those Bournemouth people Loughlin describes as "the best of the best". Managing director Bob Taylor, for instance, is now South West Water's drinking water operations director.

Loughlin comments: "Ironically the CMA process caused us to have more time to plan and time to implement." Bird explains there were multiple workshops for both companies to plan how best to handle things, and comprehensive staff communications. "People knew what was going to happen, what the processes were, what their opportunities were, where they could get independent advice if they wanted to. It all went pretty smoothly. The key thing for me was there when no compulsory redundancies. We've compensated some people for loss of office and have given them opportunities elsewhere. I think it was important when we went through that process that it wasn't about everything com-



Loughlin: taken "the best of the best" from Bournemouth.

Bird: "The more we look, the more we see parallels and opportunities (between water and waste)."

ing to Exeter." Indeed, Pennon's first board meeting after the merger was held in Bournemouth.

In terms of bringing the two company licences together, Loughlin says the process was smooth in the round. As well as dealing with the merger, Ofwat took the opportunity (as it commonly does when there is a corporate event) to simplify South West's licence, including updating its ring fencing conditions. In addition, the regulator took a couple of additional actions that other companies will likely need to look at in due course: a requirement in the licence in relation to its board leadership, transparency and governance principles (companies have met these principles on a voluntary basis since 1 April 2015); and securing a pledge from South West to become an early adopter of a new modular licence.

The company was content with both. Loughlin says on the first point: "It's entirely the right direction. It's about focusing the business on customer priorities and asking the board to take leadership for delivering that." Likewise, Bird sees sense in modular licences. He explains: "When you have four revenue controls, or six revenue controls if water resources and sludge are being carved out, I think you have to accept they are different businesses. Network businesses are very different from production businesses and retail businesses and so on… To my mind, a one size fits all as you begin to regulate the industry differently, it just doesn't work. Therefore, why would you have just one licence in those circumstances?"

Corporate strategy

In many ways, the pursuit of both cost efficiencies and growth evident in the Bournemouth acquisition is writ large in Pennon Group's new corporate strategy. The company, under chairman Sir John Parker who took over from long standing chairman Ken Harvey in August 2015, is seeking to exploit the synergies and opportunities arising from owning both a water and a waste business more directly going forward. Hitherto, South West Water and waste arm Viridor have been run largely as separate entities.

The new idea is two-fold: to seek efficiencies through synergies, and to take a strategic approach to the pursuit of growth in UK water and waste markets.

Water and waste synergies are expected to come in many forms, including:

- **Service sharing:** HR, IT and procurement are among the back office functions that will join finance in working across the business.

- **Hedging:** South West's energy purchasing activity will be used to derisk Viridor's energy recovery business.

- **Best practice:** the two operations have a lot in common. They are both asset intensive and operate under regulatory regimes. There are cross overs in many specific areas of activity too, including asset management, construction, planning, technology, logistics, maintenance, training and supply chain. Bird comments: "The more we look, the more we see parallels and opportunities." He adds that with Viridor now over the build phase for many of its assets (it has eight new energy recovery facilities on stream, with a further three in the pipeline), its risk has diminished. "You can argue that our risk profiles are more and more similar now."

Any cost or financing efficiencies found through greater integration will support activities within each individual business. South West Water itself has significant total expenditure efficiency savings to find over AMP6 (2.5% per annum operational expenditure efficiency and 5.5% capital expenditure efficiency over the period). Key themes for cost efficiency in the water business remain innovation, partnership working and the use of new technology. Projects such as the new water treatment works planned for North Plymouth, in harnessing cutting-edge technology, will generate significant savings in ongoing operational costs (see box). Long term reductions in operational treatment costs, as well as the more immediate environmental benefits, are also an important feature of South West Water's Upstream Thinking and Downstream Thinking projects (see feature page 14-16).

But the move towards integration within Pennon is driven as much by a desire for growth as a desire to save on cost. There is clearly appetite for further acquisitions of the Bournemouth type, should conditions be conducive. In addition, new and developing markets may offer opportunity. Bird says: "That's why it's important to have someone like Chris looking strategically. Looking at opportunities for growth, there will be choices to make and those choices will get more complex as the industry starts to disintegrate around retail separation, for example, and around wholesale in terms of sludge particularly. The more complex the choices, the more focus you need on the strategy."

Pennon Water Services

As part of its recent restructure, Pennon set up a new standalone legal entity, Pennon Water Services (PWS). This combines the NHH operations of South West Water and Bournemouth Water.

MAYFLOWER WTW – A NEW WORLD

Following a successful 18 month trial at a small scale research facility located at its Crownhill water treatment works in Plymouth, in March South West Water started construction of an innovative new plant to replace Crownhill. According to David Metcalfe, senior process scientist, the move is "iconic" and could prove revolutionary for water treatment.

The plant will use a brand new technology for the UK, which has been pioneered and tested by Dutch firm PWN Technologies and refined during South West Water's testing phase: ion exchange and ceramic microfiltration technology (with coagulant added to slow membrane fouling). It is the ceramic membranes that Metcalfe describes as "game changing technology" – more efficient and effective, able to cope with higher flux, and providing an "absolute barrier" to the likes of cryptosporidium. "Ceramic membranes are an up and coming force in water treatment," he explains.

The technology represents a move away from traditional chemical and energy-intensive treatment processes. Metcalfe points out there are a number of additional benefits too, including: lower cost; less than half the quantity of byproduct produced; a compact footprint; and the potential for ever more automation.

With a £60m price tag, the recently named Mayflower water treatment works in North Plymouth will be the single largest AMP6 project the company is undertaking. Modernising the old Crownhill plant would have been prohibitively expensive and logistically difficult due to the shortage of space on site. Build of Mayflower is due for completion at the end of September 2018, with operation expected by the end of that year.

In the meantime, Metcalfe has despatched the pilot plant to test the water in Cornwall where another treatment works is in need of refurbishment or replacement. It is early days for that pilot but Metcalfe says it is "going so well we are probably going to build membranes there".

The merged company plans to stage a technical exit to Pennon Water Services. Loughlin: "We have been very clear from the get-go to create a separate legal entity. That was the right thing to do for issues like level playing field and culture, giving our people the best chance to acclimatise. Bird adds it was important to move quickly on separation "to practice in shadow form, as well as in terms of data interface, systems interface, dealing with queries etc".

As Loughlin indicates, the two companies have a number of brands in the business space. South West Water set up Source for Business in 2011 to offer billing, account management and technical and engineering support services to businesses of all sizes and sectors in and out of area. Bournemouth has two non-regulated businesses: Aquacare, providing water hygiene and treatment services; and Avon Valley Water, providing water retail and private network services to industrial customers under its own Water Supply Licence.

Loughlin explains research among business customers has shown there is "integrity and value" in both the South West and Bournemouth brands. Consequently, PWS will effectively be the holding company and retail services will trade as South West Water Business Services and Bournemouth Water Business Services. The other brands – Source for Business, Aquacare and Avon Valley – will also remain and be placed in the PWS stable. Bird says: "I imagine once everything has settled down [after market opening] the separate entity will do a bit of a brand refresh."

Like most companies, retaining existing customers is a top priority, but there is also a growth agenda in certain segments. Chiefly, Pennon is planning to use the national footprint and order book of Viridor to explore opportunities for its NHH retail arm. It is already doing so in Scotland. The hope is Viridor relationships will give PWS an edge other incumbents do not have.

In terms of segments, given the Viridor link and other activities such as flooding and resilience work, Bird says the public sector is a natural target. On top of that: "We are very knowledgeable about tourism – hotels, caravan parks. With the bathing water challenges we've delivered over the years through wholesale, we are very tuned in to their needs."

More generally, the company has extensive experience serving the SME market. Bird elaborates: "Being responsive and understanding the needs of those businesses and the demographic is important…It's a very different interaction and market opportunity than some other parts of the country. So we always need to be responsive. We've got a responsibility to the regional economy to do that. Our regional economic strength lies in SMEs and opportunities live in growing those."

In due course this strategy could have additional benefits. Says Bird: "You might argue that because SMEs are small in scale, a lot of then used to be domestic customers. There are a number of reasons why we have to retain that strong retail relationship in our patch; household retail could be a reality post 2020."

2015-16 performance

Aside from a strategic refresh, buying a company, restructuring and exploring new markets, Pennon does of course have business as usual to deal with as well. At South West Water, this means delivery of its (and now Bournemouth's) business plan. In year one, the company performed well against key metrics including on totex, Outcome Delivery Incentives and SIM. Loughlin cites sterling performance in a whole range of areas, including drinking water quality, leakage, customer satisfaction and value for money. South West Water committed to outperformance sharing in period with customers through the groundbreaking WaterShare mechanism it designed at PR14, and will publish details of its year one decisions later this year.

Breaking the company's performance down a little more, Bird says there has been good progress on the clean water side, though there have been challenges around interruption to supply following a complex burst. There have been "spectacular" results on bathing waters, after the company opted to accelerate a £20m investment "to make sure we were ready for the bathing water season, with the new directive". Flooding has been challenging inherently and in SIM terms, though Bird is pleased with the increasingly integrated nature of some of the solutions that the company is delivering in partnership with others, particularly the Environment Agency. He explains: "While the particular metrics are not where I'd like to be, the partnership approach around resilience and flooding… the way we are working together is good…There's a nervousness that we are not always completely aligned in the ways we are trying to resolve complex flooding problems. Invariably, customers don't know what has caused a problem….what you don't want to do is not address the customer's issues."

Water 2020

With Ofwat's next paper on Water 2020 imminent, Loughlin and Bird offer some thoughts. The Pennon chief, firstly, embraces the need for change: "No one is saying it [the industry] should be preserved in aspic and no one should change anything. The world changes, the drivers on us change, the expectations of society or communities change…we just have to maintain investor confidence going through." Of this he believes Ofwat is mindful and he says it has done a good job on consultation: "It is great credit to Ofwat over the last couple of years and certainly the last year strongly – they have tried to engage with all the stakeholders and particularly the City and investors – debt and equity – as much as they possibly can. And I think it's been listening rather than telling."

Of the two issues that have most exercised the City – the RPI to CPI transition and segmentation of the RCV – Loughlin is most concerned by the latter. He has cautionary words: "What investors in the main are interested in is the water sector as a defensive stock, which is predictable and understandable. There's a regulatory regime which is mature and predictable going forward …it tends to have a characteristic of being asset backed and RPI backed. With some of the proposals being suggested at the moment…the cake is getting smaller." He adds: "How you calculate the RCV that comes out, the basis on which it comes out, and the potential to strand assets could obviously undermine investor confidence."

On the two markets that RCV will potentially be segmented to support, Bird says sludge has been "well telegraphed" though there are still outstanding issues including "the logistics about how far you can transport sludge before it makes no sense to transport it". On water resources, he says it is absolutely critical that "market mechanisms have to be right so we get the right outcomes and we don't have any unintended consequences". He observes: "Having workable, deliverable tradable abstraction licences and an abstraction incentive mechanism are all part of the package and they all have to work. Nobody will thank us if security of supply becomes a challenge in five, ten or 15 years time – if we get the metrics wrong or get the mechanism wrong and we can't attract the necessary investment for regional grid enforcement, transfers or whatever." South West Water has a surplus forecast in its water resources plan, along with 80% meter penetration and one of the lowest per capita consumption rates in the industry. It no doubt spies opportunity in a water resource market. Bird comments: "We can be part of the solution, particularly in terms of the acute challenges in the south and east of the country."

On CPI, the company is sanguine. It accepts the government's line that RPI is flawed – "you can't argue with that logic," says Loughlin. And perhaps because it sits within Ofwat's notional company boundaries, it feels well positioned to manage the transition. Bird: "We've always been careful to stay within the notional company and that's been a strategic decision for as long as I can remember. On RPI and CPI and transitioning, it's important to recognise Ofwat has to regulate the industry as a whole, and they set those guidelines for a good reason in terms of expecting capacity within the investment community.

"We've done our 25 year look forward… nobody is suggesting the need for investment is going to stop any time soon, whether it's resilience related, whether it's higher customer expectations related, whether its next cycle of the Water Framework Directive or the Drinking Water Directive etc. Companies take strategic decisions on where they are in relation to that notional company. Ofwat made that observation and I think as a regulator that's not an unreasonable observation to make."

Certainty and pace

Aside from kid gloves handling of the RCV, South West Water would like to see more clarity on the medium to long term position when Ofwat publishes its Water 2020 paper at the end of the month. Bird says: "We'd welcome more clarity on the post 2025 position, whether it's a prescribed formula or a series of principles and assurances, because investors are in it for the long-term . Giving our investors the confidence that beyond 2025 there's not some erosion of their position is key."

In common with many in the sector, it would also like absolute visibility on how Ofwat's CPI value neutrality promise will work in practice. And finally, it would like to see change proceeding at a considered pace, with learnings from each reform absorbed before the next thing is embarked upon.

Bird summarises: "This is the biggest change in the industry for 25 years. We shouldn't make all the change in the next five years and see how it turns out. There needs to be a reflection and a learning. I think Ofwat gets that but it would be nice to see some reassuring words around that." Also to factor in here is DEFRA's forthcoming strategic guidance for Ofwat. Among other things this will consider intergenerational equity and whether it is time for resilience to gain greater weight in the balance against affordability. Bird says: "Let's reflect on that guidance as well before we go seeking to pursue any more exotic market mechanisms." TWR

INDUSTRY COMMENT

INNOVATION AND WATER 2020: MORE FOR LESS, OR MORE OF THE SAME?

Will Ofwat's PR19 proposals enable or block innovation? Philip Davies, partner at Indepen, examines the possibilities ahead of the regulator's imminent Water 2020 paper.

As the fintech revolution marches ahead, talk of disruptive change across banking, energy and other sectors has become mainstream. Entrepreneurs in these markets see regulation as a barrier to change, impeding new products and services being presented to customers. This is a reminder that in the long run innovation tends to trump regulation as the customer's friend. In its Water 2020 proposals, Ofwat promises to encourage innovation. Will it deliver? In perhaps the most heavily regulated and capital intensive utility sector, should we characterise Ofwat and the regime it oversees as an enabler or a blocker?

Customer outcomes

Customer experience during the recent floods adds to the sense that between government, the companies and the regulators, customers are not getting the outcomes they deserve. Does Government need to step up? Perhaps the water companies could provide more leadership in finding creative solutions to mitigate the environmental externalities that are not being effectively targeted. What is beyond dispute is that there are institutional issues with no guiding hand on catchment management, and no regulator ensuring that private incentives are allied to social costs and benefits in a holistic manner across our natural capital infrastructure. Even if Ofwat is on the pitch, the innovation we need may go well beyond the traditional regulatory toolkit.

RPI-X regulation, particularly in the water sector given its capital intensity, naturally sets up a relatively narrow negotiation based on the search for incremental improvement. It is not well-suited to a more strategic conversation around transformation. In most price control negotiations, a relatively small slice of the total bill is at stake, once remuneration for past investments and previous decisions on opex requirements are baked in. This creates a bias towards protecting the status quo. The fear of the company's customers simply leaving en masse that is terrifying incumbent banks and retailers in other sectors is simply not present.

However, regulators and governments are capable of refocusing and adapting to new policy requirements when the political will is there. A great example was European governments and the European Commission coming together in 2005 to create the world's first greenhouse gas emissions trading scheme for the EU. Stakeholders struck a deal involving some major trade-offs in the name of an overarching goal of carbon reduction, and implemented a credible plan that has stood the test of time. Some might argue that the UK Treasury today should be thinking along similar lines. Deciding what the priorities are for natural capital and the water sector, and working with regulators to coordinate their agendas around a central objective. Ofwat, in turn, may need to show leadership in its softer influencing skills with government as well as through its price controls.

The Ofwat tool kit

Ofwat's chosen tools have now focused on adapting the price control to provide more scope for innovation. The companies were invited to consider new approaches at PR14 with the new totex approach and the introduction of Outcome Delivery Incentives.

Water 2020 seeks to build on this by making sludge and water resources contestable markets. Pushing contestability to its limits in water makes sense given we know innovation is most likely to flourish in competitive environments.

Yet it is not clear Water 2020 has grasped the most difficult issues. Sludge markets are a relatively small proportion of the value chain and are already contestable, while the success of water resources reform will take time and depends on government. Companies with risk-averse investors can make a strong argument that it is business-as-usual.

Two of the potential hurdles to the creation of a more favourable wind for the forces of innovation are how the perception of stranded assets is dealt with and whether there is a willingness to move further beyond a one size fits all approach to the rewards available. In considering a way forward, it may be worth bearing in mind two tests:

- *Is this new Ofwat framework up to the task of unleashing the companies that have the ambition to be better stewards of natural capital to fulfil this role?*
- *Are there alternatives, such as allowing some business streams to be either unregulated, or subject to lighter touch, more bespoke frameworks, that will deliver better outcomes?*

Stranded assets

The concern to send the right signals to the investment community about water reforms has led Ofwat to say all pre-2020 investments in these competitive segments will retain RCV protection. Ofwat needs to explain more fully how this protection can be reconciled with the exposure to volume risk it says will apply from 2020. There is unlikely to be one right answer, and Ofwat's mettle may be tested to reach an outcome that, in the round at the least, leaves all stakeholders content. In some scenarios this could lead to customers paying twice, both for the new competitor's lower price and a top-up to cover the value to the incumbent that has been displaced by the trade. This cannot be acceptable for more than a transitional period, but there are many stranded asset precedents for this from other sectors that may provide helpful models.

Scope for rewards

The driver for re-engineering regulation has to be the recognition that incentivising the companies to step up and change should save customers money. An Indepen report sponsored by three of the water companies recently estimated that the wider adoption of catchment strategies and cross-sector solutions could save £1bn to £4bn in avoided costs of implementation of the Water Framework Directive.

The challenge is to combine providing a genuine stimulus for transformation with an appropri-

ate balance of risk and reward. There are good reasons to think this stimulus may need to be large. The counterfactual of the status quo may well continue to look attractive, particularly if it is being compared to a new, uncertain alternative. Any investor is likely to discount the value of an innovative long-term "regulatory contract" unless the regulator (or government?) creates a climate of trust to make it feel like a true commercial contract. But if the regulator can deliver, it secures the benefits for customers of solutions that have been properly tested at a cost that reflects the risk borne by the providers of capital, a cost that should be comparable with the required return on similar investments made in competitive markets.

There may for instance, as Ofwat recognises, be more scope to require tenders for discrete elements of new infrastructure that need to be built. The challenge here is to focus the competition on the outcome that customers want to be provided, leaving the bidder to put the best package together in the way they think works best, while setting the parameters of tender in such a way that a fair comparison between bidders is possible.

> **Unless the regulator is able to signal its readiness to think and act differently it may cast a shadow over commercial developments, and get more of the same, rather than more for less.**

Industry capability

One of the benefits of having such a fragmented industry is surely that the capability to deliver outcomes customers want resides in a number of companies. So why not use this capability more to drive better outcomes? This will serve to sharpen the focus of those companies more inclined to play safe and maintain the status quo, while providing a legitimate basis for winning bidders to secure higher returns, if they have demonstrated they can indeed deliver more for less. Pursuing this strategy was the major outcome of an Ofgem review into network investment, and this will now lead to more competition for the construction of onshore energy transmission assets over the next decade.

Where solutions are as yet undiscovered or where benefits are only obtainable through cooperation with third parties and benefit sharing arrangements, the regulator's behaviour and reputation play a key role in determining whether these solutions even come forward. Unless the regulator is able to signal its readiness to think and act differently it may cast a shadow over commercial developments, and get more of the same, rather than more for less.

Fortunately, we see some regulators embracing this challenge. In the world of fintech, the Financial Conduct Authority is launching a regulatory sandbox this month, May 2016. This will allow financial services firms to test innovative products, services, business models and mechanisms of delivery through a light-touch regulatory framework in a safe environment. Likewise, the Environment Agency has created its own regulatory sandbox for a company with high environmental performance (Wessex Water) so that it can conduct a catchment permitting trial in parts of the Bristol Avon. This includes an operating agreement with Wessex so both parties are clear on the nature of their obligations and the regulatory contract. Could this be a model for Ofwat to follow?

Innovative ODIs

Against this backdrop, Ofwat's ODI framework in 2014 represented an important step forward. This puts the company in charge of specifying the outcomes it wants to achieve, subject to an aggregate cap and collar of +/- 2% in the regulated return on equity (at least as defined under PR14). The framework within which this potential upside can be secured requires the company's plan to stand up to comparative performance tests and to be able to demonstrate stakeholder support. ODIs should in principle be a good basis for more bespoke negotiations between the regulator and individual companies.

The lingering concern perhaps is whether these incentives will be sufficiently high powered enough to really drive behaviour change. To what extent do the companies see the imperative to change? Experience has shown that many of the companies certainly respond to the incentive to optimise their capital structure, and by comparison that may look a more straightforward approach to driving higher returns than innovative ODIs. It is a moot point whether the encouragement the companies needed to adopt ODIs with real money at stake at PR14 was a function of their risk appetite or rather simply a reflection of the time it took them to come to terms with this new aspect of the regime.

Starting on the journey

In summary, Ofwat show signs of recognising the scope for more innovation. Some clues to how well Ofwat understands its own role in creating a climate conducive to innovation should be revealed over the next year as the methodology for PR19 comes into view. The challenge is to navigate a trail between the current model that emphasises the benefits of minimising financing costs for individual projects and companies in a static sense, and the dynamic benefits that come from more transparency, market testing and encouragement to innovate at all levels of the value chain.

It is legitimate to ask whether Ofwat therefore needs to be braver and promote more radical measures, such as encouragement to create new unregulated revenue streams or new processes and ex-ante commitments that send a stronger signal that innovative approaches will be rewarded. Technology, innovation and a reluctance of customers to accept the status quo are now increasingly transforming the banking, energy and other retail sectors and these trends will affect water increasingly over time. The question is how far Ofwat can accelerate and enable this transformation in water supplies, and how far Water 2020 takes customers and investors on this journey. TWR

Philip Davies is a partner at Indepen. He has 20 years' experience of senior management positions in both the public and private sectors, including as director of markets at Ofgem and director of regulatory affairs at Centrica.

HAPPY RETURNS

South East Water is pioneering ODIs linked to customer satisfaction. David Hinton says they are shaking up the company for the better and could be a game changer for the whole industry.

South East Water took an innovative approach to Outcome Delivery Incentives (ODIs) at PR14, opting to tie rewards/penalties to how satisfied its customers are on their priority outcomes, as well as to underlying performance. One year on and asset and regulation director David Hinton believes the approach is proving a "game changer" for South East Water and could have a similar impact on the wider industry if it was adopted more broadly.

"We could not have foreseen the impact this has had," he explains. "It has changed the conversations we have internally, the ones we have with customers, and made us critically look at how we make decisions as a business. The impact this has is that we worry about all interfaces with customers, unlike SIM which only deals with customers who contact us. We are incentivised to think about the way we talk to customers, what our street works look like, van appearance, site condition, our bills, pretty much all our activities. We are also incentivised to make a brand work for us to improve satisfaction and awareness."

Satisfaction ODIs

South East Water has over 20 ODIs in total, but at the heart of these are seven which customers identified as priorities at PR14. It is to these that measures of satisfaction have been applied. Both the concept and its implementation were developed and tested with customers and the company's Customer Challenge Group. Up to 2020, the company will be rewarded or penalised according to whether customers consider:

- the appearance of their water to be acceptable
- the taste and odour of their water to be acceptable
- the level of leakage to be acceptable
- their direct interaction experience to be positive
- their water supply to be of sufficient pressure
- the frequency and duration of supply interruptions to be acceptable
- the frequency of water use restrictions to be acceptable.

Hinton uses supply interruption as an example to explain what this means in practice: "So it's not the hard and fast of how many

interruptions you have had, but how do you feel about an interruption and how it was handled as well as how satisfied are you with the level of interruptions?" The satisfaction measures consequently scoop up a whole range of things that wouldn't be measured under a standard ODI. "So there's a really good reason for our staff to keep their vans clean, to ensure roadworks are properly maintained, to talk to customers appropriately – all this gives a rounded impression of South East Water. When we talk to customers, it is often the small things that make them like you or dislike you."

There were multiple drivers for South East to go down the satisfaction route. Hinton explains it was excited by the move to an outcomes based approach and wanted to make the most of the opportunity. "Our strap-line was 'we want to stop measuring what we do and start measuring how customers feel about what we do'. That was a fundamental shift."

Early thoughts were for a single satisfaction ODI. Hinton explains: "We started off thinking really radically. Why don't we just have one only ODI: are customers satisfied with the service they receive for the price they pay?" While he still favours the principle, he acknowledges the practical drawbacks: "While a single measure is really powerful as an incentive, what it doesn't do is give you any information about where you might need to make changes."

So the company settled on a set of measures that would drive improvements for customers in areas they valued but that would also be easy to communicate to staff to motivate them to deliver. In addition, it wanted to use the approach to help develop customer awareness of the company. Hinton comments: "Customers didn't really know much about South East Water, or the water industry in general. We didn't really have an identity. And that is partly driven by the fact that we only worried about the hard measures; we didn't worry about whether they liked us or not, or had an opinion of us at all. So we wanted something that also said 'we're here, we want you to understand who we are and we'll tell you what we do, because if we tell you what we do, you'll tend to value us more.'"

We didn't really have an identity. And that is partly driven by the fact that we only worried about the hard measures; we didn't worry about whether they liked us or not, or had an opinion of us at all.

Performance

Since April 2015, the company has been conducting around 100 surveys a month with customers, selected at random. Respondents are asked to score the company 0 to 5 against each of the seven measures. It is early days to speak robustly of performance but so far satisfaction levels have been stable across the measures though slightly below target overall.

Because customer satisfaction outcomes are new to South East Water and to the water industry as a whole, it is unclear why this is so but possibly the baseline may need adjusting. Baseline targets for the measures are based on October 2013 surveys which were undertaken without any historic or trend information. There will be an assessment of whether the baseline targets are appropriate shortly.

Hinton explains that in reward and penalty terms, 2015-16 was a "free year" but that the financial ODIs will now kick in. The company adds: "We are committed to developing this approach as we believe this type of innovation is necessary in driving the appropriate level of service for our customers. Like all innovation, this makes delivery of this performance less certain and inherently more risky – our assessment reflects this."

Improvement

Meanwhile, in addition to checking the baseline, the company is implementing a suite of initiatives to push its satisfaction scores up. These have been considered by a dedicated Every Customer Counts steering group and are reviewed by the company's Customer Panel. They include:

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Measured and all-round performance. Hinton observes: "You can't spin your way out of poor performance – at some point poor performance will tell. So you've got to have great fundamental performance. But then on top of that, if you want to improve satisfaction, you've got to add some things. You've got to add all the touch points with customers: direct or indirect; cleanliness of vans; employee behaviour with customers; reinstatement; good local customer communications." He continues: "[The satisfaction based approach] drives everything both internally and externally, and that's what we wanted to achieve when we designed it. It has made the business look at itself and ask what do we need to do differently?" Consequently, South East Water has launched a new vision and values across the company and for the first time trained all its field staff, including supply chain contractors, in behavioural and cognitive skills. Hinton: "The fundamental piece is around: don't forget – everything you do impacts on customers."

Customer information and education. The satisfaction surveys undertaken to date have revealed a lack of customer understanding about many aspects of the business. For instance, a significant proportion of respondents have said they can't score their satisfaction with South East Water's leakage performance because they don't know enough about it. To move customers out of the "don't know" category so more can offer a score, they need to be better informed. Hinton picks up the story: "One thing we are doing is campaigning about leakage across the business – what it is, what goes on. We're encouraging everyone to talk about leaks, whereas in the past it was a subject we'd avoid. It's a political hot potato; it's a difficult one to address. But we're now giving staff a toolkit to help them talk about leakage and other wider issues, to educate and inform and try to get customers to move that score up."

> **In this world, constant dialogue with customers is essential. It's a completely different mindset for customer engagement.**

Branding. Following on from that, South East believes that brand value can shift satisfaction and that lack of customer awareness about what the company does is a blocker. Hinton: "Everyone tells us the water industry and water companies are anonymous – that's where we start from. When you talk to them about what they think about water, they might say 'we don't even know why we pay for it, it just falls from the sky'. I'm paraphrasing but that was the sum of a lot of the conversations we had. So we needed a brand and a set of messages to deal with that issue."

The company researched customer views and the message that came back loud and clear was there was little knowledge of the engineering and science that underpins water company activities. Moreover, once explained, customers found this impressive. Hinton continues: "If you're going to gain credibility, with the trust and confidence piece, customers have to understand what you do; they aren't going to trust a black box and not knowing means they undervalue it."

The resulting rebrand had a specific purpose in mind: to explain what, how and why the company does what it does. It was also informed throughout by customer and employee conversations. The new livery and imagery depicts real employees surrounded by the tools they use to do their jobs, while the strap line is "pure knowh2ow". Hinton observes that traditional industry literature featured the likes of pumps and workers, but this has been almost universally replaced by "smiling customers, families, people drinking water from a tap". He says: "That doesn't do anything to value the product," adding the South East rebrand "feels like a significant move away" from that approach.

SOUTH EAST WATER AND OTHER CURRENT ISSUES

South East Water: supplies 2.1 million people across Kent, Sussex, Surrey, Berkshire and Hampshire with water; Southern Water and Thames Water provide wastewater services to those customers. It is owned by two pension funds, one Australian and one Canadian.

Water resources: Hinton identifies the biggest risk to the company as maintaining a water resource sufficiency, in light of climate change and growing demand in the south east. Part of its response strategy is a universal metering programme, which is currently 75% complete (due for completion by 2020). He says this has gone incredibly well, with "the majority of customers understanding the need for metering".

Resilience: A related but broader challenge for the company (and industry) concerns resilience. Hinton argues there is a compelling need to clarify the industry's current level of resilience and for national standards to be put in place. "Once it is transparent, it will raise issues…I've always taken the view that we'd be surprised by the variation in the level of resilience company to company. I think that would create opportunities. Companies that are 'over resilient' could be incentivised to lose some of that resilience – through interconnectivity, bulk supplies or whatever. That could be a real opportunity but it isn't overly obvious at the moment."

NHH retail: South East Water is yet to publicly announce its non household retail strategy but on the wholesale side it is in the process of establishing a wholesale service desk. Hinton comments: "It's not that difficult, it's just time consuming…a lot of work in the nuts and bolts."

HH retail: alongside Ofwat's ongoing analysis of absolute costs and benefits, Hinton argues the timing of any opening of the domestic market should be a key consideration. Ideally it would be far enough away from NHH opening to learn the lessons, but not too far for those lessons to get out of date. "There's got to be an optimum distance…enough learnings to say the systems are developed, the market operator is developed, our understanding has developed. That will make it more likely for a household market to reap the benefit earlier. It will be interesting to see how Ofwat considers that in the cost benefit assessment. That to me is the key question." He offers at least three to four years after 2017 as a suggestion on suitable timing, should a household retail market be pursued.

Water 2020: South East is comfortable with the general direction of travel. Hinton echoes wider industry concern on moving to CPI indexation of the RCV and stresses clarity on value neutrality will be the key to bringing investors along.

The company is in the process of rolling out the rebrand now. "There are lots of touch points," Hinton says. "The key one is the vans. A van is a mobile billboard that is under utilised. The bills are also changing. All the corporate literature is changing. And public displays, school units, uniforms. It's a complete, across-the-board change."

Direct interaction satisfaction. In addition a new "5 out of 5" team has been set up in the customer service centre to improve handling of customer contacts and to resolve outstanding issues. Following any customer contact a survey is issued asking them to rate the service they received out of five. Hinton observes: "The results are helping to drive performance both in the call centre but also in the field and other parts of the business. If the surveys flag a problem, we call back the customer and arrange to put it right and any lessons learnt are fed back to help keep improving." The 5 out of 5 team also reviews processes to understand what points cause issues and to highlight where improvements can be made.

Risk & reward

Hinton is aware he is pursuing a high risk line in hanging rewards and penalties off customer satisfaction. Not only is what shifts satisfaction up something of an unknown, but clearly satisfaction can be influenced by factors outside of management control. He comments: "We were well aware that we are not entirely in control of how customers perceive us. There are a number of factors – other companies' performance, political statements like the NAO report [criticising the industry and in particular its regulation]; droughts and so on. What it does though, is it makes us take notice and want to understand and react to these external events to ensure the perception customers have of us is fair and informed."

Despite the risk, Hinton says the prevailing climate calls for companies to push themselves to deliver better customer outcomes efficiently. Moreover that the satisfaction based approach brings with it a host of additional benefits for the company – benefits that could be extended across the industry if other companies opted for a similar, satisfaction-based path. These include:

Value: Better understanding of the operation of the company will lead to greater trust, and greater satisfaction which in turn will lead customers to value water services more. "In the research we've done it is clear the more you are satisfied, the more you value the product. Those two things are intrinsically linked."

Self regulation of customer willingness to pay for rewards: Hinton recalls that some companies and CC Water didn't favour financial rewards where there was not explicit customer support at PR14. He believes satisfaction based outcomes can overcome this: "If you over-rewarded yourself, customer satisfaction would drop and you would have to do one of two things: you'd have to drop price or improve service. So it would be self regulating and you'd never get into the issue about customers don't want to pay rewards."

Dynamism: Hinton says satisfaction measures work over the short and long term. As customer expectations change, so does their level of satisfaction and the company will have to respond routinely without the need for a reset.

WATER 2020 ISSUES ON OUTCOMES/INCENTIVES

- Duration – should companies commit to outcomes for a period longer than five years, and do they need longer term rewards?
- Common v bespoke outcomes, and where services are comparable between companies, should performance measurement be standardised to improve clarity?
- Should more stretching, dynamic upper quartile benchmarks rather than historic ones be applied to performance commitments and/or ODIs?
- Multiple price controls – should companies develop outcomes for the whole range of services and then seek to allocate them to specific price controls or services, or should business plans be set for separate services?
- Should reward/penalty caps and collars apply?
- What is the best balance between base and outperformance rewards?

Encouragement of ongoing engagement: Hinton: "The thing about price reviews is you can talk to customers in the two years leading up to the review, engage massively with them, look at their priorities and set a target you think is appropriate for what they are asking you to achieve. Then forget about those customers, deliver those targets for the next five years then ask them again. In this world, constant dialogue with customers is essential. It's a completely different mindset for customer engagement."

Company alignment with customer issues: Hinton raises the issue of moving from RPI to CPI indexation. He mulls: "The issue seemed to start with Ofwat saying using RPI has no credibility with customers. If that's true, why haven't the companies raised it? Possibly because they are not incentivised on the whole perception customers have of them… In our world, if we were doing something customers were grumpy about like relying on an index which has no credibility, we'd worry about that because we crave credibility. A lot of the issues the industry has would play though differently if we were measured more on customer satisfaction than hard outcome type measures. The regulator shouldn't have to bring this kind of issue up."

Affordability: finally, Hinton explains affordability concern is in-built into satisfaction measures: the higher the bill, the less satisfied the customer will be. "It's a good affordability check. It's a good check on most things, which is why we liked it."

Next steps

Immediately, South East Water will track with interest how its suite of satisfaction improvement initiatives translate in terms of customer scores. Leakage in particular will be in the frame: Hinton says the company wants to see 3 out of 5 scores rise to the mid 4s. All the while it will be gathering valuable information on what is important to customers and what moves their satisfaction.

The company is also clearly committed to developing the approach going forward. One thing Hinton has in mind is attempting to value satisfaction changes: "Can you value changes in satisfaction and can you make a direct correlation between what customers are prepared to pay for a shift in their satisfaction?" It will apply all this learning to its ODI strategy for PR19 – one of the many things Ofwat is looking at as part of its Water 2020 work (see box above). TWR

IS CATCHMENT MANAGEMENT CATCHING ON?

The evidence base for managing flooding by storing water upstream is growing, and wider catchment management concepts are gaining political ground.

Politicians' appetite for non conventional approaches to flooding seems to be growing. The Environment Food and Rural Affairs Committee's Future Flood Prevention inquiry recently took evidence on local community roles and natural management methods. And at an event a couple of weeks ago in Westminster, academics and other experts queued up to tell the All Party Parliamentary Water Group and the Parliamentary Office of Science and Technology why we should manage the whole water cycle better to tackle flooding. The Environment Agency's David Brown and Liverpool University's Michael Norbury said there was a "growing body of evidence" to show storing water upstream works; could be a "no regrets" investment; and was a viable alternative to conventional solutions especially where they would be prohibitively expensive.

Among the key strands of the debate were the following.

Mainstreaming multi-stakeholder projects with multiple beneficiaries. The University of Liverpool's David Shaw asked how to make things happen on the ground given the many

WESSEX TRIALS FIRST CATCHMENT WIDE PERMITS

Wessex Water's Bristol Avon catchment-wide permitting trial has been officially signed off and represents an industry first for the water company. Under the four year agreement with the Environment Agency, which kicks off on 1 April 2017, traditional individual site permits for phosphorus have been replaced by catchment wide permits. Wessex said this would minimise the risk of failing to meet the new tighter discharge standards and therefore meet the environmental objectives in the Bristol Avon – but with less upfront investment. Individual permits would have meant expensive capital investment at all 24 sewage works where reduced phosphorus levels are required.

This move has been prompted by the need to reduce levels of phosphorus being discharged from sewage works into the River Avon to meet the requirements of the Water Framework Directive.

Nick Gupta, the Environment Agency's Wessex area manager, said: "We are keen to promote innovation and this is great example of a company taking the initiative."

Andy Pymer, Wessex Water's director of regulation and customer services, said: "The Bristol Avon is an important river catchment for Wessex Water where, in addition to catchment permitting, we are actively working with many partners on other major influences within the catchment to reduce the level of phosphorus in the river system as part of a wider catchment-based approach."

If successful, Wessex Water anticipates the approach being adopted more widely in the west country.

stakeholders involved and the catchment wide scale. Among his questions were: who's agenda is it? How do we engage across a catchment? Who pays? Who coordinates activity? Who takes responsibility for taking it forward? How do we deliver in terms of multi-benefit solutions rather than silos?

Shaw observed partnership working was often time consuming and frustrating but did yield results. He cited in particular

> **The system has lost its capacity to hold water...Useful as they are, saplings, sponges, sandbags and sympathy are inadequate.**

a project in St Helens that was led by the local authority and featured public sector players including Natural England and the Environment Agency; private sector players including design engineer Waterco; charity network Groundwork; and the local community. He would like to see greater involvement of the private sector in what is currently largely a public sector area of focus. He suggested AMP7 negotiations could assist with this commercialisation.

Louise Bracken of Durham University stressed the need to "put the i back into integrated catchment management". She identified as the key challenge the need to develop systematic integrated approaches for managing the water cycle and said we need to find a way to have "strategic oversight" of the way water is used across the full spectrum of operations.

Should landowners be paid to store water upstream? These multi-party, multi-benefit and multi-stakeholder is- >

NATURAL CAPITAL ACCOUNTING

Natural capital as a concept is in the ascendancy; a number of public and private natural capital organisations are active, and the attachment of value to natural assets it becoming a recurrent topic at business events. But there is little in the way of common understanding or standard practice.

South West Water is one of four water companies (along with Anglian, United Utilities and Yorkshire) taking part in practical work to pursue harmonisation of approach to natural and social capital accounting as part of the Accounting for Sustainability (A4S) project.

Natural and social capital accounting involves:

- the identification, quantification and potential monetisation of how your business activities have an impact on the environment and society
- the identification, quantification and potential monetisation of how your business depends on natural and social assets and the services they provide such as clean air, water or community relationships.

Natural capital 'goods' include water and 'services' include flood protection, quality control and recreation/amenity. Social capital is a far less well developed concept, but refers to how an organisation's activities both contribute to and draw on communities and wider society.

Natural capital accounting aims to broaden the information upon which businesses make decisions to include natural and social capital considerations; given global decline in resource availability and changing population demographics, organisations need to improve their understanding of their impacts and dependencies on the world around them.

A key issue in the space is whether and how to monetise environmental and community costs and benefits. Monetisation resonates more with investors and other stakeholders and makes different things comparable, but is not always appropriate and very hard to standardise. South West Water's finance director Louise Rowe believes the water industry is ahead of many other sectors on this issue, because valuing the costs and benefits of the environment to customers is embedded in everyday practice – through the willingness to pay methodology and now Outcome Delivery Incentives. She explains:

"Because our (water industry) environmental metrics are legislative and regulatory, they aren't badged as natural capital accounting. But the fundamental building blocks are there; valuing the environment is the whole premise behind improving bathing water quality for instance, catchment management, and many other environmental improvements. As an industry, we are actually ahead of the game. A number of non-water companies (in the A4S project) have found the way we use WTP very interesting."

A4S, a Prince of Wales charity, has published a set of principles and steps for finance teams to help integrate natural and social capital accounting into business decision making – for details see http://bit.ly/1WhSpco Others too are making advances – for instance the business-led Natural Capital Coalition is developing a guiding 'protocol' to a similar end, while individual companies like Marks & Spencer, the Crown Estate and British Land are leading the charge.

But mainstreaming the work is a long way off and, says Rowe, may not happen without the sort of legislative change that underpins carbon reporting.

sues can be developed to raise the debate on Payments for Ecosystem Services (PES) – a prospect being explored by South West Water as part of its work to hold water upstream on Exmoor to reduce flood risk (see box). At the Westminster event, the University of Newcastle's Paul Quinn said we need "natural engineering" to bring the water system back in to balance following post war intensive farming. He observed that our soil is degraded and "the system has lost its capacity to hold water."

Useful as they are, he said "saplings, sponges, sandbags and sympathy" were inadequate. He called for 5% of our farmland to be put in remission to "slow water down and make it stay around for longer". He concluded: "We should be paying farmers to store flood water". Mark Wilkinson of the James Hutton Institute concurred that land was the natural place to store water and observed that farmers would likely respond to storage incentives as they had to incentives to "dredge and ditch".

However, not everyone agreed farm payments would be an appropriate or adequate solution. Shaw for instance said: "I'm not

We should be paying farmers to store flood water.

SOUTH WEST WATER PIONEERS PES

South West Water is pioneering ecosystem services payments for land managers affected by its work to restore peatland on Exmoor.

The company is extending its now well established Exmoor Mires Partnership scheme to include an annual payment of £14.50 a hectare for local graziers, landowners and tenants within SWW's catchment area of the River Exe. The project focuses on blocking drainage ditches to "rewet" the bog after generations of peat cutting and drainage schemes have caused it to dry out. This has reduced the water-holding capacity of the moor, hindering its absorption of water during heavy rainfall and hence reducing the protection it offers against flooding. In addition, this drying action causes oxidation of exposed peat bogs which releases large quantities of carbon into the atmosphere and water courses. Research carried out on the moor by the University of Exeter has shown that restored bogs release a third less volume of water during storms and consequently 30% less volume of dissolved organic carbon, which is washed out of the peatland during storms. Research by the Environment Agency also indicates improvements in summer baseflows in the rivers.

Project manager David Smith explains the £14.50/ha payment is to reward the participating land-owners for the benefits they are providing to SWW and their customers, but they also offset any perceived detriment experienced by local land managers – for instance, disruption, or reduced space for livestock grazing (though in fact no stock has come off the moors as a result of the scheme) . As well as water quality and supply benefits the peatland restoration yields societal, environmental and wildlife benefits such as carbon storage. The specific sum was the result of a complex set of calculations; the scheme is validated under the Peatland Code – a mechanism by which businesses can help fund peatland restoration projects where there are measurable benefits for climate and ecosystem services. Since 2013, carbon savings from rewetted drained peatlands and other forms of peatland restoration have in theory been allowed in meeting emission reduction targets under the Kyoto Protocol, but the UK government has not yet accepted this principle. As a consequence, only voluntary offsetting is currently possible. The payments, together with any future carbon trading benefit sharing arrangements (typically 50:50), are set down in contracts between the water company and the land owner. Smith adds: "We only pay for the land area we have rewetted, otherwise it would be unfair to our customers."

This raises a regularly re-run Payments for Ecosystem Services (PES) argument for water companies: should customers foot the bill for activity that stakeholders like farmers and landowners undertake? Do such payments contravene the polluter pays principle? Smith says in South West Water's case, the scheme gained the support of both customers and the company's CCG the Water Future Panel at PR14.

Upstream Thinking update

The Exmoor Mires Partnership is part of South West Water's Upstream Thinking – an initiative that kicked off in 2008 to change land management practices to protect rivers and improve water management. This AMP, Upstream Thinking is expanding significantly to cover 11 catchments across Devon and Cornwall:

- River Exe
- River Dart
- River Tamar
- River Fowey
- Otter Valley
- Cofton Cross
- Fernworthy Reservoir
- Barnstaple Yeo
- Argal & College Reservoirs
- River Cober
- Drift Reservoir

Smith says this amounts to "everywhere we are taking raw water out where water quality is a problem". The company is investing about £10m over the five years, up from around £9m in AMP5. Smith notes that because the company and its partners are frequently able to access match funding for schemes, more like double this amount will be invested in practice.

Land and farm management

Upstream Thinking is embedded in South West

Wet pools at Spooners, Exmoor, a few months after restoration

Water's business plan and its performance is subject to Outcome Delivery Incentives. There are two primary strands of work. The first is the habitat restoration activity on Exmoor, the Culm grasslands and other areas. As discussed, this will continue: over 2,000 hectares of land on Exmoor were restored in 2010-15 and the company is looking to deliver 500 further hectares this AMP. Smith says this will have substantially addressed all known damaged areas from which water is abstracted.

In year one (2015/16), the company had an ODI target to restore 500 acres of mires, Culm and wildlife sites. It managed to restore 731 acres– despite the first year of the new programme being complex with lots of initial activity dedicated to establishing work in new catchment areas. It is targeting a further 750 acres this year and 1,606 acres across the five years.

A similar pilot project on Dartmoor, from which 40% of the company's water is drawn, started in 2010. At present, this is proceeding cautiously and is still in the research and evidence gathering phase.Smith explains both the breadth of stakeholders to liaise with and the more complex nature of the land problems mean "we don't want to plough ahead" until the conditions are right. Whereas Exmoor has primarily been damsure countryside stewardship is the answer or feasible at catchment level."

Bottom up or top down? Minni Jain of The Flow Partnership brought some international experience to bear. She said her experience in India and Slovakia pointed to the fact that grassroots community initiatives, rather than top down policy, was the most sustainable approach. Other speakers and delegates agreed. Norbury said there was a need to "pump prime community initiatives".

Think long term. Wilkinson pointed out the need to provide for operational arrangements as well as capital works, citing an example of a flood management solution put in place some time back that has now been neglected. He emphasised the concept of a catchment partnerships as the key to implementation and to thinking beyond short term funding cycles.

New developments. In discussion, developers' automatic right to connect to sewer came up. Bracken said we need to be more selective about where new developments are sited and think about whether an automatic right to connect in sensible in the current environment. This issue has recently been raised in Parliament as part of the debate on the Housing and Planning Bill – see p18. TWR

aged by drainage, Dartmoor has been subject to many pressures including past intensive grazing and burning, military shelling and acid rain so has suffered patchy erosion.

The second strand of Upstream Thinking is the provision of advice and grants for farmers of land connected to rivers above water abstraction points. The aim is to reduce the amount of unwanted substances in river water, which in turn helps to control the cost of chemicals and energy needed to turn raw water into high quality tap water.

Advisors visit farms and carry out an assessment resulting in a whole-farm plan. The company explains: "This includes a water management plan and includes future capital investment proposals, which will be up to 50% funded by Upstream Thinking. These can include improvements to slurry storage; fencing to keep livestock out of rivers; providing alternative water sources for livestock; and better pesticide management including investment in new equipment such as weed wipers which deliver targeted doses of herbicide."

Smith says most farmers are willing participants. According to Paul Cottington, environment adviser for the National Farmers Union in the South West: "Farmers across the South West are recognising that the land they farm provides multiple services for society, including clean water, and they are investing time and money in measures like these that will help protect water sources for the future."

The target for the programme is to get 750 farms under revised management by 2020. South West Water delivered 106 integrated farm management plans in 2015/16, against its ODI target of 100; it is targeting 150 farms this year.

Lessons

With eight years of Upstream Thinking experience under its belt, South West Water has and continues to refine its approach. Among the lessons it has learned so far are:

Farm funding: Smith says targeting funding has improved and the company now sticks rigidly to capital grants of 50% of the required investment and only uses it when other alternative match funding is not available. This is in part because it has honed its knowledge of leveraging match funding from a variety of sources. This helps enable investment to go in while keeping capital costs for South West Water customers down.

Partnership working has proved invaluable. Upstream Thinking's main partners are the Devon Wildlife Trust, the Cornwall Wildlife Trust, the Westcountry Rivers Trust and the Exmoor National Park Authority. A wide range of other stakeholders work with these main delivery partner organisations including the Environment Agency, Natural England, the Farming and Wildlife Advisory Group, the National Farmers Union and the local Catchment Partnerships. Smith admits operating with such a diverse set of groups has been "a steep learning curve" but that successful partnering has been vital to success. "These organisations have expertise and are seen as the honest broker. It's far better than us being heavy handed."

Multi-benefit: catchment management is not a one trick pony. Smith says it saves customers and farmers money while benefiting the environment, wildlife and society.

Looking ahead

Exactly how these multiple benefits are quantified and funded, by whom, and how they are delivered, returns us to the issue of PES. PES schemes are market-based instruments that connect sellers of ecosystem services with buyers. Typically the beneficiaries of ecosystem services provide payment to the stewards of those services, often via a continuing series of payments to land or other natural resource managers in return for a guaranteed or anticipated flow of ecosystem services.

South West Water has taken a key step on this path by, firstly, funding farmers to make capital and operational changes to the way they manage their land and now rewarding land managers for rewetting Exmoor. The principle is not universally accepted, and even where it is, payment calculations are hugely complex: they need to factor in monetising a wide range of benefits including those of avoided investment, and appropriately incentivising the right behaviours. Valuing natural assets even within companies is very difficult; natural capital accounting is on the ascendent but far from mainstream (see box p15 – Natural capital accounting).

Moreover, thought is increasingly being given to monetising the benefits of upstream services that go beyond offsetting water investment and safeguarding water quality and quantity – for example, to account for (most urgently) flood prevention but also recreation, amenity, biodiversity, carbon reduction, public health and the wider environment and society. South West Water is nearing completion of its first full Downstream Thinking project: a set of sustainable drainage initiatives to protect a small number of properties in Aveton Gifford that regularly flood but where conventional solutions are not cost effective.

Smith concludes: "In the long term, we should stop thinking about upstream and downstream and start think about the whole catchment approach."

SUDS REVIEW FALLS OUT OF HOUSING BILL ROW IN PARLIAMENT

This month the House of Commons and the House of Lords have been locked in a parliamentary battle over whether the government's flagship Housing and Planning Bill should contain a specific measure which would ensure that the best possible use is made of sustainable drainage systems (SuDS).

Under a proposed Lords amendment put forward by Baroness Parminter during Report Stage, the automatic right to connect to sewers would have been removed unless the relevant drainage arrangements met standards for sustainable drainage systems. A Water UK briefing explained this would "allow local planners to require the most appropriate sustainable drainage techniques to be implemented with the assurance that the developer does not have the simple alternative of disposing of surface water via the sewer system".

There was widespread cross-party support for this proposal in the Lords as well as the vocal backing of Water UK and many other groups including the Institute of Civil Engineers, the Chartered Institution of Environmental and Water Management, the Royal Institute of British Architects, the Wildfowl and Wetlands Trust, and the National Flood Forum. Water UK argued the amendment would have multiple benefits, including: helping to prevent homes being flooded; improving the environment; and bringing practice in England into line with current practice in the rest of the UK, which have more extensive SuDS standards or requirements.

However government ministers insisted that the proposed measure was "unnecessary and impractical". After initially digging in over the issue and insisting that the Bill should include the amendment, peers climbed down at the eleventh hour as The Water Report went to press and accepted a government offer of a review of planning policy and SuDS which will be shoe-horned into the Bill.

This formally commits the secretary of state for Communities and Local Government to "carry out a review of planning legislation, government planning policy and local planning policies concerning sustainable drainage in relation to the development of land in England".

POLICY UPDATE

Ofwat, the industry and other interested parties are continuing with a programme of work to improve the water sector's relationship with developers. Among the latest strands of activity are:

Charges

Ofwat set out its emerging thinking on how charging rules for new connections could potentially meet the government's charging objectives. This entailed:

- Increasing the transparency of charging publications, engagement and clarity over which charges are expected to recover what costs.
- Increasing predictability through requiring water companies to set out a number of fixed charges (or clear methodologies for calculating charges) upfront.
- Placing the ownership/accountability with companies to develop charging approaches.
- Helping promote a level playing field for potential alternative providers that wish to compete with water companies to provide new connections by requiring equivalent charging for equivalent services.

Water UK reported last month that discussions have been taking place within a DEFRA-convened task and finish group about a draft set of charging rules that Ofwat has prepared. It observed: "Developers have however been very critical of companies' charges and it remains to be seen whether this approach will be acceptable to them given the discretion it confers on companies and given also the prospect that it will lead to different approaches being adopted by different companies."

It added: "The draft also raises the idea of asset payments being made to developers where sewerage assets are adopted by water companies, thus creating equality with the position on water supply assets. This would however be a significant change to the current arrangements and it is unclear who would meet these additional costs. Water companies would be reluctant to increase bills to customers to meet such payments to developers."

Competition in new connections.

Last month Ofwat outlined the key areas of work it will be progressing during 2016 to enable effective competition in the provision of new connections. The areas for action identified were:

- **Levels of service.** The regulator suggested the inclusion of more performance information about water companies' delivery of non-contestable services that organisations such as SLOs rely on to be able to compete to provide new connections.

- **Better information on competitive options.** Ofwat said water companies should provide accurate, transparent, clear, accessible, timely and customer-led information to customers which empowers them to secure the lowest possible bills and the best possible service.

- **Charging:** Following the provisions in the Water Act 2014 and guidance DEFRA, Ofwat is developing new charging rules for new connections in 2016, with a view to them coming into effect for the 2016-17 charging year (see above).

- **Operational processes.** Ofwat said: "We consider there is significant scope for water companies to harmonise their operational processes and requirements for self-lay, such that differences between them become the exception rather than the norm. In doing this there are opportunities to build on existing good practice in the sector to simplify processes; to remove unnecessary 'control points' that might be potential barriers to competition; and to consider whether the sector's accreditation scheme remains fit for purpose."

- **Competition law.** By summer 2016 Ofwat will publish guidance for the water sector on competition law to encourage the sector to better understand and think through the implications of markets for water companies' obligations under UK and EU competition law. It will also work with the sector to think through potential areas of risk and/or customer concern about competition law that arise from a water company's decision to outsource some of its developer services to a third party "term contractor".

- **SLO assurance.** Ofwat has published Information Notice 16/06 setting out its general expectations about the assurance terms a water company may seek in a self-lay agreement.This followed consultation last September.

Y1 DEVELOPER SERVICE LEVELS UP BUT NEW MEASURES MOOTED

Water companies have now been reporting for a full year on delivery of agreed standards of service to developers. The trend over the year is for continual improvement at an industry average level for both water and sewerage measures, as shown in the charts. Overall levels of service performance have risen from 89% to 98% for water supply and from 94% to 98% for sewerage.

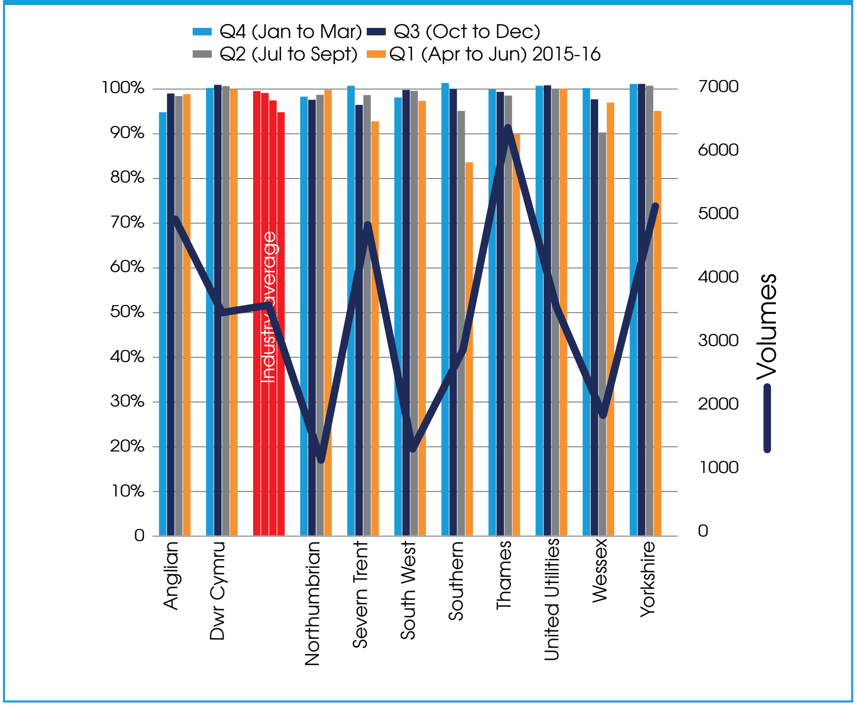
The latest figures, for the January to March 2016 quarter, show Dee Valley Water was the top performer on water supply, delivering against standards 100% of the time. Affinity Water was again the lowest performer with a 91.6% success rate – but a considerable improvement from its Q3 performance of 74%. Company performance at the top end was more tightly bunched on sewerage. Southern was the top performer with 100% but five other companies scored 99% or more. Anglian was at the low end with 94.1%.

Fifteen water supply and nine sewerage performance targets are currently measured for a range of services including enquiries, quotations, connections, design, construction and adoption of developer laid assets. However the metrics have been subject to criticism. For instance, Martyn Speight, managing co-ordinator at Fair Water Connections, a membership association set up to press for "a fair deal in water connection provision," said: "Our analysis has shown that the companies are not weighting their measures to focus on what is important to self lay organisations, and the developers they seek to supply. This means that their headline figure comes from improving high volume, largely administrative, tasks performance whilst delivery on larger, more complex, sites looks to get much less attention.

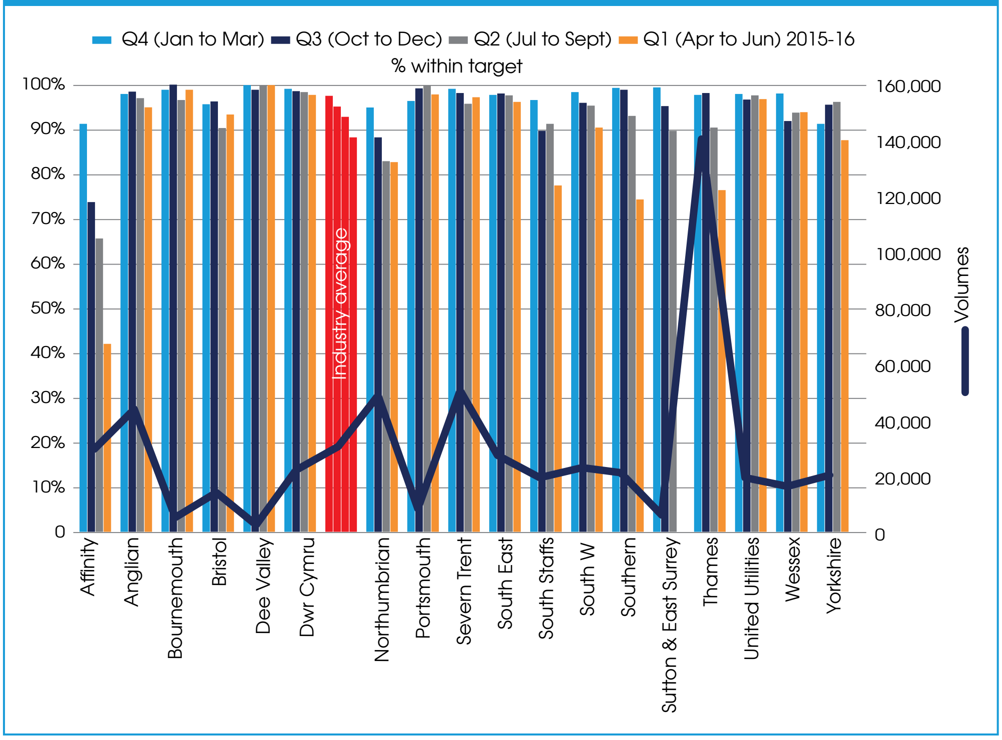
"We think it is now time for companies to refocus the way they use their developer services measures so as to raise delivery standards for those providing water supplies on larger sites. So we are calling for companies, in their reporting, to weight main-laying work and give it greater prominence over administrative tasks and routine service-laying work."

Water UK said last month: "Water companies have been engaging with a range of stakeholders to ensure that the activities which are being monitored are those which matter to their developer customers. A new measure on mains diversions is being trialled and work is underway on new measures in respect of self-lay activities." TWR

DEVELOPER SERVICES LEVELS OF SERVICE PERFORMANCE - % WITHIN TARGET AND ACTIVITY LEVELS SEWERAGE



DEVELOPER SERVICES LEVELS OF SERVICE PERFORMANCE - % WITHIN TARGET AND ACTIVITY LEVELS WATER SUPPLY



SOCIAL TARIFFS ONE YEAR ON

Water companies are finding ways to make social tariffs work, despite the inherent difficulties.

A few pioneering water companies have had social tariffs in place for a number of years, but most introduced schemes for the first time last April. While companies were very willing to try to help hard pressed customers, for many, this particular form of assistance was fraught with complexity and difficulty.

There was no underpinning definition of water poverty, and no prescribed eligibility threshold for receipt of help. There was no guidance on how much help should be given, to how many. Cross subsidies had to be approved by bill payers. While lots of companies welcomed the local freedom this offered, some also questioned the adequacy of the assistance that could be funded through an explicit cross subsidy, and the likely postcode lottery result. Based on customer research, the Consumer Council for Water argued at the time that a publicly funded solution would be more appropriate.

So what's happened since? Fifteen firms had social tariffs in place for 2015-16. In the round, these tariffs have not been a silver bullet, but nonetheless have established themselves as a valuable tool in the industry's affordability armoury. CC Water's senior policy manager Andy White maintains there is still a need for public funding to help the water poor, but acknowledges more help is now available than ever before and social tariffs should stay: "We've got this system now. It is serving customers. I'd be cautious about pulling away from that now."

That said, company experiences have been mixed. In its *Debt and affordability* report published at the end of last year, Ofwat said: "Our evidence suggests that the availability and quality of help for customers varies significantly across England and Wales."

While it praised the industry for making "significant progress" in areas such as promoting assistance schemes, engaging with local communities and other stakeholders, managing debt and training staff appropriately, it also noted: "Most companies have not achieved the initial target they set for registered customers for their social tariffs schemes." Among the reasons cited for this were low cross subsidy levels, inappropriate eligibility criteria, lack of uniformity between schemes and low customer engagement.

Lessons from year one

So what lessons can companies learn from the collective experience? This is particularly useful information for those launching new tariffs for the first time this year (see box p22). Among the key learnings we can draw out are:

Recruitment is tough but helpful strategies are emerging. Many report lower enrolment rates than they would like. Recruiting has been perhaps especially tough for Northumbrian Water, which was unable to secure any cross subsidy at all and instead launched a cost neutral scheme last April under which where customers are found to be spending more than they get in, the company will neutralise the deficit up to the value of half the customer's annual water bill, thus giving them more chance to make ends meet. Customer collection manager Mark Wilkinson says as a result its scheme is necessarily restrictive and scrutiny of customer circumstances has to be rigorous and demanding of customers in information terms.

The company had hoped for 2000 recruits by now but has around 1300. On a positive note, though, Wilkinson says the numbers have ramped up since Northumbrian has worked closely with a number of third party agencies – primarily StepChange but all sorts including much smaller more local bodies such as Darlington Council's Financial Inclusion Unit.

Sue Lindsay, head of customer relations at frontier company

Wessex Water, echoes the point. "You have to reach customers however you can. Partnering with advice organisations is crucial." Wessex has seen a 19% uplift in the take-up of its Tailored Assistance Programme package of measures this year through closer partnership working and community engagement. Lindsay explains it has widened its network of partners and developed relationships with them to promote, signpost and refer to Wessex schemes. In addition, it has worked hard on community engagement to raise awareness.

Lindsay stresses the importance of a number of other factors too:

- It is vital to be in a position to seize on opportunities to engage when they present themselves; Wessex operates a "hot key" system with StepChange for instance, so customers can be referred to further help the instant they try to engage. More generally, staff must be appropriately trained to deal with situations as they arise and know how to spot the signs of financial difficulty.
- Communications must be clear. "We've done a lot of work on our promotional material to strip it right back into simple English with very clear calls for action," she explains.
- Schemes must be easy to access. Wessex accepts paper and electronic applications. Those who have record of their financial budgets electronically can simply attach these to the online application form.

United Utilities has faired very well on recruiting customers to its social tariff. Launched last April, this is available only to customers in receipt of Pension Credit; its wider customer base was very clear it would only support a limited cross subsidy (43p, of which the company pays half) and only to help out that particular group. Customer service director Louise Beardmore reports 8,000 customers have been recruited in the year after a three pronged approach: working with a range of partners (including Age Concern, CAB, local authorities and social landlords); training contact centre staff to recognise potential recipients when they get in touch; and proactively identifying eligible customers for the tariff by using both internally held data and credit reference agency data from Equifax.

This year, the company is targeting a further 8,000 recruits. Beardmore is confident of achieving the target – in part because United Utilities is launching a Priority Services campaign later in May to improve its services to those who need special help of one kind of another. Part of that work is proactive tariff review and the social tariff will be promoted heavily as part of this programme.

For Dwr Cymru, a proactive approach has worked too. Managing director of customer services Julia Cherrett explains the company trialled home visits to indebted customers in partnership with an external organisation – and has found this such an successful social tariff recruitment route that it has been put in the activity programme permanently. "Home visits definitely work for us," she says.

- **Eligibility criteria** – keep it simple. CC Water's White says on social tariff eligibility: "The simpler and clearer, the better. And case studies can help customers understand if they are eligible." Northumbrian's Wilkinson agrees. "These can be very disengaged people," he observes. "They can be nervous. Some worry what will happen if they don't get on [to the tariff]. You don't want them to have to jump through lots of hoops."

Cherrett explains Dwr Cymru had to raise the household income threshold it used as an eligibility criteria from £12,500 to £15,000 in October last year following low take up. The company has seen improvement since then, with recruits at around 3,000, though Cherrett says this is "not as far as I'd like to be". She adds: "We are wondering now if we should increase it [the income threshold] further."

The company tries to keep the application process as simple as possible, literally just confirming an applicant's household income against data bought in from a credit reference agency. But even this isn't straightforward. "We don't always get great matches so we often have to ask for other evidence of income, such as benefits statements."

- **Join up water and sewerage help.** A related learning here is that where customers have different water and sewerage providers, a joined up approach is less confusing than two completely separate ones. Potential options are for the water only company to reflect the sewerage company's social tariff arrangements (or vice versa), or for eligibility for one scheme to automatically mean eligibility for the other, even if the details of the schemes are different. New water-only company launchers in 2016 have heeded this lesson (see box). Wessex Water and Bristol Water have for many years harmonised their affordability offerings.

Beardmore argues more collaboration between companies would be helpful from a customer perspective. "It can be quite confusing," she says, "if people on either side of a border are entitled to different types of help". She adds it's important to retain the ability to flex schemes according to regional circumstances, and believes that it is for companies to work together to find the right balance for their customers.

- **Once customers are enrolled, the schemes can work well.** Wilkinson reports low levels of drop-out and good payment rates at Northumbrian. "We take an account management approach and communicate directly with these customers. If they fall behind, there is a process we go through."

- **Social tariffs are insufficient in isolation.** All the experts we spoke to indicated social tariffs must be regarded as one among many assistance schemes companies offer. Ideally, help packages should be tailored to individual customer needs. Some customers will need a number of measures, such as help to repay debt and ongoing assistance with charges.

In addition, particularly for companies operating in areas of economic deprivation, gaining customer agreement for a cross subsidy is inherently difficult and will inevitably be insufficient alone to address the scale of the need. Beardmore says United Utilities is in this position and as well as its social tariff, the company offers an extensive array of other well-established schemes that help an additional 72,000 customers.

- **Limited push back from the wider customer base.** CC Water's White says complaints about the cross subsidy principle or any practical matter relating to social tariffs have been isolated and low level. One could speculate that this perhaps suggests larger cross subsidies might be palatable in future.

Dynamism and data

Given the relative newness of the policy, the complexity and the lack of uniformity across the country, it seems likely that learn-

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ings will run and run; best practice will by dynamic; and new challenges will frequently emerge. The April 2015 launchers will have just grappled with one of these: annual re-enrolment. Wilkinson says the process has been a challenge and the likelihood of a change in a customer's circumstances will depend on the root cause of their need for assistance. A blunt example is that a large family won't go away, but unemployment could.

Cherrett says Dwr Cymru regularly audits its wider assistance package – some 55,000 customers receive help of some kind and the company is targeting 100,000 by 2020 – but finds "there is not a huge amount of turnover in terms of people moving out of a need of help".

Nevertheless, keeping tabs on customer situations is a massive data challenge, and one that is only just emerging. Wilkinson shares: "We don't label customers in our business. But we are trying to get our heads around what we record and how we record it." He offers the example of how its Priority Services Register (PSR) sits and works alongside its records of customers in vulnerable circumstances, to ensure the right help is tailored to individual customer needs and effort isn't duplicated. It is looking outside its own walls too – specifically at sharing its PSR with that of its sister company in energy. "If one of our customers is on dialysis, for example, we would know, but would their energy company?" he offers as an example.

This opens the data sharing can of worms. Data protection rules – primarily the Department of Work and Pensions' reluctance to share its tax and benefits data – have hindered companies as they try to target help the best they can. But there is a chink of light in this area. Ofwat is working with the Information Commissioner's Office on some Data Protection Act guidelines to help companies use customer data securely but more efficiently. And the DWP has agreed to a pilot project with Wessex Water (run jointly with Water UK, CC Water and DEFRA): identifying and contacting Wessex customers it thinks may need help, to flag up the assistance packages the company offers. This pilot gets around data protection problems because DWP will explicitly not be sharing any information with Wessex.

Re-testing the water

Elsewhere, a number of companies have indicated they plan to look again at cross subsidy levels and customer appetite for them. Wessex has already done this ahead of introducing its new Pension Credit discount (see box). Northumbrian Water is researching what made customers who have gone on to its help tariff engage. Once that work is complete, Wilkinson says it will re-test appetite in both its north east and Essex and Suffolk regions.

Cherrett says Dwr Cymru may look again at its cross subsidy if it opts to raise the upper income limit for its social tariff again. United Utilities has new customer research planned with a view to securing additional funding – initially to support more people on Pension Credit but potentially also other groups. "We are much clearer about the proposition now," Beardmore explains, "and can point to actual benefits."

CC Water's White flags up that a major problem on the horizon as uptake rates pick up with the spread of better practice is that cross subsidy funds will easily be depleted – potentially leaving customers in need of help but with nothing to help them with.

Finally, social tariffs offer the theoretical prospect of being self-financing. That is to say that reducing bills to more manageable levels for struggling customers should encourage them to pay something when they may otherwise have paid little or nothing. And that being the case, there is the potential to reduce the £21 cost on the average bill to cover bad debt – possibly to the extent that it neutralises the social tariff cross subsidy. Self financing arrangements have worked for individual companies – Wessex and Bristol's Assist tariff has long functioned on that basis, and Northumbrian's social tariff now does too.

The consensus at the end of year one is it is too early to say whether social tariffs more widely are tending in this direction. But it is certainly something companies will be scrutinising as evidence builds. TWR

NEW LAUNCHES IN 2016

Eighteen out of 21 water companies have had social tariffs in place from 1 April – up from 15 last year. The new launchers – South Staffordshire/ Cambridge and Dee Valley – will be joined by Portsmouth Water from July, taking the industry total to 19 out of 21.

South Staffs and Cambridge's Assure tariff will offer customers with a household income of less than £16,105 discounts of up to 80% on their water charge. Those accepted on to Assure will automatically qualify for the local sewerage provider's equivalent tariff; South Staffs/Cambridge will apply the discount to the customer account and notify the sewerage provider.

Dee Valley launched Here2Help on 1 April, offering 30% discounts to those with household incomes of less than £15,500. Head of customer service Wendy Jones explains it was not feasible to mirror Dwr Cymru's scheme because its customers agreed to a 50p cross subsidy, whereas Dwr Cymru secured a much higher contribution from its customer base. It is targeting 1% of its customer base, approximately 1,700 customers.

Portsmouth's billing year commences on 1July, so that is when its social tariff will begin. Head of retail Paul Barfoot explains the design is based on that already in place at South East Water. Portsmouth will offer its minimum charge (£75.28 for 16/17 billing year) to customers with a household income below the HMRC low income threshold (currently £16,105). He adds: "We will share details of qualifying customers with Southern …so that a customer applying with us will qualify for the Southern Water scheme."

In addition, Wessex Water and Bristol Water (working in partnership), who have long offered social tariffs, each added a new scheme from 1 April targeted at helping those who receive Pension Credit. Anyone receiving the benefit is eligible for a 20% bill discount – a smaller proportion of discount than available to those on the company's flagship Assist tariff, but available to a much larger number (potentially 80,000). Lindsay explains the move: "The elderly were underrepresented despite our efforts to engage. It's a generational issue. But those on Pension Credit often 'suffer in silence'. There is help available to this group elsewhere – things like free bus passes, free eye care, discounted energy bills and so on – and we felt there should also be help for water bills." Unlike Assist, which is largely self financing because it commonly helps those who would have paid nothing or very little to pay something, Wessex needed a customer cross subsidy to fund the discount for Pension Credit recipients given they are currently in the round good payers. The company conducted fresh research and secured two-thirds support for a £3 cross subsidy."

PR19 AND WRMP SCHEDULES ALIGNED

Government and regulators streamline planning but risks remain.

Governments, Ofwat and environmental regulators have acted on industry calls for greater alignment between the planning processes for Water Resources Management Planning and the 2019 price review. DEFRA, the Environment Agency and Ofwat have agreed the timetable shown in the table to govern both processes for companies based wholly or mainly in England. Similar arrangements have been put in place with the Welsh Government for companies based wholly or mainly in Wales.

The timetable announces that the date for business plan submission will be 3 September 2018. It also sets out proposed dates for draft and final determinations, though notes these will be subject to further consultation through Ofwat's Water 2020 programme.

In a letter, the English parties affirmed: "We have reached the conclusion that the revised timetable offers an appropriate balance of the risks between the WRMP and PR19 planning processes. It ensures that public consultation on WRMPs will be completed before business plans are submitted to Ofwat; this is a change to earlier proposals that should help ensure companies have the evidence needed to underpin future water resources investment."

Risks

However, the government and regulators cautioned the timetable wasn't set in stone. Aside from the Water 2020 consultation process, which could affect the design of the price review, they pointed out the wider policy context of decisions to be taken by the government later this year – a potential direction on level of service and a National Policy Statement for water resources, as well as the National Infrastructure Commission's first National Infrastructure Assessment expected in early 2018.

In addition, they highlighted two risks within companies' control:

- Water companies will need to publish their WRMPs for consultation promptly during January 2018 to ensure there is sufficient time available to produce a Statement of Response by July 2018 within the statutory 26 weeks consultation and response period.
- It is likely business plans will be submitted before the secretary of state makes decisions on WRMPs. Companies will need to ensure that their business plans as far as possible reflect their WRMPs when they are submitted on the 3 September 2018.

DEFRA, Ofwat and the Environment Agency pointed out: "Delays to either of these stages of the process would create issues for the PR19 and WRMP timetables. However we think that these risks are manageable with effective planning and use of risk-based approaches from the regulators. It is up to companies to own and manage these risks and ensure they prepare appropriately."

Ofwat added that it would be flexible should a company need to update its WRMP during the price review process – for example due to the outcome of a public hearing – and would not penalise it for delays and discrepancies it could not have reasonably foreseen or control. It added though: "However Ofwat will expect business plans to include a clear strategy to manage risks...Water companies' management of these risks will be taken into account in Ofwat's risk based review." TWR

WRMP AND PR19 TIMETABLE FOR COMPANIES WHOSE AREAS ARE WHOLLY OR MAINLY IN ENGLAND

	DATE	WRMP	PR19
2016	Spring	Defra publish WRMP Guiding Principles Defra, Welsh Government, Environment Agency, Natural Resources Wales and Ofwat publish WRMP technical guidance (WRPG)	
	May		Ofwat publish design consultation
	Spring (2016) → Winter (2017)	Companies conduct pre-consultation on draft WRMPs	
	October/ November		Ofwat consults on customer engagement and outcomes, and further design issues
2017	June/July		Ofwat publishes price review methodology consultation
	1 December	Companies submit draft WRMPs to Defra for security clearance and checking	
	December		Ofwat publishes price review Methodology
2018	January	Companies publish draft WRMPs for public consultation	
	July	Companies publish Statement of Response within 26 weeks from consultation	
	3 September		Companies submit business plans to Ofwat
2019	Subject to Secretary of State approval	Defra Secretary of State decisions on companies' WRMPs	
	March/April		Ofwat publishes enhanced company draft determinations
	June/July		Ofwat publishes standard company draft determinations
	December		Ofwat publishes final determinations

UKRN on cost of debt and data sharing

Regulators' forum the UK Regulators' Network (UKRN) will focus on four policy workstreams in 2016-17, according to its latest work programme document: cost of capital, sharing data on customer vulnerability, consumer engagement and alternative dispute resolution (ADR).

The focus of the cost of capital piece will be on a review of regulators' tools for anticipating the cost of debt – "a crucial component in estimating the appropriate cost of capital". The review will particularly scrutinise tools used for investors and lenders and the costs, benefits and risks associated with adopting new tools. The backdrop will be a potential move away from RPI-based indexation. Ofwat is already engaged in a review of the cost of debt and moving away from RPI as part of its Water 2020 work.

In a move that reflects industry cooperation on vulnerability signposting agreed between Water UK, Energy UK and the Energy Networks Association, the UKRN said it would bring on the design and implementation of a process to capture data on the needs of consumers in vulnerable circumstances. The intention is for this to be shared by companies in different sectors.

Under customer engagement and challenge, the UKRN said it will look to better inform regulatory decisions by assessing the emerging models that regulators are using to improve companies' engagement. This will build on the work already undertaken by the group on consumer engagement and switching.

And finally, UKRN plans to develop a shared understanding and good practice in ADR through a review of the benefits/risks it poses to consumers. The regulators also said they will assess current ADR providers and models.

Other projects that may be included over the next three years include: the value of customer data as an asset – an examination of whether is there a role for regulators in how this asset is managed; and how customers make decisions about services – an examination of the key factors that consumers consider when selecting a provider.

Ongoing projects that will continue include:

- An assessment of the key benefits and risks to consumers in using online intermediaries.
- Work to improve the transparency of regulators' weighted average cost of capital calculations. This will involve publishing annual comparison documents that outline decisions relevant to WACC calculations; supporting fellow regulators to make comparisons of cost of capital decisions when required; introducing a bi-lateral or multi-lateral 'peer-review' process for relevant cost of capital decisions; seeking opportunities for commissioning joint external research where the benefits can be shared; and encouraging and supporting secondments or loaning of staff between regulators.
- Raising awareness of support services for vulnerable customers
- A cross-sector review of reward and penalty regimes to ensure resilience to extreme weather.

NEWS IN BRIEF

Now boarding: Thames Water's strategy and regulation director Nick Fincham is to join the company's board as an executive director following an announcement that chief financial officer, Stuart Siddall, is to retire at the end of 2016. Fincham has been a member of the company's executive team since April 2011 and will continue in his current roles.

Wise moves: Waterwise has appointed three new board members: former finance director and managing director at United Utilities, Martin Bradbury as chair; Ofwat's director of parliamentary and public affairs, Nicci Russell; and policy manager Rose O'Neill from WWF.

Down the river: a £14 million sustainable drainage scheme to sweep surface water direct into the Thames is poised for construction in west London. The Nine Elms project is a collaboration between Thames Water and local authorities to relieve already over stretched Victorian sewers from the run off from a major development underway on the South Bank covering some 16 ha.

Five new appointments to Ofwat board

The environment secretary has appointed three new non-executive and two executive members to Ofwat's board. The non-executive appointees are: former chief of the Green Deal Finance Company, Mark Bayley; current managing director and former chief of the High Speed 2 rail project, Alison Munro; and Port of Dover chief, Tim Waggott. Munro will also chair Ofwat's audit and risk assurance committee.

Two recently appointed senior directors who will join Ofwat in the summer are to become executive members of the board. They are former head of the Treasury's competition, markets and regulation team, Aileen Armstrong; and former chief operating officer of Infrastructure UK at the Treasury, currently seconded to Shell Group, John Russell.

The appointments follow the departures of non-executives Robin Paynter Bryant, Wendy Barnes and Chris Burchell and executive member, Keith Mason, who have all completed their terms.

IRISH WATER SURVIVES BUT BILLS SUSPENDED

Concern over the demise of Irish Water (IW) following the Irish election has ultimately proved an exaggeration although it was a close run matter.

The minority Fine Gael government now running the country has secured an agreement on water services with Fianna Fáil (the second largest political party) that means IW will be retained as a single national utility in public ownership and responsible for the delivery of water and wastewater services.

However the aftermath of the election has potentially serious and far-reaching repercussions for the semi-state company in terms of its governance, activities and operations as well as the crucial issue of water charges.

The new administration has committed to introducing legislation by mid June to suspend domestic water charges for a period of nine months from the end of the current billing cycle. The suspension will be extended by the Government if this is required and requested by a new special parliamentary committee on the funding of domestic water services.

As well the government has committed to establishing a statutory so-called External Advisory Body designed to "build public confidence in Irish Water". This body will advise on measures needed to improve the "transparency and accountability" of the organisation.

It will publish advice to the Government and give quarterly reports to the new parliamentary committee on the performance of Irish Water in respect of the implementation of its business plan. This new body will focus on:

- staffing policies
- infrastructure delivery and leakage reductions
- improvements in water quality, including cost reduction and efficiency improvements
- procurement, remuneration and the elimination of boil water notices
- responsiveness to the needs of communities and enterprise.

Commentators have already pointed out there will be an overlap with the functions carried out by the Commission for Energy Regulation (CER) the economic regulator of the water sector.

Also planned is the creation of a so-called Expert Commission. This new entity will make recommendations on the sustainable long-term funding model for the delivery of domestic water and wastewater services by IW. The expectation is that this will complete its work by the end of this year.

The Commission's deliberations will take into account the maintenance and investment needs of the water and wastewater system in the short, medium and long-term. Also under consideration will be how IW will be able to borrow to invest in water infrastructure. Other issues for the Commission will include water conservation, Ireland's domestic and international environmental standards and obligations and – crucially – the role of the regulator.

The political agreement is opaque however on the vexed issue of exactly what will happen to those who have not paid their water charges and whether those who have paid will get a refund. Reports in the Irish media suggest many customers have been cancelling existing direct debit arrangements.

Chief Whip Regina Doherty has publicly advised that both members of the public and members of parliament pay their water bills until the charges are suspended in June.

Irish Water has been obliged to charge households for the provision of water services since January last year. The most recent figures show that some 61 per cent of registered customers, or almost 930,000, have paid some or all of their bills.

By Roger Milne

EAC: NO GREEN POLICY GROUNDS FOR BREXIT

Even critics of the European Union offered no environmental policy grounds to support a UK exit from the bloc, according to the findings of a cross-party Parliamentary inquiry.

In its report on a probe into the EU and UK environmental policy, the Environmental Audit Committee (EAC) said: "None of the witnesses to our inquiry, even those who made criticisms, made an environmental case for leaving the European Union." The "overwhelming majority" of inquiry witnesses felt that membership of the EU has "improved the UK's approach to environmental protection and ensured that its environment has been better protected".

Most of the participants in the inquiry, according to the report, took the view that the UK lacked ambition in its implementation of EU environmental standards. For example the WWF UK along with the Wildlife Trusts said "under-implementation, a lack of ambition and excessive complexity" characterised the UK's approach to the Water Framework Directive.

"We noted that many witnesses implied that if the UK were free to set its own environmental standards, it would set them at a less stringent level than has been imposed by the EU," said the report. It added EU membership has ensured the UK took action on environmental matters "on a faster timetable and more thoroughly than would otherwise have been the case".

EU member states gave the EU legislative powers over environmental matters "in the recognition that there were significant benefits to solving some environmental problems multilaterally," the EAC report said. "The overwhelming majority of witnesses who gave evidence to our inquiry stated that these benefits remain."

CMOS MOVES TO USER ACCEPTANCE TESTING

Work on central market systems delivery has moved into the user acceptance testing phase. MOSL confirmed that a new release of Central Market Operating System (CMOS) code was deployed successfully over the weekend of 7/8 May enabling it and companies to continue testing.

MOSL released the core CMOS system – 80% of the code base on which the market will be opened next year – as planned on its revised date of 25 April. Over 90% of tests had been passed and a note setting out what capability was and wasn't proven was issued.

In a letter to MOSL members, chief executive Ben Jeffs said: "In adopting this approach, we are mindful of the feedback we often receive about the need to issue deliverables as promptly as possible, rather than holding back awaiting the fully finished solution. With 92% of the tests successfully passed, we are assured that the software is stable and contains enough proven functionality for you and your teams to start to familiarise yourselves with it and to commence your own testing of the capability that has been successfully tested."

> The second independent review of Open Water is expected later this month

Within a few days of the drop, multiple retailers and wholesalers had logged on and started to familiarise themselves with the system. The CMOS settlement engine being built by CGI's delivery partner Bridgeall has passed simulated data tests and moved on to test "real" market transactions.

In other recent updates, MOSL has confirmed the following:

Market Entry Assurance (MEA): an appeals process independent of MOSL will be delivered, and market and interface training to support the MEA process will take place in early June.

Bi-laterals: MOSL will facilitate reaching an agreement on bi-laterals following industry requests. It pointed out this was not a formal area of its responsibility but that it would support company efforts.

Readiness: informal feedback from market participants using third party middleware providers is that they are up to three months behind on development. MOSL itself plans to increase management capability to make up time lost during the earlier CMOS delay. Early this month it announced the appointment of Mark Coulthread, as interim Chief Operating Officer. Coulthread, who has a track record in a similar environment as interim COO at electricity market operator Elexon, will lead the work of the market engagement and market services teams; oversee the delivery of the integrated programme plan; and help to transition MOSL to become the enduring market operator.

Observers: companies associated with existing MOSL members are to be offered the informal status of "observer" so they have visibility of communications without voting rights.

Programme update

Elsewhere at the Open Water programme level, there have been developments in the past month in the following areas.

Independent Review. Publication of the second independent review of the Open Water programme – and the programme's response to recommendations – is expected later this month. Ofwat commissioned a series of reviews in March 2015 to measure the success of the programme at important stages, to give the industry and other stakeholders confidence, and to make changes as necessary. The first – baseline – review took place in June 2015. It gave the programme an amber rating and recommended a significant number of actions against the key categories of: governance; transition planning; organisational capabilities; risk management; communications and engagement; and readiness for the next phase. The second review will not delve into areas of policy and although it follows a similar process to public sector Gateway Reviews, will not in fact act as a "gate" to the next phase of the programme.

Customer awareness. With one year to go until the market opens, the programme has committed to step up work to raise customer awareness, though market participants are expected to take the lead. For starters, Open Water has published online a guide to the market for non household customers, which sets out all the basics. A related strand of work concerns customer protection (see story p30). Ofwat said it plans to issue a final customer code of practice this month.

Credit. Further consultation on back stop mechanisms is being developed and is due out shortly. This consultation will help to formalise the approach for payment terms/credit options.

Assurance. Phase one of the Assurance Framework has been studied to identify and implement improvements to the process ahead of phase two. A number of strands of assurance activity (including assurance letters, DEFRA's Assurance Group activities, MOSL's MEA testing and the independent review) are considered appropriate for a programme of the scope and scale of Open Water, and the programme is mindful of the need for clear communications about how these distinct strands fit together. Ofwat also intends to carry out a targeted review on readiness later this year. It will identify the areas of greatest risk and see if companies are adequately addressing them. TWR

INDUSTRY COMMENT

COMPETE, DON'T JUST COMPLY

A proactive response to market opening – be it to actively compete or exit – is less risky than just waiting to see how things turn out. By PA Consulting.

The strategic landscape for the water sector is changing more significantly than at any time since privatisation in 1989. Yet the full implications of these changes are yet to be widely recognised. As a result, it may be tempting for some water companies to respond in a passive way and simply focus on ensuring they comply with the requirements set by market reform. However, the Severn Trent/United Utilities retail joint-venture, announced at the beginning of March 2016, shows that a passive approach is not going to be a sustainable long term position.

There is an increasingly urgent need for water companies to develop coherent strategies to deal with competition. There are two clear options. They can take a reactive stance to competition in the retail market, complying with the minimum requirements arising from market opening but without taking any additional measures, essentially a 'wait and see' approach. Alternatively they can take a proactive position deciding either to compete or not to participate in the competitive NHH market.

Reactive stance

The wait and see position gives companies the chance to see how NHH competition will develop and gives the market time to settle. It also allows the first movers to test the new framework, and let others see how things develop before making any significant move.

> **A passive approach is not going to be a sustainable long term position**

This may appear sensible, considering the difficulties inherent in any project of this size, the small short-term financial impact of market reform, and the lack of experience of water companies in managing open market competition. However, the reality is:

- *The market will settle and a company involved from day one will be better prepared to face any issues that emerge later on.*
- *The financial impact will significantly increase if/when the household market opens to competition, and there will be an even greater impact associated with upstream competition.*
- *The sooner in-house commercial experience is developed, the better prepared companies will be to compete within a less regulated and more competitive framework.*

So while a wait and see approach is superficially attractive, this position carries more risks than taking a more proactive response.

Proactively compete

A proactive decision to compete should start with a recognition that a strategy of defending a company's existing customer base is unlikely to be a viable option as, over time, customers will be cherry-picked by other competitors. The fixed cost nature of the business means that there is no choice but to proactively target non-household customers outside an incumbent's geographic area. This decision to compete for new customers will only be successful if a number of key business processes, such as customer service and tariff setting, are managed exceptionally well. In the case of customer service, this could be achieved through a more personal relationship with the customer.

Companies also need to decide which customers or customer groups will be both targeted and defended. This process has now been made easier by Ofwat's creation of a transparent market through the publishing of extensive customer group and tariff data at PR14. As a result such decisions can now be based on detailed analysis, enabling a realistic assessment of the likely costs and benefits of acquiring key customers.

> **A strategy of defending a company's existing customer base is unlikely to be a viable option**

Water companies should look at the experience of others, who have had to deal with comparable situations. These retailers have now acquired the commercial expertise that could potentially give them an advantage in the English retail NHH market – and so could pose another threat to those water companies who decide to adopt a reactive stance.

Proactive stance to exit

Alternatively, if companies decide not to participate in the competitive NHH retail market then the detailed implications need to be considered rapidly. Even though non-household retail volumes are relatively small, the largely fixed cost nature of the business, and an inability to exit the household retail market, mean that coming out of the NHH retail market will increase the costs of serving the household market.

Compared to some of the other options, companies may feel this is a price worth paying, because it will enable them to focus on other aspects of the business without distraction. But they still need to understand that the decision to exit the market will have long-term implications on the overall business.

What is important is that they address this fundamental question sooner rather than later. That means ensuring that they conduct a thorough review of the commercial, operational, regulatory and financial implications for the business of exiting.

It is clear that boards and executive teams need make long term decisions now, recognising that their room for manoeuvre will become increasingly limited as we head towards April 2017. That means looking beyond ensuring the necessary regulatory compliance with market reform requirements to weighing the full range of options. This should be based on a thorough analysis of the business and an understanding of the dynamics of the market. A clear focus now will be the best way to ensure their long term success in an increasingly challenging market. TWR

By Stève Hervouet and Keith Gardner, water experts, and Steve Frobisher, business strategy expert, at PA Consulting Group.

POLITICIANS WARN OF DOMESTIC RISKS

Work overload, price deaveraging and customer disengagement were among the concerns aired by the APPWG on a domestic water market.

Introducing domestic competition in water could be a damaging distraction from some of the really pressing issues the sector faces. That was one strand of debate among parliamentarians at last month's All Party Parliamentary Water Group (APPWG) meeting in Westminster, which discussed opening the household retail market.

APPWG chair and Labour MP Angela Smith first questioned the logic of the timing, given DEFRA already faces a packed schedule. This includes work on non household retail, abstraction reform, 25 year resource plans, a flood management review and food and farming planning. She pointed out that we could end up "messing up" abstraction reform if the Department and companies are hurried by the need to work on domestic competition. She added that preparing for a household market carried a "risk of serious disruption" for the industry, pointing out there are "real risks here of throwing the industry into serious chaos".

A number of attendees from water companies made similar points in discussion. One pointed out the industry has pressing structural issues to deal with; another that sorting out water stress and abstraction reform was key.

Each of the meeting's formal speakers – Ofwat's director of strategy and planning Iain McGuffog, CC Water chief executive Tony Smith and Germserv's head of transformation Tony Thornton responded. Smith acknowledged that "there clearly are risks doing all these things simultaneously" but added that these risks could be mitigated. McGuffog pointed out the industry needed some clarity on where a household market might go before the 2020 price review, and raised the prospect of a phased opening as a way of staggering the workload. Thornton said the process could be made manageable with a bit of pragmatism: policy makers should decide on a date for opening and work back from there, only taking on what is feasible in the time available.

APPWG co-chair Baroness McIntosh of Pickering, who declared herself generally supportive of competition prospects in retail and upstream water markets, questioned the price deaveraging effects a household market might have. (see box – Poor and vulnerable at risk of higher bills).

Another APPWG member appeared to question whether the market would be worth it. He said it seemed unlikely that anything other than price would provide a basis for customers to switch, and that energy had struggled to engage a significant proportion of the customer base despite far higher bill savings being on offer. McGuffog countered that some sections of the customer base may enthusiastically greet opportunities in water if they existed – for instance, early technology adopters and prospective smart home owners (see box - Look to the future)

Research and scrutiny

In his opening comments, McGuffog said Ofwat was approaching the cost benefit analysis it had been asked to conduct by HM Treasury with an open mind, though it had set a "high hurdle of evidence" on why water might be the only utility for which customers wouldn't have a choice. He sketched out its process. In addition, he said the regulator was gratefully drawing on primary research being undertaken by CC Water and all the contributions coming from the industry. He acknowledged the timeframe was "tight" given the amount of work there is to do.

CC Water's Smith gave the APPWG

LOOK TO THE FUTURE: SMART AND CONNECTED TECHNOLOGIES

Projections for a domestic retail market in water based on existing regulation, technology and characteristics of participants are all but certain to prove inadequate. So it is safe to say that investment decisions that do not include some account for evolution – possibly extensive and swift evolution – would be fragile and high risk.

For signs of how a water retail sector might evolve, investors should look at the impact on the energy sector of shifts in technology. Advances in communication between control devices have soared over the past five years. This so-called machine-to-machine (M2M) connection is behind kit such as remote programming for domestic heating and security control.

Researcher Analysis Mason has forecast that energy supplier applications will account for 67% of M2M connections worldwide by 2023.

Energy suppliers' growing deployment of M2M technologies will be a manifestation of a transfer in their businesses away from energy sales to service provision.

Independent researcher and strategic advisor Lazarus, in a recently published analysis of the opportunities and threats facing utilities from the growth in smart technology in UK homes, has urged the energy players to get a move on: "Utility companies have a unique opportunity to transition their businesses from declining, politically-controversial, commodity provision to growing, high-margin, brand-enhancing service provision. However, their window of opportunity may be short-lived," writes Lazarus partner Edmund Reid, author of the report: *The smart shift to services: transitioning from commodity to service provision.*

The need to move swiftly comes, according to Reid, from evidence of a first mover advantage in the customer services market in that retention is strong once customers have bought into the technology. Something prospective water retailers might be wise to note.

There is it seems at least one warning that prospective water retailers might take from the current battle between technology firms, device makers, retailers, telecom providers and energy suppliers seeking to wrest control of the home services market. "Investors that accept the profit potential from connected homes are often sceptical about the ability of utilities to compete in a technology-driven market," cautions Reid.

However, it would be risky to assume that future developments could be anticipated on the basis of what went down in the past. In a comment that possibly semaphores the degree to which technology might disrupt a water retail market, Reid says of the home services market: "We expect applications to develop in ways that we have yet to imagine, similar to the innovation in smartphone apps."

a “taster” of the research the customer body has conducted of consumer attitudes towards and appetite for switching water supplier. Customers like the idea of competition and choice, he reported, but expected there to be sizeable price reductions on the table. He suggested “engagement and switching might be somewhat limited” given only 10% of the bill was on offer and because customers would be influenced by their not entirely positive experiences in energy and other markets. Elsewhere, Smith reported that CC Water was also scrutinising policy issues that a domestic market would raise, including metering, disconnection and social tariffs.

Gemserv’s Thornton made a number of observations on what might happen in water, drawing on the energy experience. On the positive side, there are around 30 active suppliers in the market many with business models different to those of the big six. There are around 500,000 switches a month. On the negative side, consumer trust is low, complaints common and Ofgem has had to investigate supplier behaviour.

Thornton said he was pro-competition and considered 2020 to be an achieve timetable for market opening to start, providing a date is fixed and the programme worked back from there. He cautioned water companies to expect fundamental changes to the nature of their operations and their staff, though, should market opening go ahead. He reported that Centrica had expected to retain its existing staff but post gas market opening had to develop a whole range of new capabilities including around data analysis, customer segmentation and hedging. TWR

POOR AND VULNERABLE AT RISK OF HIGHER BILLS

The poor and the vulnerable would be in the firing line if retail cross subsidies unravel without mitigation in a competitive household market.

That was one key finding of extensive analysis conducted by ICS Consulting in an independent report to Water UK. Data was provided by water companies representing about 12 million households – just over half of the total households supplied with water and sewerage services in England and Wales.

The report, *Distributional impact of introducing household retail competition in the water sector*, estimated cross-subsidies for the differing costs of providing retail services for households to amount to £52m a year (£4.30/billed household) based on PR14 average cost to serve data, or £184m a year (£15.10 per billed household) under a de-averaged cost approach that accounts for wider variations in the household cost to serve.

ICS found complex patterns of subsidy (contribution and benefit) within all demographic segments it examined. Examples (based on the upper deaveraged estimate) include:

- Households who are mostly likely to be in debt with their water bills receive a benefit of £145 per household. Households who are least likely to be in debt contribute on average £20 per household. The most recent Ofwat estimate of the cost of household bad debt is a similar £21 per household.
- Households in the bottom 30% of incomes receive retail cross-subsidies equal to about £43 per household. Households in the top 30% of incomes contribute on average £17.
- Households who pay by direct debit contribute on average a subsidy of £14. Households who do not pay by direct debit receive on average a subsidy of £19.

ICS went on to model the impact of retail switching on current cross subsidies across a range of market scenarios, drawing on energy sector evidence. It found: “In the absence of policy and regulatory measures to mitigate the distributional impacts of retail switching, our evidence suggests that these retail cross-subsidies, particularly to households in vulnerable circumstances could come under pressure.” The overall cross subsidy recoverable from current retail charges could over time, and if not mitigated, reduce. “This may constrain the ability of incumbent companies to assist those households in vulnerable circumstances within the current financial and regulatory framework for household retail services.”

The report advocated:

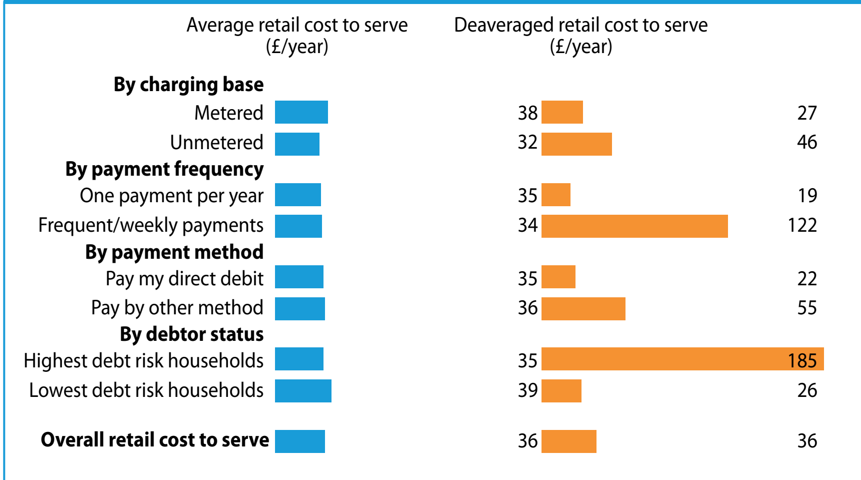
- The importance of recognising in current policy debates the potential for distributional impacts arising from household retail competition. It will be essential to assess the actual costs of providing retail services to different household groups and to factor this in to the consideration of overall costs and benefits, and the design of any potential household retail markets.
- Consideration of ways to mitigate the challenges of these potential distributional impacts. The report said: “Managing any transition to household retail markets in the water sector could also have an important influence on the pace and scale of any unwinding of these cross-subsidies.”
- Understanding how these challenges can be managed across these markets as retail competition develops in water will be an important further consideration.

RETAIL COST TO SERVE: AVERAGED V DEAVERAGED

ICS notes that the retail cost to serve at the household level will be an important determinant of the size of cross subsidies. The blue bars in the chart show the average cost to serve as assumed in the regulatory price controls. The orange bars show de-averaged costs to serve, taking account of various factors. For both measures the overall retail cost to serve averages out at £36 per household per year.

The data shows the average cost to serve measure is relatively uniform across the cost drivers. The de-averaged measure shows significantly more variation.

COMPARING THE MEASURES OF THE HOUSEHOLD RETAIL COST TO SERVE



Source: ICS analysis of data provided by computers

UU/ST JV cleared and funded

In a move that will give confidence to other companies considering clubbing together to compete in the 2017 business retail market, the Competition and Markets Authority has cleared the 50:50 non-household retail joint venture between Severn Trent and United Utilities. The inquiry was launched on 3 March and cleared on 3 May without proceeding to a Phase 2 referral.

Both companies intend to apply to the secretary of state for consent to exit non-household retail and to fully transfer their non-household retail activities to the JV, to be called Water Plus.

Separately, Ofwat has granted consent for United Utilities to loan the JV up to £100m over five years. The water company was required to apply for regulatory approval under the terms of its licence. Severn Trent's licence does not contain a full set of financial ring fencing conditions so it did not require formal consent to make loans from its appointed business. Both companies provided assurances in relation to customer protection, competition, licence compliance, financing and resilience. The funds will be used as working capital.

Licence changes to accommodate market codes and customer protection

Stakeholders have until the end of the month to respond to a series of changes Ofwat has proposed to monopoly and inset appointees' Instruments of Appointment to help establish the business retail market.

Three new conditions are proposed:

- **Market Arrangements Code condition:** this is needed because the code is not statutory. Ofwat said it may need to make this change ahead of the other changes, as it is relevant to the establishment of the market operator.

- **Stapling condition:** this will require appointees with both wholesale and retail businesses to comply with the provisions of the Wholesale Retail Code, which governs behaviour and interactions in the market.

- **Customer protection condition:** this requires compliance with the Customer Protection Code of Practice.

In addition, Ofwat has proposed amendments to a number of existing conditions. These aim to:

- Remove obligations relating to the current arrangements for the existing Water Supply Licensing regime that will no longer be required after April 2017. These are the requirements for appointees to comply with the Customer Transfer Protocol (CTP) for the transfer of supplies to premises of eligible customers, and to have an access code. Ofwat noted: "We are still considering whether we need to retain the CTP and access codes for introductions of water, where the wholesale element of old combined supply licences will be replaced by the new English Wholesale Authorisations and the Welsh Supplementary Authorisations of new water supply licences."
- Remove duplication and potential inconsistencies between old and new arrangements.
- Introduce a new requirement for a separate Certificate of Adequacy for all appointees' non-household retail businesses, so that all appointees face similar obligations to licensed retailers.

The regulator said it was minded to use section 55 of the Water Act 2014 to make the changes. It is considering two options to cover companies who opt to exit the market (given some of the proposed amendments might not be needed, and the secretary of state is not due to issue final decisions until January 2017): the production of two separate versions of the Instrument of Appointment – one for exited and the other for non exited appointees; or making the changes for all appointees, but using a combination of "sunset" and "sunrise" clauses to give effect to the relevant provisions in each case. Its preference is for the latter.

The proposed changes follow Ofwat's earlier consultation on priority licence amendments, notably to introduce a market readiness condition and to remove the in-area trading ban. The plan is to make the changes ahead of market opening in April 2017 although in most cases the changes would only take effect at market opening.

- Ofwat is expected to publish its final Customer Protection Code of Practice this month following extensive stakeholder engagement. This is one of a raft of customer protection activities the regulator has undertaken in preparation for market opening. In the last month, it has made proposals to government for changes to the standards of performance and associated payments set out in the Guaranteed Standards Scheme. It has also published conclusions following consultation on interim supply and retail exit codes.

WSSLs to be tweaked for self supply

Ofwat has just finished consulting on self supply licences. Its approach is to adapt the standard licence conditions for the new Water Supply and Sewerage Licences (WSSL) that were published by the secretary of state on 17 March 2016 to make them suitable for those who seek only to supply their own and associated premises. The idea is to ensure self suppliers are fit to deal with wholesalers through licensing, but free from unnecessary regulatory burdens that might be off-putting.

In a consultation issued last month, the regulator proposed excluding the requirement for self suppliers to provide a "Certificate of Adequacy" on the grounds that no unrelated customers are exposed to risk of the licensee ceasing to trade. In earlier consultations, some suggested that the certificate of adequacy be maintained to provide some protection to the wholesaler. Ofwat said wholesalers would be protected by credit provisions within the Wholesale Contract and Wholesale-Retail Code. It also excluded the requirement on arms length transactions given the licensee is only purchasing for its own consumption; there is no separate customer to protect from discriminatory practices.

In addition, Ofwat proposed a number of modifications to the standard conditions: on licensee conduct; the provision of information to wholesalers and Ofwat; and the Customer Protection Code of Practice.

Once it has considered consultation responses, the regulator intends to publish the proposed self-supply modifications to the WSSL standard conditions, together with supplementary application guidance.

INDUSTRY COMMENT

THE OPEN MARKET AND THE INFORMATION REVOLUTION

Retailer-promoted water efficiency services will spur on the adoption of the Internet of Things, as Laurie Reynolds explains.

There are many non-domestic customers who currently use significant volumes of potable water and discharge similar volumes of greywater. Launderettes, market gardens, breweries, hotel and restaurant chains, hospitals, leisure centres and many others will benefit from greywater and recycling technologies which will reduce their costs.

Retail providers will improve their profit margin through provision of value-based water management services to reduce wholesale water purchases. Water efficiency encompasses a range of different solutions for water management, including smart sub-metering, demand dependent and time-of-use tariffs, leakage and demand reduction through active pressure management and recycling.

Greywater systems

All of these solutions require measurement, control and real-time data management systems to minimise consumption and discharge. Market analysis indicates that in 2014, the global market for greywater recycling was larger than for desalination and many water technology suppliers such as GE Water have switched development focus from supply side to demand-side solutions including recycling technologies.

AquamatiX is currently working with one of the market leaders in the recycling field, providing a monitoring system for a small but sophisticated water treatment plant in the basements of top-end London commercial property developments. Toilets are flushed and the green-roof terrace and hanging gardens are irrigated using harvested rainwater and recycled greywater.

The treatment plant comprises several small pumpsets, tanks, actuated valves, filtration, disinfection, sterilisation and storage of clean water - very similar to a small municipal treatment plant.

The treatment plant often has to be integrated with sub-metering so that operating costs can be correctly allocated to individual tenants in proportion to their use. In effect, every new commercial building is becoming a miniature water and wastewater smart network.

The monitoring system is very similar to what has traditionally been referred to in the municipal sector as SCADA or telemetry. However, alarms and performance data are no longer reported to a central control room via a proprietary SCADA system, where a dispatcher will acknowledge the alarm and send a utility employee in a van to attend to the problem.

Cloud hosting

The control centre in a water services orientated world is virtual, hosted in the cloud and likely to be based on an Industrial Internet of Things (IoT) platform such as WaterWorX.

The person responding to an alarm is a mobile field service technician responsible for hundreds of similar plants across a region of the UK. The alarms are sent and acknowledged via a smartphone, service response time and time to fix the problem are all measured in real-time.

The technician has access to PDF copies of the operating manual for that specific plant and can call up charts showing the operating history leading up to the fault. A log of the fault together with a field service report is automatically created by the system and any additional knowledge relevant to the specific fault is captured in a Wiki – a knowledge repository for that plant available to all authorised users.

Predictive diagnostics

Different levels of user have access to different parts of the system depending on their 'need-to-know'. In advanced applications, process specific prognostics (predictive diagnostics) can identify a potential problem well before a service failure occurs.

The plant's energy and water efficiency performance data is monitored by the service manager in real-time via a set of dashboards, and a monthly service level report with performance against targets is automatically emailed to the facilities manager responsible for a group of buildings.

The alarm and water use data is integrated with the building management and asset management systems for the site. This is real-time remote asset and service monitoring enabled by secure, low-cost connected systems.

Security strategy

Concern about security is probably the most significant barrier to widespread IoT adoption. IoT is an over-hyped term. It is not that new; it was coined by Kevin Ashton, a Google scholar in 1999, to describe a world where all things around us – fridges, cars, personal health condition monitors, medical instruments and turbo-generators – have sensors and microcontrollers built into them to monitor and control their operation. The earliest examples of IoT - ATM and vending machines - were around long before the term IoT. They are now a familiar part of daily life.

Security is taken very seriously by technology providers. We all use ATMs to manage our personal money without paying too much attention to data security or privacy because they are convenient and the value we gain is greater than the perceived risk.

So it is and will be with the majority of new IoT devices. No system can ever be 100% resistant to attack; but because they have to provide complex connectivity, industrial IoT systems are designed with multiple levels of security.

The IoT security industry is developing very powerful detection and prevention strategies and can be made more secure than traditional real-time systems which were designed before cyber security became the scourge it is today.

Opening up the water market will be the biggest change to the UK water industry since privatisation. Increased competition will drive a new focus on customer service and water management which will encompass the whole water cycle. Rivers, canals, water resources, supply, distribution and wastewater reuse will all benefit from integration of low-cost sensors, mobile communication networks, smartphones, tablets, cloud computing and data analytics; in other words an information revolution. TWR

Laurie Reynolds is managing director of AquamatiX, a company pioneering the Internet of Things and new wireless sensor networks in the water industry. WaterworX is a next generation SCADA system built by AquamatiX and powered by IoT platform ThingworX.

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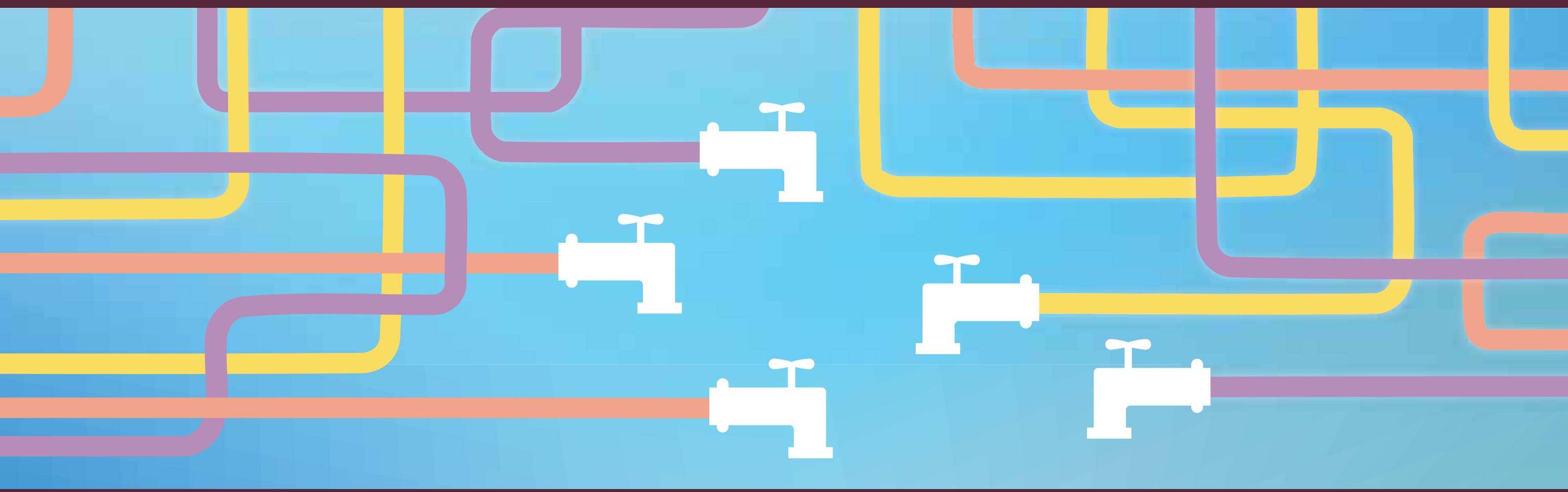

Water Market Reform

4th July 2016
The Waldorf Hilton, London

Laying firm foundations for the new market

Water Market Reform will bring together over 100 senior stakeholders from water companies, Ofwat, the Government, and the supply chain ahead of major legislative changes coming into force in 2017 and beyond.

Key reasons to attend:

- Presentations on the systems, processes and business strategies for the non-household market
- Speakers including the CEOs of Anglian Water, OFWAT and MOSL
- Fresh perspectives with insights from Moneysupermarket.com
- Brand new content on upstream reform and the opening of the domestic retail market
- Meet those laying the foundations of the new market with over 150 attendees

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