THE
WATER REPORT
POLICY | REGULATION | COMPETITION

OCTOBER 2016

National service

Sector calls on government to set minimum levels of service on drought in the public interest.

COMPETITION WATCH

- Successful start for shadow
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THE WATER REPORT COMPETITION WATCH

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EDITOR'S COMMENT

Beyond reasonable drought

Having reviewed the new evidence presented on water resources 50 years out (see report p6-9), I can see no reason why we as a country wouldn't want to invest in increasing our resilience to drought. In fact the evidence is so compelling that benefits would outweigh costs that really the onus should be on justifying why not to invest, rather than why we should.

Theoretically there should be no issue in securing our water supplies under the current framework. Customers should be falling over themselves to pay to ensure they and their children and grandchildren have enough water. But that relies on sophisticated communication of difficult issues, and in everyone seeing the long term picture when there may well not be an immediately apparent problem.

Plus an intellectual point made by the study is very pertinent: that water shortages would affect society as a whole – agriculture, industry, business, the environment, wildlife and so on – and so should not just be left to water companies and their customers to field.

So the report calls for a more supportive policy framework from government, and in particular for national minimum levels of resilience to be set. These would remove the need for protracted dialogue over the basics and enable water companies to get on with shoring up supplies.

Again, this should be a no brainer but the early signs are that the government may not see it that way (see report, p4-5). I am at a loss to really understand this, but can imagine there might be concern about the short term impact on bills and perhaps a suspicion that water companies are only in it for the RCV. But assuming the numbers in the new research are approximately accurate, the additional cost to customers of new demand and supply side measures would be negligible. And thanks to Ofwat's direct procurement policy for PR19, concern about RCV greed could be neutralised by specifying that sizeable water resource investments be tendered.

Given those two factors, it seems incredible and not in customer/citizen best interests that the sector may face an uphill struggle to make good on its raison d'être in the interests of society as a whole. Particularly when elsewhere in water, policies with a far less certain cost benefit are receiving consideration.

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Feedback, comments and suggestions very welcome.
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WATER WATER NOWHERE…

Despite stony silence on retail markets and resilience at the Party conferences, chinks of policy intent for environmental regulation and payments for ecosystem services markets gave water watchers something to think about.

Party conference season 2016 drew to a close at the start of the month with very little in the way of discussion dedicated to water issues. There was one Fringe meeting focused solely on drought and flood at the Conservative conference in Birmingham, thanks to the efforts of Southern Water, Anglian Water and the Enterprise Forum. But that was pretty much it. Water watchers had to elicit what they could from the many meetings discussing matters that touched the industry but were far from devoted to it – those on planning, infrastructure, house building, consumer issues and – perhaps most interestingly – agricultural and environmental policy outside the EU.

In itself, this lack of political interest in water is not unusual and in fact many in the industry are grateful they are not under the spotlight in the way that, say, energy is. However it was somewhat surprising to find not a single meeting looking at the opening of the business retail market next year. While Sarah Hendry and her DEFRA team are engaged and attentive, there is little it seems to interest MPs and party members in a new market for 1.2m organisations. On one hand, this can be taken as a compliment to the sector – it is undergoing transformational change so smoothly that the public and politicians have barely noticed. The flip side of that of course is that perhaps it is not being discussed because no one knows it is happening. Raising awareness of switching possibilities among eligible customers seems to have suddenly become an Open Water priority now the shadow market is safely open (see report, p 20-22).

It will be revealing to see if the water market features more heavily in conference 2017, once it has six months of trading under its belt. Let's hope it doesn't make prime minister Theresa May's dysfunctional market hit-list. She used her closing speech in Birmingham to signal a more interventionist approach to markets that are failing customers, among which she included energy, housing and broadband. In her words: "Where markets are dysfunctional, we should be prepared to intervene. Where companies are exploiting the failures of the market in which they operate, where consumer choice is inhibited by deliberately complex pricing structures, we must set the market right…It's just not right that two-thirds of energy customers are stuck on the most expensive tariffs." It would have been nice to hear something of the government's thoughts about prospects for a household water market, seeing as Ofwat filed its final cost benefit analysis last month and functional markets seem order of the day.


Therese Coffey

Don't 'cling to nurse for fear of worse'

Resilience reticence

Retail aside, there are some other pressing water issues, of strategic, economic and social consequence, that might have been expected to command a little more political attention. Anglian Water's regulation director Jean Spencer and Southern Water chief executive Matthew Wright ably pressed the case for building resilience to drought at their Fringe event, following on from the publication last month of a multi-stakeholder report on water resource requirements 50 years out. Wright cautioned that if appropriate action isn't taken soon, water customers could find themselves paying through the teeth for capacity when this becomes urgent, as energy customers look set to do with Hinkley Point.

One of the key recommendations of the report was that resilience to drought is a matter of public policy. It consequently called on the government to set national minimum levels of resilience (for details, see article p6-9). Water minister Therese Coffey didn't have a firm response to that call when questioned in Birmingham, commenting only that she is thinking about it and in discussion with Ofwat.

If drought is sensitive, then flooding is arguably worse – or as Wright said "a harder nut to crack". He spoke up for creation of the role of some kind of catchment manager, able to look at flood management holistically. He commented that existing arrangements feature "confused accountabilities". Coffey recapped the government's actions to date, including publication of the National Flood Resilience Review and the new funds that have been recently pledged. She added there was more to do, for instance on surface water flooding and in pressing local bodies to produce flood strategies before the government stepped in.

Outcomes opportunity

In terms of hard policy in and around our sector, there was Labour's pledge to halt government attempts to allow fracking in water protection zones and sites of special scientific interest. Shadow energy secretary Barry Gardiner said a Labour government would ban fracking altogether.

Two relevant aspects dominated the Conservative agenda. First, a new industrial strategy which May said would "get Britain firing on all cylinders again". She elaborated: "We will identify the sectors of the economy - financial services yes but life sciences, tech, aerospace, car manufacturing, the creative industries and many others - that are of strategic importance to our economy and do everything we can to encourage, develop and support them." No direct link to water, but possibly some spill over benefits. And second, a 25-year environment plan due out this autumn which will be a framework document setting out the government's environmental vision and its thoughts on implementation. TWR

What the UK's environmental policy looks like outside the EU drew considerable attention at the Party conferences. Coffey, a Remainer before the referendum, admitted it was "a genuinely exciting time to be creating policy for the future". And she seemed determined to make the best of Brexit, noting Brussels had the best of intentions but at times its directives had become "overly prescriptive". She used the magic word "outcomes" in her talk at the Southern/Anglian event when commenting on what the future might look like. Leaving the EU, she said, provided "a real opportunity to think about outcomes in the future". Released from the confines of abiding by rules spanning 28 countries, we could for example come up with 100 catchment plans, each taking account of different water requirements and different water stresses. "We need to go a lot more local," she signalled.

Speaking at a Fringe meeting hosted by rural landowner association the CLA, her fellow DEFRA minister George Eustice fleshed out the messaging on this. He said the more "straightforward" EU rules such as the Habitats Directive could just be converted from a European to a UK legal basis, while the more complex aspects, particularly those with Treasury funding, would need more work. Crucial here is the Common Agricultural Policy. The government, said Eustice, is looking to bring forward primary legislation to establish a replacement CAP.

More surprisingly, the environmental lobby was upbeat about green prospects without Brussels. At a Liberal Democrat Fringe meeting in Brighton co hosted by RSPB, WWF and the Wildlife Trusts, representatives from all three groups spoke of their optimism. The RSPB's Martin Harper sought a new land use policy to replace the CAP that would incentivise environmental restoration, the safeguarding of wildlife and flooding reduction as well as food production; the £20bn currently spent on the CAP could, he felt, be much better spent. Meanwhile WWF's Trevor Hutchings said the UK had played a leadership role in international environmental policy making including on the Sustainable Development Goals and climate agreements and should continue to do so; Brexit "was not a vote for environmental degradation". The point was echoed by the Wildlife Trusts' Steve Trotter who pointed out the UK public are "nature lovers at heart" and that there is "no mandate for dilution".

However, the government's political opponents took a different view. The Liberal Democrat deputy leader in the Lords and spokesperson for environment and rural affairs Baroness Parminter told the Brighton Fringe that there was "a real risk we'll see a dismantling of our environmental protections" post Brexit. She said she was not confident the government would opt to voluntarily transpose existing green legislation given its growth and deregulation agenda; environment secretary Andrea Leadsom's climate change scepticism; and its track record – for instance on opposing protection for bees. "This is a government whose heart is not in the right place," the Baroness said.

Describing herself as "extremely nervous" about the future for the environment, she pointed out we won't know any more until it is clear what prime minister Theresa May means by "Brexit means Brexit". The soft option, which preserves access to the single market, would likely be accompanied by ongoing green protection, but with a hard Brexit "all bets are off". Baroness Parminter will be leading a debate in the Lords on 20 October on environmental and climate change policy following UK withdrawal from the EU.

Parminter called on NGOs to work together to step up their efforts in the area too, to speak with a strong clear voice on the public and environment's behalf. Interestingly farming minister Eustice said the same. He pointed out that some of the green groups have massive membership bases – the RSPB is the country's largest membership association, for instance – and those groups would be better off spending their time engaging the public and mobilising a strong voice for the environment that "burning their money on a barrister" to take the government to court.

PES post CAP

Eustice, a former Leaver, gave some clear – and very encouraging – signals as to his thinking on the linked issues of green protection and agricultural support. One of the five underpinning principles he listed for agriculture post CAP was that it was right to recognise farmers provide more than just food and that it was "absolutely right" the government should reward them for delivering ecosystem services (see report, p12-14). Like Coffey, he looked to a more local approach, speaking of schemes individually tailored and joining up a host of things including water management, soil management, flood risk and food production. The approach taken in Devon, said Eustice, could be fundamentally different to that taken in Cambridgeshire. Without blanket EU rules and the risk of infraction proceedings, he said we should "allow ourselves to try different things in different areas". He even mooted that third parties like the Rivers Trusts and local organisations might look to proactively coordinate catchment sensitive farming plans.


George Eustice

"Absolutely right" to reward farmers for providing ecosystem services

These emerging ideas seem to have mixed support among the agricultural community. CLA president Ross Murray endorsed the view that the environment and agriculture are not enemies and saw "no contradiction in multiple uses of land". He said he desired the CLA's members to derive income from services beyond just food production. NFU president Meurig Raymond in the Southern/Anglian session, however, emphasised the primacy of food security. His vision was for the UK to become more self sufficient than at present (61%), particularly in the face of uncertain trade deals. He said he sometimes gets angered by arguments that the environment should deliver public good, stating "food delivery is a public good".

Eustice faced questions including from Neil Parish, chair of the EFRA Select Committee, over who would fight the agriculture/environment corner in the Brexit negotiations and whether they were sufficiently tooled up to do so. (The impact of cuts at DEFRA and the Environment Agency was another recurring theme at the conferences). The minister confirmed DEFRA would take the lead in the negotiations and insisted it had both sufficiently talented people and the resources to pull it off

RESILIENCE TO DROUGHT: A NATIONAL ISSUE

There is an indisputable cost benefit case for ramping up our resilience to drought and as a societal issue, government needs to set minimum standards and create a supportive policy framework.

Water companies' level of resilience to drought is a matter of public policy and the UK and Welsh Governments should set consistent national minimum levels of resilience in the public interest. That was one conclusion of the expert report published last month on a 50 year planning framework for water resources (see box 1).

The groundbreaking research contains the startling message that we are facing longer, more frequent and more acute droughts than previously thought (for details, see box 2). It also suggests the traditional approach of allowing water customer willingness to pay at a company level to determine resilience standards it is too narrow a view in a world where choices may have to be made on supply restrictions and where any such restrictions would have impacts across society. For instance, the availability of water for agriculture and industry depends on the resilience of public water supply, which takes precedence in times of water stress. Moreover, drought can have widespread economic consequences which need to be factored in to policy decisions on resilience levels.

The leader of the steering group behind the report and Anglian Water's regulation director Jean Spencer summarises the questions in hand: "It comes down to a decision on how resilient do we want to be? And then there's the philosophical question of who should decide?"

Citing that both Ofwat and the secretary of state now have a duty to further the resilience objective in England and Wales, the report urges the UK and Welsh Governments to consider setting clear expectations on minimum levels of service for water companies in preparing their Water Resource Management Plans (WRMPs). Common national standards would oil the wheels of water transfer from place to place. What's more they would recognise that customers have historically found it difficult to evaluate high impact low likelihood events and issues that cross generations. Hence in the past customers have not always been willing to pay for increased levels of resilience –particularly when there are other pressures on bills from mandatory requirements. "Resilience often gets pushed out," Spencer observes.

Customers would continue to play a critical role against the backdrop of governmentset minimum standards. For example, they could choose to pay for resilience levels above the baseline should they value that. Moreover the report observes: "There is a clear need for a step-change in companies' engagement with their customers, to allow them to explore the inter-generational and national aspects of water resource decisions made at a company scale."

Clear benefits case

So that message is stark: drought is a major societal risk and our response as a society is too important for policy makers not to have a view and to leave to individual water companies and their customers. The good news from the new findings is that drought resilience is within reach if concerted action is taken now. Plus there is an indisputable cost benefit case for ramping up resilience. In fact the report issues a compelling rallying cry for action to increase resilience, putting a very cheap average cost of £4 per customer per year figure (£5 under drier climates) for the extra spend needed to increase resilience to severe drought – "if the right measures are taken early enough". Indeed it argues there is a "strong economic argument" for providing resilience to extreme drought; that is costed at £8/customer/year (£10 under drier climates).

There are caveats to consider – of regional cost variation; that there is no direct translation to £4 on bills because of industry financing arrangements and so on; and, most importantly, the fact that the quoted cost only includes the expenditure involved in demand management and new resource schemes (no allowance has been made for any additional treatment or transaction costs that may be required). But nonetheless the figures are so low for the benefit they would deliver that they seem palatable even if they crept up a bit.

That is particularly the case when the value customers place on avoiding severe restrictions on supply (the project focuses on Level 4 restrictions) is factored in. That is priced in the range £40-£160 per day. Costs to the economy come on top. The study prices economic losses to businesses and other water users across England and Wales at £1.3 billion per day, though this figure would need to be scaled down to apply to the region(s) affected by drought restrictions. The model based this calculation on the basis of lost gross value added as a result of water shortages and restrictions (GVA provides a monetary value for the amount of goods and services produced, less the cost of all inputs and raw materials directly attributable to that production).

In summary, the study puts the central estimate of the benefit/cost ratio at greater than 10:1, and notes it remains greater than 5:1 even if lower bound benefit estimates are assumed. So there is a very clear benefits case. And drought risk is present today. The study argues we need to make a decision on how much more resilient we need to be today and then we need to respond flexibly as more information on aspects such as sustainability reductions, growth and demand emerge over time. WRMPs are adaptive so this should be possible within that framework.

Ambitious demand management

The study is equally clear on what the right measures to boost supply resilience are. It supports a twin track approach of demand management on one hand and supply enhancement on the other.

On the demand side, the researchers argue there is a case for considering more extensive measures to manage demand than are in place today, "both to give a greater level of resilience to more extreme future shocks than those considered within this report and to reduce the risk of regretted investment in infrastructure if more favourable futures materialise".

Demand management includes measures to reduce household and business consumption and to reduce leakage. Spencer observes that more ambitious demand side measures can be expensive and are certainly not an easy option. She uses the illustration of tariff innovations: everyone assumes price signals will be a good idea but evidence from Sydney, for instance, shows consumption increased followed the implementation of rising block tariffs as some consumers actively sought to use water they would be charged for and the tariffs ended up being withdrawn.

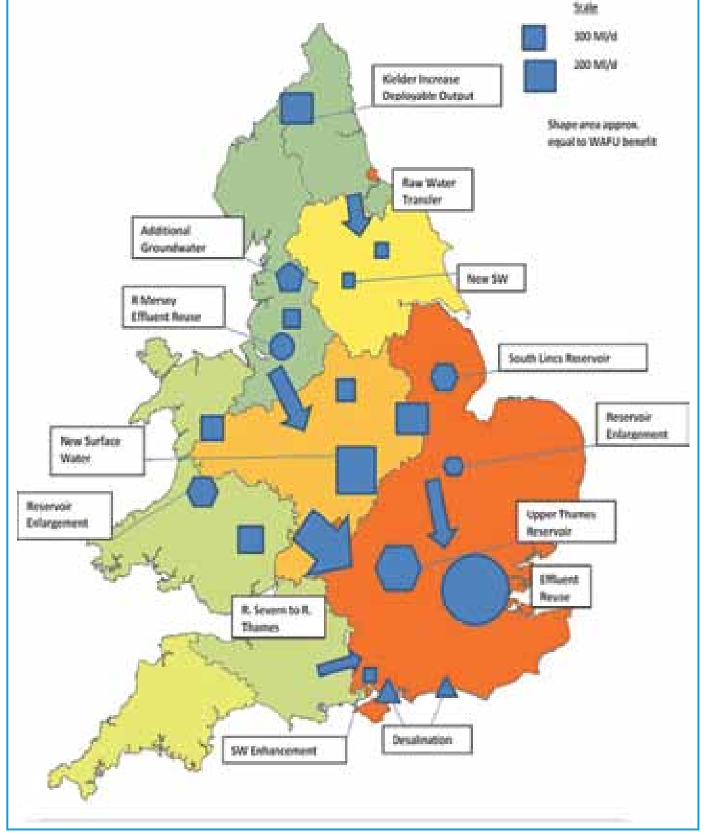
The new study developed and costed four demand management strategies. It is worth noting though that even under the more conservative strategies, there is still considerable ambition for significant behavioural change and cost reduction through innovation. Average per capita consumption reduces below 120 litres per head per day under the "business as usual" strategy, while leakage declines to below 100 litres/property/day.

Policy support for demand side measures would therefore be vital, particularly for more ambitious demand side strategies – for instance, for tariff structure innovations and for reducing demand from new property builds. On the latter, Building Regulations stipulating developers build in a certain level of water efficiency for new developments would be ideal, but given the government's new homes agenda, there seems little chance of any new regulations that might increase developers' costs. Instead the industry is looking for a mechanism through which it can fund water efficient infrastructure at new developments as a means to "bake in" savings rather than rely on consumer behaviour change. On the former, Spencer says she has advocated a piece of work to build a better evidence base on tariffs which could be used as the basis for policy development.

Redistributing surplus

On the supply side, the report found large-scale transfers of water between companies and regions, supported by storage and new local resources, may offer some of the best value options. The new techniques employed by the study mean that for the first time it was possible to identify the scale and distribution of surplus volumes of water at a national level "under nationally consistent scenarios of future uncertainty in population growth, climate change, changes to abstraction licences and taking account of the likely spatially coherent impacts of drought on deployable output". The underpinning principle is the movement of water from

BEST VALUE SUPPLY SIDE OPTIONS



areas of surplus to areas of deficit.

The map illustrates the supply side enhancements that could be required under the more challenging 2065 scenarios. There is no requirement for a national water grid; instead the study suggests a number of strategic supply schemes should be considered (none are recommended specifically). It reported:

- Large amounts of flexibility can be provided by smaller 'local' supply developments.
- Transfers, both inter and intra regional, are likely to be required, together with appropriate storage.
- Major strategic transfer routes to be considered are:
  - River Trent to support storage in the Anglian region (plus onward transfer to Affinity).
  - River Severn to transfer resources to Severn Trent and potentially across to Thames.
  - River Tees to supply Yorkshire.
- New surface water storage will be needed.

DROUGHT RISK PRESENT AND FUTURE

Existing drought risk

The report assessed the existing degree of risk to three different levels of drought: worst historic; severe – rare events beyond those seen in the 20th century and which might include periods where water rationing might be in place for up to three months; and extreme – very rare events of a type only observed a few times in even the longest reconstructed records, where water rationing might be needed for up to six months. It found there is a significant and increasing risk of severe drought across many regions, particularly in the east and south of England.

According to the report: "Putting this in context, those companies whose WRMP anticipates no deficit or surplus against planning standards, and being resilient to the worst historic drought on record, still run a 12% chance of seeing a drought event with standpipes or similar in place for two to three months over a 25 year planning period. There is a lesser risk (circa 5% in 25 years) that such an event could turn into an extreme drought with drought restrictions lasting for 4 to 6 months."

An additional observation the report makes is that our current plans for drought response have not been tested in anger. In particular, in serious drought conditions, Emergency Drought Orders provide for increased abstraction for Public Water Supply outside that permitted by an abstraction licence; restrict abstraction by other users such as agriculture; and restrict public water supplies to customers much more severely through a mix of rotacuts and standpipes, with water then available from bowsers or bottled water supplies. The researchers note: "However, these interventions have not been tested at scale and a question remains over whether there would be adequate facilities in a widespread severe drought. In emergencies, bulk imports of water by tanker might be considered, although again the adequacy of tanker provision is untested."

Spencer points out that in the 1995-6 Yorkshire drought, it was 600 tankers that kept people supplied. "But that was pretty much all the available tankers in Europe. What if the drought hadn't been so localised?"

The report points out: "If a policy decision is made to plan for a higher level of drought resilience than is currently allowed for within WRMPs (i.e. worst historic in most cases), then there will be a need for water companies and stakeholders to agree on the methods that can be used to determine the reliability of Permits and Orders as a means of providing resilience or to prioritise investment."

Future drought risk

The picture is even bleaker in terms of drought risk for the future. The researchers modelled 15 different drought scenarios, of which ten were based on sophisticated forward-looking techniques rather than historic experience. The possible impact of three factors was studied in depth.

- Climate change. The analysis considered two climate change scenarios: median (a central estimate) and extended (a drier climate – approximately 75th percentile of the potential range). The potential impacts of climate change are significant. By 2065, there could be a 9% loss in deployable output for a severe drought under the median scenario, rising to a 22% loss for an extreme drought under a dry scenario. Under a moderately dry future, the risk of standpipes and other restrictions could double in the South East and Bristol, or treble in the London and Anglian regions.
- Population growth. The scenarios used indicate population growth for England and Wales of between 6.6 million and 16 million by 2040, and between 13 million and 33 million by 2065. The least resilient and most water stressed areas in the South and East are also subject to most growth and climate change risk.
- Preserving water for the aquatic environment. Sustainability restrictions on abstractions, driven by the Water Framework Directive and the Habitats Directive, will be felt by five companies in particular: Affinity, Anglian, Severn Trent, Southern and Thames. For those companies, measures to protect the environment may make it necessary to reduce the amount of water currently available for abstraction by between 5% and 50%. Spencer says there remain "huge levels of uncertainty on what might be required" and collaborative work is ongoing with the Environment Agency with the intention of reaching a view this autumn.

In all, 36 scenarios featuring various combinations of possible outcome on drought severity, climate change, population growth, abstraction reductions and levels of reduction in demand were modelled. There is the potential for huge and widespread deficits.

Of course, transferring water is expensive. While the report has examined costs and benefits of transfers on a technical basis, it highlights that important constraints, including risks to drinking water quality and the environment, could limit the feasibility of transfers. These constraints include the spread of invasive species; environmental impacts on receiving water courses; and the management of potable water quality risks, including aesthetics such as taste, odour and hardness, and risk such as those associated with the treatment of metaldehyde pesticides.

The researchers therefore suggest the practicability of interregional transfers needs further assessment for the benefits to be realised. Moreover they advocate that some form of adaptive "roadmap" would be desirable to confirm when decisions to proceed (or not) with the major transfers need to be made. This would also provide support to infrastructure planning once each decision is in place.

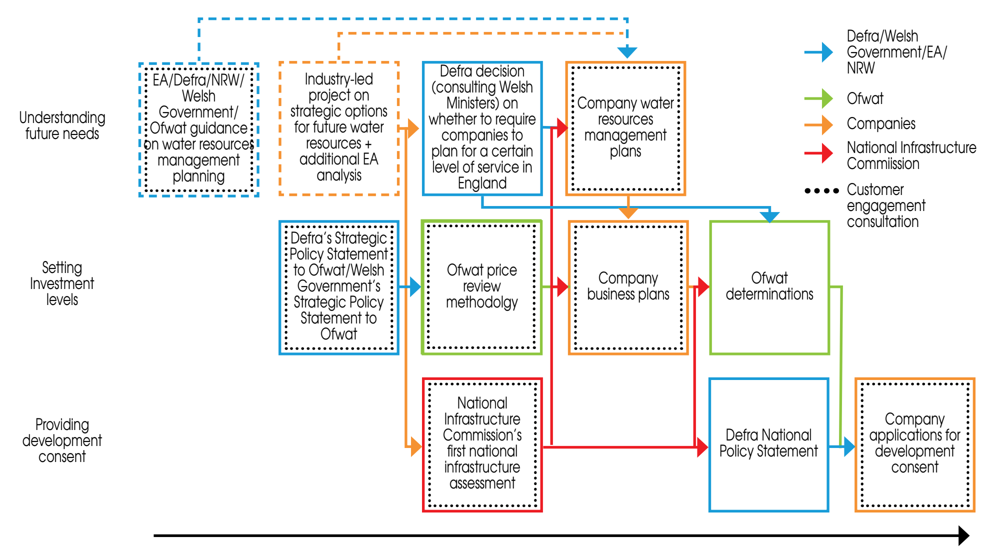
An additional point of interest on supply enhancement is that one stumbling block of the past may no longer be in play. There has long been an assumption that water companies will always advocate building assets when there is an opportunity to do so as this will enhance their Regulatory Capital Value and hence returns. This is one reason the regulator has in the past emphasised taking demand side action. But with its Water 2020 papers, Ofwat has opened the door to third parties delivering £100m plus projects, which if enacted would drastically reduce the credibility of the accusation that companies just want to build. Spencer says: "There is no presumption in the research on who would deliver any of this. There's no assumption it would be the water company building a new reservoir or transfer scheme, or financing it. We are just saying: 'This is what the nation needs to be resilient.'"

Next steps

The report, is just the start of the journey to securing long term water resources in England and Wales. The researchers identify the following as among the follow-up actions needed:

- Through their WRMPs, water companies need to verify the results, develop detailed plans that align with customers' wants and confirm the best value water infrastructure development plans. This will involve deepening their engagement with customers and working more closely with housing developers to increase the water efficiency of new homes.
- Inter-company planning forums such as Water Resources East and Water Resources South East need to conduct cross-company and stakeholder initiatives to better understand the risks involved, and the commercial/institutional arrangements required to support future transfers. There may be the need for enabling actions that can increase the scope of these forums.
- Government and regulators need to work with other stakeholders to develop a supporting policy framework. In particular, there is a case for a national level "adaptive plan" that supports ongoing WRMPs and balances risks against opportunities to defer costs. Such a plan would identify the key trigger points that will determine which set of investments and policy interventions would be needed and when. The report cautions: "Where risks are within the control of policy makers or can be monitored, it is important to ensure that adaptive actions are given adequate time, and that this is reflected within the WRMP process. Failure to do this could result in either increased risk or costs that are much larger than those proposed within this report."

POLICY AND STRATEGY CONTEXT



National policy influence

Notwithstanding the extra work needed, the evidence and framework developed through the long term water resources project aims to have a powerful impact on the development of national policy on many levels. As the diagram shows, this includes the National Infrastructure Commission's first National Infrastructure Assessment; any National Policy Statement on water resources DEFRA produces; water company WRMPs; and the 2019 price review.

But while it is in it for the long haul, make no mistake that the study is also insistent on immediate action, where it is possible. The report concludes: "The most cost-effective approaches to increasing resilience require action in the current round of WRMPs to avoid having to rely on more expensive options later on. Demand and supply measures both have long delivery times. Significant increases in water efficiency take a long time as they require sustained behavioural and policy changes and require significant investment. Delivering large inter-regional transfers and new storage capacity are complex projects and require lengthy analysis and agreement before beginning work on associated infrastructure, which in itself takes time." TWR

GROUNDBREAKING WORK IN NINE MONTHS

The study was borne following an evening in September 2015 when then water minister Rory Stewart brought water company CEOs together to explore the implications of DEFRA's resilience duty introduced by the Water Act 2014. Stewart asked the industry to look at the long term resilience of water resources in England and Wales. "He wanted something very practical," Spencer recalls, "something suggesting what should be built and where".

Following a mini-tender, Water UK commissioned a consortium comprising Atkins, Mott MacDonald, Nera, HR Wallingford and the Environmental Change Institute. Its work was overseen by a Steering Group lead by Spencer and comprising regulators, national and devolved governments and water companies. The work was also peer reviewed by an expert panel led by Oxford's professor Jim Hall, who is also a member of the Adaptation Sub-Committee of the Committee on Climate Change.

In addition to the formal group work, a number of stakeholder events were held to share findings and seek input from wider interests such as NGOs. The multi-stakeholder nature of the approach was designed to break down barriers and look beyond individual company WRMPs.

The primary aim of the project was to develop a high level strategy and framework for the long term planning of water resources for public supply in England and Wales. It considered:

- A sector-wide view of future resilience and options for improving that resilience.
- An assessment of variation in levels of service and potential minimum levels of service for customers and the environment, accounting for costs and benefits at a national, regional and sub-regional level, including the wider social impacts of drought and drought resilience.

The research, completed in June and published in September, breaks new ground by deploying new modelling techniques and by looking 50 years ahead across the whole of England and Wales. The report consequently provides a significant new evidence base. The analysis includes:

- An assessment of the scale of the potential impacts of climate change, population growth and reductions in abstractions to protect the aquatic environment.
- The scale of deficits in 2040 and 2065 for each region across a range of futures.
- High-level portfolios of options that could be used to address the range of possible futures and identification of those options that are most drought-resilient and cost-effective.
- Consideration of the societal and economic costs of water supply failures and the costs and benefits of investing to avoid such failures.

WHEN IN DROUGHT

San Diego and Arizona offer coal face experience of building resilience to drought. Trevor Loveday finds lessons for the UK on customer trust and engagement.

When it comes to tales of the tribulations of maintaining resilience in water supply in the face of drought, not many places can rival US cities Phoenix in Arizona and San Diego in California. The extremes of drought that challenge the water industries in these two arid yet growing US cities are features of life for the people in them and who govern them. The case for maintaining the water infrastructure of a city in a mega drought is arguably a perfect no-brainer. Yet Phoenix and San Diego each have political, economic and social obstacles to navigate in their attempts to keep the taps running.

Both cites tell how placing a value on water is as important as it is tough. But in terms of specifics, their tales differ. Water chiefs and local authorities in San Diego are dealing with an extraordinary situation as they enter their sixth year of drought following earlier periods of abundant rainfall. But drought has been business as usual in Phoenix since before the Hohokam native Americans settled there a thousand years ago. Life in Phoenix is all but governed by the need to be prudent with water.

San Diego

There have been mandatory water use restrictions in place in San Diego since 2011. So its water authority has a sound understanding of what it takes to guide the public and city council officials through changes in water availability. What might be its advice to the people of the south and east of England where the climate is becoming drier and is creating a growing need to invest in improving the resilience of its water supplies?

"Be prepared for a long journey," counsels San Diego County Water Authority's general manager, Maureen Stapleton."Resilience doesn't come with a single project or even a few. San Diego went from very cheap but unreliable supplies in 1990 to three times the cost in real dollars but far more reliable and diverse. But it's taken 20 years," she says.

The city has deployed a range of means to keep the water flowing to its homes and businesses including:

- Recycled non-potable wastewater for irrigation of parks and golf courses.
- A "very long and very large" agriculture-to-urban conservation and transfer programme where farmers are incentivised to conserve water and sell it to the city.
- More recently the western hemisphere's biggest seawater desalination plant which began production at Carlsbad and pilot projects providing potable reuse treatment of wastewater.

High rise: 300% rate increase in San Diego in 10yrs.

Feel the heat: seasonal pricing in Phoenix

"We have not gone after one single solution – that would leave us vulnerable. There is no silver bullet," Stapleton says.

The water companies in San Diego – as with most of the western US – are publicly owned entities and water rates are set locally by district officials and paid for by users. So San Diego's diverse infrastructure approach has needed public support and the water authority has had to inform and persuade its water ratepayers to back the investment. Southern California homeowners have seen their water rates increase more than 300% in ten years.

"It took over 20 years working on our diversification plan and we have overwhelming support for it. But it didn't come easily. It was heavy lifting to work with the community to help understand the situation and options and get support to move forward with strategy," says Stapleton.

She explains that the district boards who set the local water rates are elected, and hence are highly accountable: "They can be voted off," she emphasises. This means that intense public information and engagement campaigns are not just a feature when increases in water rates are on the cards to fund (say) a new infrastructure project.

"The community wants to know where their money is going. We've got to be out there all the time telling them of the challenges – and not just when we're raising rates. If we don't do that we won't have a success when we do try to get a rate increase. Some districts do make that mistake. They go out for a month to rally support for a rate increase and are surprised when the community doesn't applaud them and rally round."

Meanwhile regulatory demands are intensifying. Every five years the authority has to submit to state government its plans to meet demand in normal years and to show its contingency plans to meet demand during possible multiple dry years. The dry years period has just been increased from three consecutive years to five.

Now in its sixth year of drought, Stapleton says conservation measures and other gambits mean San Diego forecasts no need to cut back for emergency conservation. "Our gallons per capita has dropped 40% since 1990 despite adding 800,000 people to the population," she says.

Some of the measures that have helped curb water use in the region include rebates from the water supplier on efficient appliances, and the passing of water authority-sponsored legislation to set a water use standard for toilets and washing machines. And California no longer imports washing machines under a given standard of efficiency, Stapleton explains.

There is evidence of strong compliance among Californians for water conservation measures. In recent years Governor Jerry Brown responded to emergency conditions by imposing a mandate that all users should cut water consumption by 8-30% depending on prior usage. They did. Urban areas reduced use by more than the mandated amount.

Stapleton recalls a minor drought period in 2008-11: "When we called on communities to conserve water in an emergency, they stopped washing the car and let their lawns go brown." She emphasises the importance of universal metering in the success of these water conservation measures.

The hugely costly Carlsbad desalination plant has, Stapleton says, 80% support from the communities it serves and whose bills have been increased as a result. But that acceptance did not come easy: environmentalists sued the project 14 times. "It's part of the marathon," she adds.

Phoenix

"Resilience is the new sustainability," says the city of Phoenix Water Service Department's Kathryn Sorensen. But for her it's always been standard fare. The city's desert location, she says, leaves its population "uniquely prepared" for climate change. "Our desert perspective gives us an edge in planning for a hotter drier world. One of the things about Phoenix is you cannot live here and not understand the value of water."

That edge is invaluable to Sorensen who views the quality of infrastructure as pivotal. "The best way to maintain resilience is to rehabilitate and replace infrastructure. Period."

This edge might also be expected to simplify the task of making the case for investments. Sorensen agrees that her case for funding for capital projects is oiled by the inherent public knowledge of the challenges she and her department face in keeping Phoenix watered. "In a very strong sense, it's easy for us to educate – you can't go through a summer here and not get it." Yet, despite the clarity of Phoenix's challenges, securing regional officials' backing for capital expenditure is, it seems, not without trials.

"Our elected officials are reluctant to raise rates. Ask for support for a water rate increase and you're asking officials to do the thing they are least willing to do," says Sorenson, adding: "Water is the basis of quality of life, public health and economic opportunity. But educating the council – these are painful conversations."

Sorenson echoes too the views of Stapleton on the value of concerted public engagement to maintain trust. "If the utility doesn't have credibility with the public it can't purchase what it needs to purchase and it can't build what it needs to build because people won't support the water rate increase."

While she believes that her department has the trust of Phoenix's ratepayers she says there are other forces at play that erode that confidence. "There is distrust of government across the US and that bleeds over onto utilities."

Nevertheless Phoenix has succeeded in regulating consumption through seasonal pricing with summer rates significantly higher than winter ones. "That pricing tool alone has made an enormous difference in water efficiency," says Sorenson.

Like Stapleton, Sorenson questions the prospects for affecting change in consumption without universal metering: "You've got to know what people are using. It's fundamental."

The message from the West Coast is that concerted information campaigns and close public engagement are needed to secure trust and agreement for increased water bills.

Even in communities where drought is part of every day, there is a need to educate water users and engender trust. This should be a warning to water stakeholders in the UK where drought is not a way of life. Clearly the customer communication that UK water companies would need to produce would have to be pinpointed and lengthy if customers ever had to accept substantial bill increases or conservation duties to counter water stress without lasting grievances. The water industry's battle with drought is every bit as much a struggle with degrees of public understanding as with degrees Celsius. TWR

MAINSTREAMING A MARKET FOR SLOW CLEAN WATER

Green Alliance and National Trust are working on a new mechanism to galvanise broad interest in Payments for Ecosystem Services upstream as a real alternative to downstream investment. Their first target markets? Improving water quality and reducing flood.

Environmental think tank Green Alliance, in partnership with National Trust, has scoped out a new model for mainstreaming Payments for Ecosystem Services (PES) in water. The idea is for a new payment mechanism, dubbed a Natural Infrastructure Scheme (NIS), through which farmers and land managers could sell services to improve water quality and reduce flooding to buyers – namely water companies, other infrastructure operators and public authorities.

The premise is that buyers would be able to save money by avoiding costs – to pay for water treatment works, flood defence and remedial actions after floods – while at the same time funding new income streams for farmers and landowners. The latter would deliver locally determined land management changes that have been proven to deliver flood and water contamination benefits – for instance, tree planting, attenuation ponds, peatland restoration, woody debris dams as well as farm practice changes such as reducing stock levels or stopping growing crops on steep slopes which can result in high run-off levels.

As diagram below illustrates, the mechanism features a catchment wide consortium of sellers trading with a consortium of buyers via a brokered contract. The core services under the Green Alliance model, shown on the left, would be for flooding reductions and water quality improvements. The key buyers for such services would be the major institutional beneficiaries of flood mitigation and improved downstream water quality, including water companies, the Highways Agency, Network Rail, energy companies, local authorities, the Environment Agency and reinsurers, particularly the Flood Re scheme.

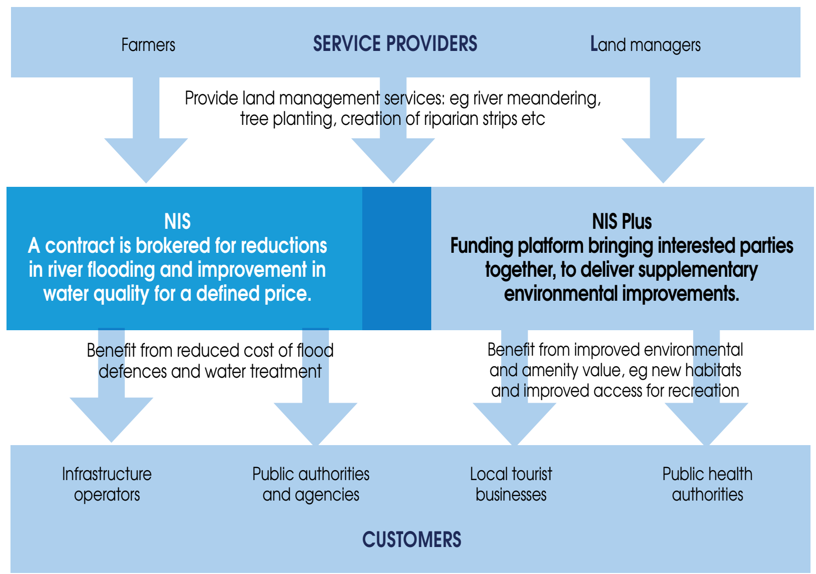
Buyers could use money they are already spending on downstream protection, but there are a host of other possible funding mechanisms too, including banking the stream of future savings to fund upfront capital investment and long term maintenance of the NIS.

Additional services relating to things like biodiversity, wildlife, green space and amenities could be sold on top to a wider pool of buyers, as shown on the right of the diagram and dubbed "NIS Plus". Such services are unlikely to be viable on a standalone basis due to preventatively high cost, but added on top of already-funded core services and costs could be kept relatively low. Buyers for these additional services could be diverse and include: local people; tourism industry players; public health authorities (for instance, if the physical and mental health benefits of nature were better understood); big business interested in carbon offsetting; and new housing developers who could get higher prices for properties with better views and natural access.

NIS AND NIS PLUS

How a NIS would work
Landowners in a catchment enter into a NIS contract with downstream businesses and public sector organisations to increase the ecosystem services provided by their land and reduce costs incurred by those downstream.

What a NIS Plus would offer
An online NIS Plus funding platform enables local people, tourism businesses, local and national companies and others to fund a set of supplementary land management changes which increase the level of environmental benefits provided under the original NIS.



Green Alliance/National Trust

Size and scale

The ideas are contained in a report launched last month: *New markets for land and nature – How Natural Infrastructure Schemes could pay for a better environment.* In it, Green Alliance and National Trust highlight four features that distinguish their NIS plan from many other PES schemes that have been trialled:

- It is farmer-led. Many catchment management schemes attempted to date in water have been initiated by the water company for a specific outcome. According to Steven Smith, technical director at infrastructure engineering specialist Aecom, switching the driver to the landowner side could be "a gamechanger" if it could be made to work, as it would open up the sale of ecosystem services to multiple buyers.
- Payments incentivise change – properly funded, ecosystem services move from the periphery to become something that could fundamentally change landowners' approach to farming.
- Delivery is at catchment scale, not more local.
- Service sales are results based – landowners are responsible for delivering on contracts.

The report goes on to stress the importance of setting up appropriate institutional arrangements on both the seller and buyer sides. It appreciates the difficulties here and point to some similar arrangements where lessons might be found – for sell side consortia, existing collective agri-environment schemes; for buyers, local purchasing partnerships such as flood defence partnerships. It also emphasises the need for expert assistance, both in the form of agents acting for each side and of brokers to hammer out the details of each deal. The latter role could be performed by various parties; some water companies have had success using local Rivers Trusts as "honest brokers". The report offers a step by step guide on how to set up an NIS – see diagram p14.

WESSEX AND ENTRADE

Wessex Water is in the throes of setting up a new business which will sell catchment trading services to other water companies and interested parties. The development comes on the back of Wessex's development of an innovative trading platform, EnTrade, which allows farmers to bid for funding.

The company started work on a trading platform as part of its pioneering nitrogen offsetting work in Poole Harbour. Rather than just consenting individual assets, Wessex secured regulatory agreement to nutrient permitting at catchment level. Nitrate contained in the effluent discharged from Dorchester's sewage treatment works can be offset by funding farmers to reduce agriculturally derived nitrate from the catchment.

Wessex Water's director of strategy and new markets David Elliott reported that the company planned to reduce nitrogen entering Poole Harbour by 40 tonnes per year by 2020. In a year it reduced half that amount through direct negotiation with farmers and more than remainder via a reverse auction facility. He said Wessex had in fact received 147 bids and achieved a 60 tonne reduction at around one tenth the cost per kilogram of nitrogen removed as would be delivered through asset based solutions (£1.76 per tonne rather than £17.60). Factoring in the cost to develop the trading platform and to manage the contract, Elliott said the total cost would still be less than a quarter of the traditional price. Elliott reported Wessex's catchment management work went back a decade and was motivated originally by a need to reduce costs, given the company relies on groundwater for 70% of supply and that this is heavily affected by agricultural practice. The company hosts five of DEFRA's pilot catchments. Elliott noted the NIS approach took a different path to the one Wessex had pursued but said he was "excited" by the Green Alliance approach and was keen to work with the developing project to challenge the allocative inefficiency that results from catchment spending in silos.

WATER QUALITY AND FLOOD COSTS PER YEAR IN ENGLAND

Beneficiaries	Water quality		Flood	
	Cost of treatment (£m)	Investment in resilience (£m)	Cost of events (£m)	Investment in resilience (£m)
Water companies	1,065	Unknown	29	246
Environment Agency		140	135	209
Local authorities			1.6	26
Internal Drainage Board				12
Highways England			110	Unknown
Insurance pay outs			337	
Network Rail			29	11
Power companies			0.81	> 22
Grid companies				
Total	£1,065	£140	£642	£526
Grand total				At least £2,373 million
Average per catchment	For 100 catchments in England this is equivalent to £24 million per catchment per year			

Green Alliance/National Trust

Why water?

Ecosystem services are potentially huge and payments for them could be made to reduce carbon emissions, or improve air quality or regenerate soil condition. So why have Green Alliance and National Trust opted to focus on water? According to Angela Francis, senior economist at Green Alliance and lead author of the report, water is a good place to start for a number of reasons. Current policies, particularly the Common Agricultural Policy, are far from optimal. The CAP props up food production via subsidy, but fails to address environmental problems or support markets in other services the land provides. Moreover, performance is in some instances deteriorating (flooding, wildlife) and existing costs for remedial water quality and flood action are sizeable. "Huge amounts are spent on flooding and clean water already," Francis says, "and we can do better."

The analysis puts a £1.2bn price tag on existing annual spend on water quality (by water companies and the Environment Agency) and another £1.2bn on flood spend (accounting for hard defences, insurance payouts and infrastructure rebuilding after floods – see table for cost breakdown). Costs could be avoided if natural engineering alternatives could deliver outcomes more cheaply than end of pipe water treatment and hard defences. "If we could avoid even a quarter of that, we'd save £500m," Francis observes.

The report's vision is for a market for what it describes as "slow clean water". National Trust's enterprise director Patrick Begg explains his organisation's interest and motivation. Eighteen months ago the Trust launched its ten year strategy, which included plans to restore the natural environment and manage its land better. As one of the country's biggest landowners with 200,000 hectares, Begg said the Trust has "skin in the game" and can see the size of the potential prize. The organisation also occupies a unique position in straddling the farming, charity and environmental sectors, so is well placed to provide leadership.

There is an extra motivator to act right now too. The CAP system will be up for negotiation as the UK leaves the EU. Demonstrating ecosystem value through NISs could influence the nature of any mechanism that replaces the production subsidy system. (see report p4-5)

Fraught with difficulty

There is absolutely no doubt though, that moving from the theory of a NIS to putting it into practice is fraught with difficulty. In his summing up at the end of the report launch, Begg highlighted what he saw as the three key challenges: coordinating human relationships; settling on appropriate regulations and incentives; and ensuring the bigger NIS Plus type benefits do not fall by the wayside.

There are many more we could add to this list. The report acknowledges: "Water is not 'owned' by anyone, it is affected by many complex processes and it passes through a catchment where it is hard to assign responsibility and assess impact. And, on a practical level, there are a large number of stakeholders so coordination is a challenge. Plus natural engineering is a new approach which has to overcome all the normal barriers any new system faces."

Discussion at the report launch threw up further difficulties. These included DEFRA's historic support of production based subsidies; sensitivities around anything that could be perceived as jeopardising food security; and hostility in some quarters to PES on polluter pays grounds. Aecom's Smith, who has studied lessons learned from the 25 PES pilots DEFRA funded between 2011 and 2015, added the following common obstacles to the list: that the science of cause and effect is not clear and hence "many PES schemes are a leap of faith;" establishing contracts of an appropriate duration is tough; there are often difficulties engaging local people and businesses; securing funding up front can be hard; and there are all sorts of trust issues from landowners.

Wessex Water's director of strategy and new markets David Elliott spoke of his company's experience as a pioneer in the field of water PES (see box p13). Among the barriers it had had to overcome to get schemes off the ground were the need to persuade Ofwat in the early days that PES was in the customer interest; negotiating space to try things given prescriptive legislation and regulation; and measuring benefit in a robust way.

Even more fundamental perhaps are arguments which question the logic of the NIS vision. Chris Uttley works for Stroud District Council and is charged with finding, designing, procuring and delivering land management actions to reduce flood risk. He has first hand experience of working with landowners to deliver schemes which typically cost £3,000-£5,000 per holding. That price covers labour and materials. Significantly he says most landowners are willing to act without payment beyond covering costs for the work, which raises questions for the premise underpinning the NIS idea.

Uttley went on to question whether landowners would be so willing to help if they were approached by a catchment wide organisation "with a big bank account". Moreover he flagged the importance of designing schemes that are sensitive to farmers' specific needs, of working with accurate local data and of having bottom up buy-in from those whose land will be affected. He mooted the possibility of scaling up community driven schemes as an alternative to going for top down catchment wide mainstreaming of PES activity.

However, coming from a position of support for the NIS approach in principle, the report identifies six challenges specific to designing a payment mechanism for slow clean water:

- Making contributions fair, and preventing free-riding on others' investments.
- Only rewarding activities that go beyond legal compliance and standard good practice.
- Securing upfront funding for capital works and maintenance.
- Optimising scheme design through expert input.
- Assessing whether schemes have performed to the contracted standard.
- Capturing wider environmental benefits, potentially through a pre/post delivery comprehensive ecosystem assessment.

Next steps

National Trust and Green Alliance have publicly committed to develop and test the NIS concept with partners and stakeholders, and to work to address legal and regulatory barriers. They urge the government to play its part too, by offering seed funding in the form of grants for consortia set-up; by collaborating to produce the legal framework for mainstream delivery; by providing any necessary derogations or licences in the demonstration phases; and by considering the role of ecosystem services as it devises a replacement for the CAP.

Begg spelled out the National Trust's next steps. It plans to orchestrate a landowner leadership group featuring the likes of the Crown Estate as well as and other key players.

And it has offered its enormous estate as a testbed for a workable version of the theory. TWR

NIS DEVELOPMENT

A Design prospectus	1 Identify a potential site for a NIS and build consortium of landowners in the area	2 Design a prospectus of interventions that delivers the flood alleviation and water filtration needed by downstream beneficiaries	3 Establish a contract sharing agreement baseline, monitoring and evaluation plan
B Contract with primary purchasers	4 Identify downstream beneficiaries who can establish a protocol for joint negotiation and contracting	5 Specify the standard of the flood alleviation and water quality and independently verify the effectiveness of the NIS design	6 Contract for the primary deliverables
C Platform for additional benefits	7 Design a prospectus for a supplementary set of ecosystem services that add value to the scheme and create a NIS Plus	8 Offer each of the additional ecosystem services separately via a crowd funding platform	9 Contract for additional ecosystem services that attract sufficient contributions

Green Alliance/National Trust

INDUSTRY COMMENT

A BETTER PRICE REVIEW

Companies can use the activity undertaken for market opening to position themselves for PR19. By PA Consulting's Alex Mahon.

During PR14 the introduction of four separate price controls brought the concept of cost allocation to the fore, with four of the Risk Based Review (RBR) assessments dedicated to reviewing companies' design of and justification for allocations. As no single company successfully passed every test, it was clear that many lacked clarity about their costs or how to allocate them appropriately.

Some may argue that the industry has now improved its understanding of costs. However, the evidence from Ofwat's March 2016 and August 2016 targeted review of WaSC and WoC robustness, alongside its work on comparability of revenue reporting data, suggests that there are still areas of inconsistency.

While it is still not clear exactly what will be required in PR19, there are some indications of the approach Ofwat will take. Water 2020 suggested that there will be two additional price controls and an expectation of greater transparency about how the sector is performing to help inform customers and new entrants. At the same time, companies also face the challenge of Ofwat's plans to implement household competition and pressure from retailers to improve services. All these factors underline that there will be a need for a more granular understanding of costs and services.

The business driver

To meet this need, companies should start by securing a better understanding of their business processes and costs. Without this understanding, they run the risk of finding themselves in the same position as during PR14, where they had to put considerable effort into clarifying proposals that had already been assessed and submitted.

The challenge is complicated because once the final PR19 methodology is published in July 2017, companies will have only 15 months left to produce, test and assure their business plans.

Transaction testing and control reviews

These are a common accountancy practice used to demonstrate compliance and risk management across an organisation's financial allocations. For PR19, this methodology could also be applied to help companies understand which services are being provided to the end customer and most importantly, the appropriateness of the cost allocation between service lines.

Each service identified can then be overlaid with its associated performance metrics, facilitating better customer engagement with the service. The responses from this engagement can then provide companies with an understanding of whether they are meeting customer expectations.

Cost of service studies

Another key action should be to undertake cost of service studies. These enable companies to bring together the financial and operational aspects of their activities and identify the cost of providing a particular service to an end customer.

The outputs of these studies can then be used to justify the assignment of cost responsibility across the business, either to support Regulatory Accounting Guidelines or by providing the opportunity for companies to challenge them.

The effectiveness of this approach was seen during PR14, when the companies which received an 'A' categorisation were those who had appropriate evidence to support their challenge.

Cost out methodologies

Companies could also use cost out methodologies to inform their work. These assessments facilitate the realisation of core efficiency and performance gains across the company by identifying duplicate activities, orphaned processes and those activities which are not directly contributing to continued service delivery or performance improvement.

These methodologies can also be used to deliver performance and quality improvements through an increased understanding of processes and ways of working. A top six energy company used this technique to improve the efficiency of its energy sales to members of the public through rapid process review and improved management of controls and performance metrics.

A crucial benefit of these actions is that the greater level of business insight can be used to test companies' regulatory position and associated performance commitments and Outcome Delivery Incentives. By starting this work on cost and service assessments early, companies will also have longer to engage with customers and then interpret and incorporate their views within their asset investment plans and more importantly be able to provide evidence of those priorities. They will also be able to demonstrate to customers and Ofwat the actual impact of service changes on bills.

This kind of review of existing operating models means companies can position themselves more effectively to manage changes in the industry. In particular, they will secure an improved understanding of the relationship between the commercial and regulatory drivers of their services and how third party contracts and alliances relate to business process costs. A further advantage is that this ability to quickly respond and adapt to change will allow companies to demonstrate a high level of business resilience to Ofwat.

The end result of implementing this approach in advance of PR19 is that companies will have a clear understanding of service costs and clearly evidenced customer support for their plans. This will enable them to efficiently address any discrepancies with Ofwat's cost threshold, allowing them to move into higher scoring categories of the tests from the outset.

There will also be wider benefits to these actions than just ensuring success at PR19. Applied correctly these methods will help companies better understand the areas where they are efficient. In an increasingly competitive market, they will be able to identify the sectors where they may choose to compete and the services they may wish to offer in the future. This will be underpinned by a realistic projection of market share and margin gain.

By taking action quickly to better understand their costs and services companies can position themselves at the forefront of the industry, delivering greater value to both their customers and their shareholders. TWR

Alex Mahon is a water expert at PA Consulting Group www.paconsulting.com/water

COST OF NEW DEBT SET TO BE INDEXED

Ofwat has put forward a new approach to setting allowances for the cost of debt

Ofwat is minded to shift to indexation of new debt at PR19. This approach would tread a middle path between existing arrangements, where the cost of debt is fixed for five years, and full indexation.

Existing practice has come under fire because debt costs fell faster in reality than was expected at the time previous price controls were set, to the substantial benefit of investors but without associated benefit for customers (see box). The allocation of risk between companies, investors and customers and how allowed returns are set play a key role in determining customer bills.

Ofwat has looked at three options for PR19:

- Sticking with existing arrangements, which provide strong incentives for companies to manage financing costs, but means that customers do not share in benefits or bear costs from market changes in the cost of new debt during the period.
- Full indexation, where the cost of debt is based on a trailing average of the cost of debt over a ten to 20 year period. Customers would benefit from reductions in the market cost of debt during the period, but are also exposed to the risk of increases in the cost of debt during the period.
- Indexation of the cost of new debt only. This means that the forecast errors from estimating the cost of debt for the forthcoming review period are corrected and that customers bear risk around changes in the market rates over the period, but that embedded debt continues to be set on the same basis as at present. Ofwat explained why this is its preferred option: "There is evidence that forecasting new debt costs is difficult with significant errors in market forecasts and that there may be little benefit from companies bearing this risk. We also consider that full indexation may lead to over-reliance on market benchmarks, which may not accurately reflect the efficient cost of debt for the water sector and so result in customer bills being higher than necessary."

Notional structure and bills

The proposal came in a consultation issued last month and running until 17 October. The regulator will incorporate its final decision in its July 2017 PR19 methodology consultation.

Ofwat also said in the September paper it was minded to:

- Stick with setting the cost of debt on the basis of an efficient notionally structured company. "This approach means that companies, their investors and management are responsible for their own financing and capital structure and bear the risks associated with their choices." It added that it saw no reason to take a different approach for companies with securitised structures.
- Adjust bills in response to new debt indexation at the end of each review period to minimise bill volatility in-period.
- Encourage but not mandate companies to consider wider pain/gain sharing, so that customers share in the differences between the company-specific cost of debt compared with the allowed cost of debt. It said mandatory sharing would weaken incentives to manage financing costs; cut across company engagement with customers on their preferred approach; and may create perverse incentives to gear up.

Cost of equity

In addition the regulator mooted some preliminary ideas about its approach to the cost of equity for PR19. It asked for views on the cost of equity allowance and its approach to the risk based review of business plans at PR19 – specifically on an approach proposed by the Essential Services Commission of Australia linking the allowed equity return to the level of risk and ambition within a business plan. This incorporates a menu based incentive for companies to accurately self-assess their plans.

Ofwat noted it was not formally consulting on a preferred approach, but would take account of stakeholder views as it develops its plans for PR19. TWR

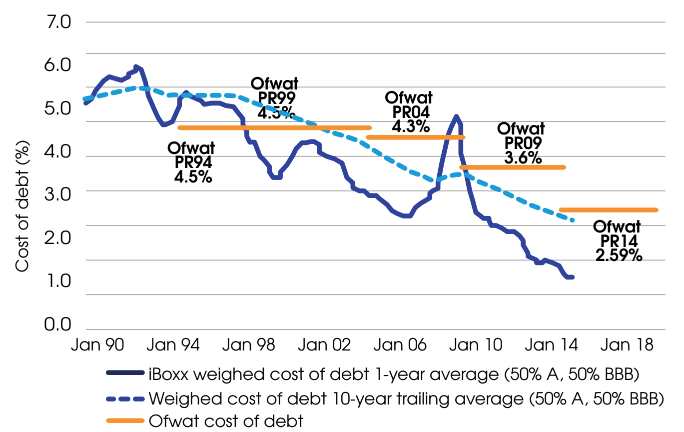
COST OF DEBT OUTPERFORMANCE

Ofwat normally sets a fixed cost of debt allowance for the five year period of the price control, based on the cost of debt for an efficient notionally structured company. Companies are responsible for the risk that the actual cost of debt may be higher or lower than the allowance.

As the graph shows, since the 2004 price review, the cost of debt (represented by the ten year trailing iBoxx index) has been falling faster than the allowed cost of debt set in price controls. After PR09, interest rates dropped particularly sharply as the global financial crisis took hold. Consequently, companies have typically outperformed their cost of debt allowance (Ofwat notes individual company performance will depend on their individual cost of debt rather than market rates). This led in 2015 to the National Audit Office (NAO) comparing Ofwat's approach to the cost of debt to Ofgem's indexation of the allowed cost of debt and the emergence of the argument that water bills would have been lower if Ofgem's path had been followed. However, the NAO also accepted that indexation passes on financing risks to customers and could result in higher and more volatile bills should debt costs rise.

A review by the Public Accounts Committee recommended that Ofwat review its approach to setting allowances for the cost of debt, taking into account the methods used by other regulators.

ALLOWANCE AND ACTUAL COST OF DEBT



SIM and complaints improve but some firms struggle

The latest round of customer service and satisfaction data shows an improving overall picture but difficulties for a number of individual companies.

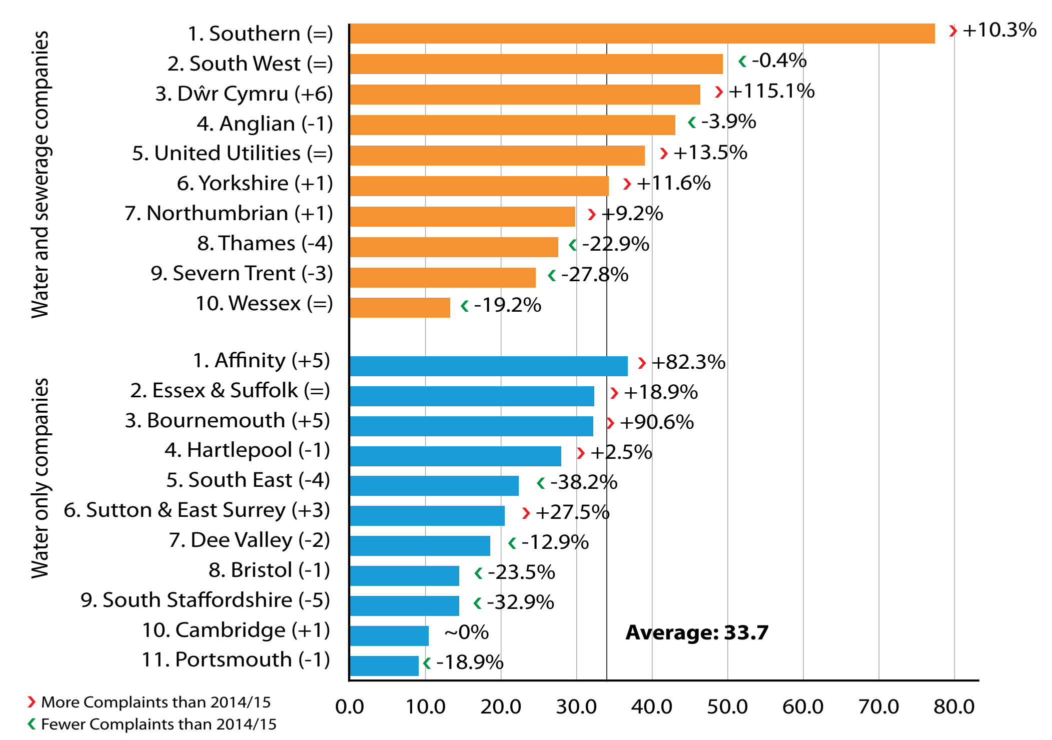
At the start of the month, Ofwat published Service Incentive Mechanism performance for 2015-16. The average score across the sector rose from 81.6 out of 100 to 82.5. As the table shows, Portsmouth Water came top, making huge strides from eighth position last year. Its score of 90 is the highest ever achieved by any company since the SIM began in 2010.

Wessex Water was once again the highest performing water and sewerage company, with a score of 87. Meanwhile Southern Water struggled at the bottom of the table, with Affinity and Thames in joint second from bottom position.

These are the first formal results since the revised SIM kicked off in April 2015. The mechanism was altered to take account of business retail market opening in April 2017. Changes were also made to increase the qualitative component from 50 to 75% of the score; to streamline the measures used; to include in-flight rather than just resolved contacts; and to take away advance notice for companies on when surveys would take place.

Data on customer complaints 2015-16 published by CC Water last month added to Southern's woes. As the chart shows, it was far and away the most complained about company (written complaints) and suffered a 10% rise on last year. But it was not alone in receiving a warning from the consumer watchdog after complaints rose at close to half of the water companies in England and Wales. CC Water described the increases as "alarming" in some incidences and asked the four worst performers to report by the end of October on their actions to address their shortcomings. Of the 21 firms, ten showed an increase in complaints per 10,000 connections. Total complaints across England and Wales were down 0.5% to just over 106,000.

WRITTEN COMPLAINTS 2015/16, PER 10,000 CONNECTIONS



SIM SCORES 2015-16

Company	Overall 2015-16 SIM score
Portsmouth	90
Wessex	87
South Staffordshire	86
Bournemouth	86
Bristol	85
Anglian	85
Severn Trent	84
Northumbrian	84
Dee Valley	83
Dwr Cymru	83
Yorkshire	83
South East	82
United Utilities	82
Sutton and East Surrey	81
South West	79
Thames	77
Affinity	77
Southern	73
Average	82.5

Sector continues to improve its pollution record

Water company performance on serious pollution incidents improved in 2015, according to data released by the Environment Agency. Companies were responsible for 59 serious pollution incidents, 12% of the total. This was a fall of 3% on 2014, and the Agency noted the sector caused fewer than half the number of incidents in 2015 as in 2005 (135). Of the 59, 42 related to the sewer network, and were mostly a result of containment and control failures (34 of 42 incidents, 81%).

The biggest changes in the distribution of incidents caused by water companies in 2015 compared with 2014 were:

- an increase in the number of incidents caused by water and surface water related premises (1 incident in 2014 and 8 in 2015)
- a 44% decrease in the number of incidents caused by sewage treatment works (16 incidents in 2014 and 9 in 2015) - serious pollution incidents at sewage treatment works also decreased substantially between 2013 (27 incidents) and 2014 (16 incidents).

Four fall short in PR16 DDs

Ofwat has turned down the non household retail price proposals submitted by Anglian Water, Welsh Water, Northumbrian Water and Thames Water and has instead published draft determinations for those companies based on PR14 price caps. The regulator said these firms had "made proposals that were not supported by evidence that was sufficiently convincing, comprehensive and/or robust".

The news emerged when Ofwat published PR16 non household retail draft price determinations for the industry last month. Its PR16 statement of method, published in May, specified:

- Companies would need to provide substantial new evidence to support claims for any increases in the overall net margin of 2.5% (1% for non-contestable customers of companies operating wholly or mainly in Wales) or increases in the overall level of cost allowances made at PR14.
- To protect smaller customers from any inappropriate rebalancing of cost/margin allocations between default tariff caps, companies proposing to increase prices to smaller customers would need to satisfy a high evidential bar. This would include providing: evidence from their ongoing customer engagement and research and their day-to-day interactions with customers, supporting any price increases; evidence of engagement with and support from their Customer Challenge Groups; and where appropriate third party assurance and other evidence.
- Board assurance must be provided, both in general terms and if a company's board was satisfied that modest changes in estimates of eligible customer numbers would have no substantial impact on its cost/margin allocations, then it could provide assurance on this basis.

Ofwat explained: "The intention behind these requirements was to encourage companies to provide high quality information and ensure that any changes to the price controls were consistent with the interests of customers. In particular that increases in cost/margin allowances or rebalancing of charges by significantly reducing prices to larger customers (typically best able to take advantage of a competitive market) and increasing prices to smaller customers would be clearly supported by strong and convincing evidence."

The other companies fared as follows:

- Severn Trent, United Utilities and Wessex Water proposed significant changes to their PR14 price caps. Ofwat said it intended to accept these, given they were supported by "strong and comprehensive evidence that was proportionate to the bill impacts of the proposals".
- Affinity, South East, South Staffs, Southern and Sutton and East Surrey proposed minor changes, which were backed by reasonable quality and proportionate evidence – Ofwat is minded to accept.
- Bristol, Dee Valley, Portsmouth and South West Water proposed no or very limited changes to their PR14 caps so Ofwat is intended to accept these as the basis for the new default tariff caps.
- Yorkshire Water has been asked for further information to support the minor changes it proposed.

The significant changes proposed by South West Water to PR14 caps in the Bournemouth area have been modified and the modified caps used as a basis for draft determinations.

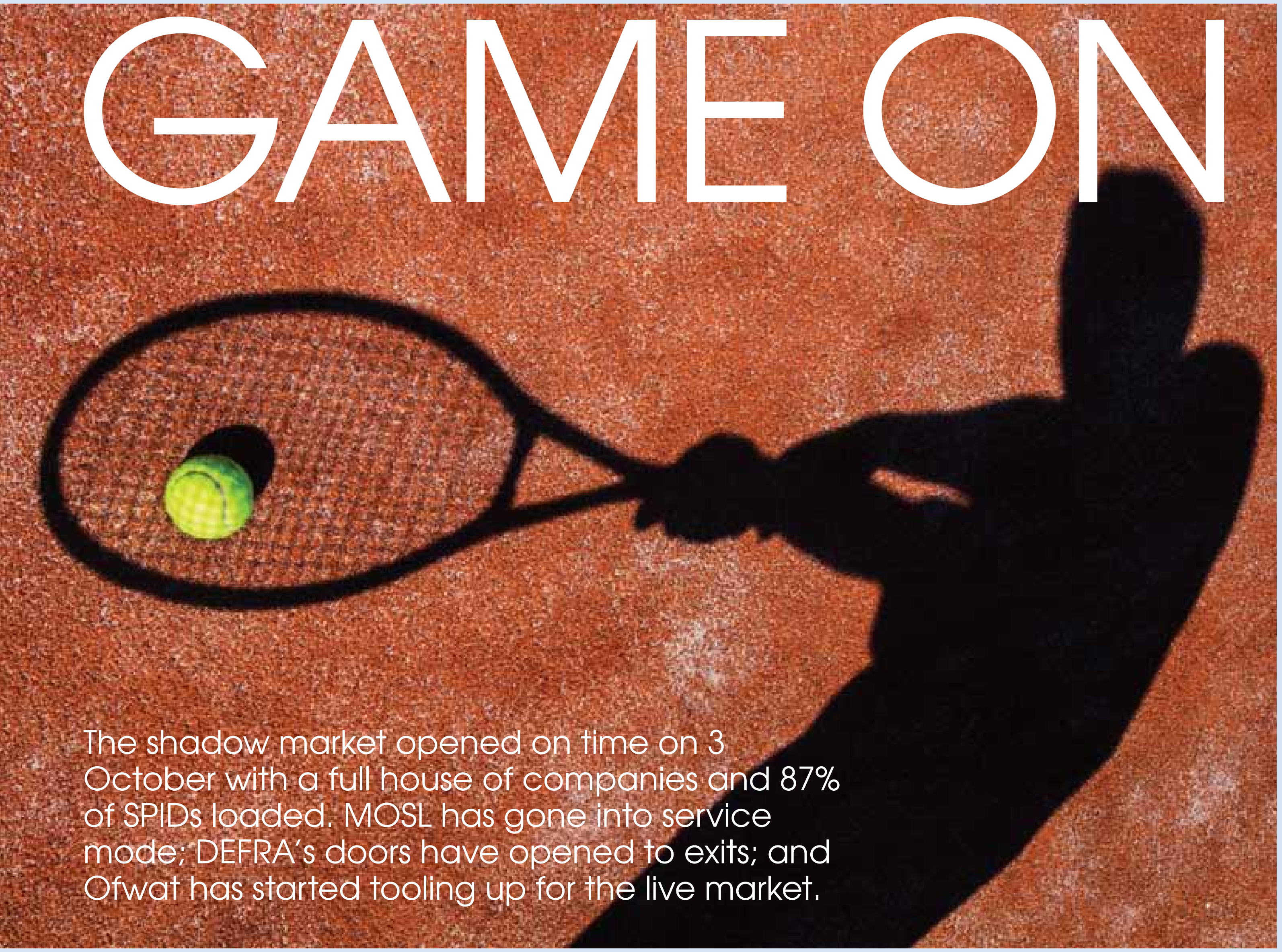
Margins, cost and eligibility

- **Net margins:** In its May statement of method, Ofwat confirmed its plan for a 2.5% net margin, but set out two areas that would merit further consideration: the outturn of credit term arrangements and Welsh circumstances. It reported there were no claims from incumbent companies on the overall allowed level of net margin but that Business Stream continued to express concern about the adequacy of the overall net margin, not least in relation to the working capital allowances implicit in it. Ofwat did not see any reason to increase the 2.5% net margin having considered the latest evidence.
- **Cost to serve:** Northumbrian Water and Anglian Water put forward arguments for reviewing the cost to serve allowances. But Ofwat said it did "not consider that the information provided meets the test of substantial new evidence that demonstrates it would be in the interests of customers… to make additional overall allowances for retail costs in setting the price controls".
- **Eligibility:** Companies were provided the opportunity to put forward changes in their proposals with respect to changes in the numbers of eligible customers. Seven companies were satisfied that their PR14 customer numbers remained appropriate and provided assurance on that basis. The remainder have proposed changes, as shown in the table. (Note that for Severn Trent Water and United Utilities, changes to customer numbers primarily relate to the consolidation of multiple wastewater tariff bandings adopted at PR14 into the simplified structure at PR16).

The regulator invited representations by 28 October and said final determinations would be issued on 15 December. TWR

COMPANIES PROPOSING CHANGE IN CUSTOMER NUMBERS

Company	Proposed customer numbers for 2017/18	Change vs PR14	Comments
Severn Trent Water	346,374	-40%	Not eligibility related
Sutton and East Surrey	11,940	-22%	
Wessex Water	109,135	-21%	
Bournemouth	14,161	-13%	
United Utilities	445,620	-11%	Not eligibility related
South East Water	52,119	-10%	
Dŵr Cymru	166,413	-5%	Not eligibility related
Northumbrian Water	148,101	-3%	
Thames Water	501,962	-2%	
Anglian Water	226,578	2%	
Southern Water	174,266	12%	



GAME ON

The shadow market opened on time on 3 October with a full house of companies and 87% of SPIDs loaded. MOSL has gone into service mode; DEFRA's doors have opened to exits; and Ofwat has started tooling up for the live market.

"Heroic" was the word used by both MOSL chief executive Ben Jeffs and Ofwat's retail market opening director Adam Cooper in describing the water industry's successful efforts to get the shadow business retail market open on time. "This is a huge achievement by everybody involved," Jeffs says. "We've worked tirelessly to get to this point, as has CGI. How many other IT implementations have happened on time?"

He recalls the difficulties along the way for MOSL – putting the programme to red status earlier this year to galvanise extra resources; entering June with an eight week delay; and having to deal with other challenges, including data privacy issues. "But we left July with just a one week delay and here we are."

Jeffs is the first to say though that the hardest graft was put in by the industry. "The companies have had to take on a much higher level of work than MOSL. They've had the systems side, but they've also had to break up their business processes and transform into new organisations."

For DEFRA director Sarah Hendry, "reaching shadow gives us real confidence that all parties are doing everything possible to be ready for market opening." Six months out, she says she is confident all the appropriate conditions for market opening will be in place for April.

Full house

Jeffs wrote to water industry CEOs on 3 October confirming all companies had hit that day's deadline to enter the shadow market. He comments: "We haven't dotted all the 'i's and crossed all the 't's and there have been some temporary work-arounds, but everyone is in the shadow market and signed up to learning from it."

In fact, all but one company completed their final data uploads on or ahead of schedule, meaning some 2.26m of 2.6m supply points identifiers (SPIDs) were uploaded into the Central Market Operating System (CMOS) on time. The shortfall was a result of difficulties experienced by Water Plus (see interview, p24-25) in loading some of Severn Trent's data. However Jeffs says the fact that a portion of Severn Trent's SPID portfolio had been loaded means the company is able to participate in the shadow phase from the outset, and hence that MOSL can claim a full house. He also confirmed: "Water Plus have processes in place so that customers are not affected by their system issue and we are planning to undertake further data uploads from them in October and November to complete this process."

Immediate cut over

Most interested stakeholders appreciate shadow market opening is a major programme milestone, but Jeffs points out that it is even more significant for some companies than many might realise. Companies have been free to choose how they "cut over" into the live market and many have opted to cut over now, as they enter shadow, rather than in April or at some point in between. "That means the big, big thing is happening now," Jeffs explains, "and that will help build confidence and trust. There should not need to be a major cut over in March – our aim is that it will be a seamless transition."

He also confirms that the plan is still very much for a big bang opening rather than a staggered start or anything of that nature. As part of the strategy for coping with switching volume risk on day one, MOSL plans to conduct some of the bulk customer transfers resulting from incumbents exiting the market in February. Clearly the exits still need approval from the secretary of state, but says Jeffs DEFRA's indication that it will adopt a "no roadblocks" policy has been helpful; some companies have entered shadow as if their exit has been approved.

Hendry confirms DEFRA's approach: "We've worked to ensure the application process is light-touch, designed to allow undertakers that wish to exit the non-household retail market to do so subject to meeting some simple and clearly defined criteria. Companies that meet these criteria can have a high degree of confidence regarding the outcome of their application and should feel able to plan on that basis."

MOSL also plans to consult with the industry to gauge pre-switching levels – where companies have signed up customers in advance and may have already started managing their billing activities and so on with a view to switching them as soon as the market opens in April. Jeffs says if pre-switching levels prove significant, it may look to to stagger the transfers in a similar way as for exits.

Data quality

While on time shadow opening is a major achievement by anyone's standards, the programme isn't home and dry yet. One of the key issues is the quality of the data now loaded into CMOS remains untested. It is 99-100% compliant with code and system format requirements, but we have yet to see how the industry performs on issues such as gap sites and pairing up SPIDs where customers have different water and wastewater suppliers or where company boundaries meet. Jeffs observes: "Work on that sort of thing will go on well beyond market opening."

But while the six months of shadow operation will not be time enough to get data to pristine condition, it will help iron out the worst system commissioning issues ahead of live operation; enable companies to increase their knowledge of CMOS and plan training and resourcing appropriately; and generally let participants get a taste for how processes will work under the new arrangements. Jeffs lists as examples of the latter: settlement every month for six months; meter exchanges; tariff changes; and the whole life cycle of a site – from the moment it enters the market, through changing occupancy, to coming out of the market in the event of closure or change of use. Jeffs' belief in the value of the shadow period led MOSL to resist calls from some companies to shorten it when they were feeling the heat of preparation. "It is an as-live environment, not a test," he stresses. Aspects that cannot be part of the shadow market – switching and payments – will be tested concurrently in a parallel system or systems.

MOSL in service mode

The start of shadow was also a watershed moment for MOSL itself. The market operator effectively moved into "service mode" on 3 October. That afternoon it launched a self-service portal for market participants and contacted teams with a plan of its intended service model going forward. There are still a few systems aspects to complete. While the core CMOS and settlement processes are now fully user acceptance tested, testing of CMOS 2.1 is not due for completion until later in October. There is also further performance testing of the system to do; MOSL will strive to deliver against its Service Level Agreements through shadow, but will not be held to them until the market goes live.

Meanwhile the organisation is continuing working towards becoming the enduring market operator. Jeffs says he is "broadly comfortable" that all that is technically required of MOSL is funding and members, both of which it already has. It is now working on a business plan setting out future costs, staffing requirements and so on that members will be asked to sign off in the coming months; and it is looking to update its Articles of Association to reflect its future role.

Company readiness

As for market participants' wider readiness to compete, Jeffs confirms all those who applied at the outset have now passed Market Entry Assurance testing. At the time of speaking, he had issued 61 pass certificates, with more in the pipeline.

Cooper explains Ofwat's "targeted review" has scrutinised company readiness in the broadest terms, including cultural issues, behavioural change, customer awareness and the customer journey. "There's a tendency to look for a finish line, but there is no finish line," he comments. "We've got to hand the baton on to enduring processes." The regulator has not published its findings but Cooper confirms "overall, it's a good story – most get greens, there are a couple of ambers, no reds".

> **How many other IT implementations have happened on time?**

Further details on the readiness of both market participants and the Open Water partners will surface later this month when all parties submit their second assurance letters to DEFRA. Hendry is expecting a good showing: "We expect the letters to evidence the huge amount of progress that companies and partners have made, but of course we recognise that some companies' retail strategies have changed since the first gateway in February. All the evidence so far is that companies and partners are doing everything they can to be ready."

What market?

Perhaps the most pressing issue for the market now though is arguably one of the seemingly simpler aspects: customer awareness. Ofwat's position hitherto has been that customer engage- >

ment should not start too early. But with just six months to go before opening, a sense of urgency finally seems to be taking hold that the market, even if perfect in every way, could falter on businesses simply not knowing they can switch. The last Management Group meeting remarked on the importance of making rapid progress on the customer communications strategy and resolved to adopt a collaborative approach with market participants, "noting that there was broad support for independent, consistent and neutral information about the market".

The Open Water customer information activity, led by Ofwat, has a number of strands:

- The Open Water website has been significantly developed. It is not the finished article yet and will continue to be developed. Ofwat welcomes input.
- Ofwat has commissioned an England wide survey on business customer awareness. 1800 eligible business charity and public sector customers will undertake a telephone based questionnaire, followed by a further 80 qualitative discussions.
- Water companies are due to respond by 7 October to a survey organised by Water UK into the extent of their efforts on both awareness raising and marketing. Ofwat will use this information alongside that gathered from its targeted review to conduct gap analysis.
- Consideration is being given to a national campaign to raise awareness and offer impartial information and guidance about the market.

The idea is for the national campaign to build on company efforts. Cooper comments: "Companies themselves have got to be the first port of call. They have various existing channels to customers and we plan to leverage those."

Hendry adds: "We agree that there is a need for independent,

MOSL plans to conduct some of the bulk customer transfers resulting from incumbents exiting the market in February

consistent and neutral information about the market and recognise the valuable part to be played by a national campaign to raise customer awareness. We are working with Water UK and the water companies to ensure we have a complete national picture of awareness-raising activities already planned and underway. Working collaboratively will be key and Water UK has set up a steering group for that purpose."

The idea gained further traction at a recent CEO workshop; there was general agreement that it is time to start talking to customers in a way that compliments company efforts. Ofwat is keen to see the results of the national survey and the Water UK work before deciding on the detail of a national campaign but says it is committed to providing access to easy to understand, impartial advice and guidance, free from any market or company spin.

Tooling up

Aside from awareness, Ofwat's attention will fall next (this month) on consulting on the Wholesale Retail Code and the Market Arrangements Code. Cooper says the open governance of the codes to date through the Interim Codes Panel process should have "teased out any show stoppers" but that companies and MOSL may well pursue some changes or developments via the consultation. "We will have to triage these things very very carefully," he observes. Jeffs chips in that change is one of the beauties of a market – "they are supposed to change…you are not locked in." He adds the codes allow CGI to issue a number of releases next year to respond to issues as they arise.

Ofwat is also working on putting together a voluntary code of conduct for third party intermediaries. It has no powers to regulate them, but plans to do what it can to spell out what it expects to see from responsible players. Hendry explains why DEFRA has held off giving Ofwat powers over TPIs. "The marketing activities of TPIs operating in the water market are already subject to regulation. The Competition and Markets Authority and trading standard authorities have roles in ensuring customers have the correct information when switching to alternative suppliers. DEFRA will keep under review whether Ofwat should have powers to prevent inappropriate marketing activities, as Ofgem has in the energy sector."

The regulator is also now embarking on the difficult process of "organising itself for the market," says Cooper. This month it is starting work with stakeholders to design a monitoring framework so it can track how the market is developing. "It's not a simple set of metrics," he explains, listing among relevant factors: switching levels; company behaviour; customer experience; new entrant numbers; how corporate strategies develop; and whether the market architecture is acting as a barrier to competition in any way.

DEFRA has published its success criteria for the market in the longer term. Hendry explains: "It is key customers have a positive experience of the new market and can access outcomes that are cost-beneficial; the market is fair, transparent and efficient; it encourages diversity of entry and minimises barriers to entry and incentivises innovation in services by both existing and new market participants."

There are a number of other aspects Ofwat needs to be ready for too and that will require some degree of operational restructuring. "As an organisation, we need to be tooled up," says Cooper. "When I hand over the different elements, I want to hand them over in the full knowledge of how they'll work." He lists the following among key aspects:

- **Complaints handling.** Cooper says an increase in complaint levels is to be expected – both from customers and around the retail/wholesale interface – and in the latter case Ofwat will have to decide which are best dealt with through immediate resolution and which need to go through the Codes Panel.

- **Codes team.** A formal codes team will be needed – Cooper currently signs off changes but once the market opens and appeals are possible a more formal process will be necessary.

- **Ability to discharge interim supply arrangements** – for instance, should a retailer fail.

- **Customer Protection Code of Practice.** Ofwat has taken customer protection further than required by statute in developing a code of practice retailers must abide by. Cooper concludes: "We've got to ensure it is applied properly and stays relevant." TWR

WSSL grants and applications

Ofwat has handed out the first tranche of new licences to trade in the business retail market. Each of the following companies were granted water supply and sewerage licences (WSSLs) at the end of September, though the date on which these will become effective is yet to be determined:

- Water 2 Business
- United Utilities Water Sales
- Sutton and East Surrey Water Services
- SSWB
- Severn Trent Select
- NWG Business
- Kelda Retail
- Clear Business Water
- Castle Water
- Anglian Water Business

Since our last edition, Ofwat has received WSSL applications from the following companies:

- Waterscan – Heads turned when this strategic water management specialist put in for a licence. Not only did its application mark the entry of a new type of supplier in the market, but the company appeared to be moving out of its role as independent customer advisor to compete with those it had hitherto interacted with on the customer behalf. However, Waterscan confirmed its core service will continue to be providing accurate billing data to customers, wholesalers and retailers – particularly in the retail, hospitality and leisure sectors. Its new retail service will operate as a separate business unit and, said Waterscan, had primarily been pursued to assist its understanding of the new market to enable it to advise clients accurately.
- Regent Water – as an associated business of commercial gas supplier Regent Gas, Regent Water appears to be the first dedicated multi-utility retailer in the market. Its business plan said it plans to sell through independent energy brokers.
- Affinity for Business – Affinity Water's newly unveiled retail brand, which plans to trade nationally.

Meanwhile, one of the newly minted WSSL holders Sutton and East Surrey rebranded its business retail division as SES Business Water. The company, led by managing director Giuseppe Di Vita, will compete nationally for creditworthy customers of all types. Di Vita explained the new name combined a reference to the company's 150 years of experience with a fresh identity that will play better out of area than the very local Sutton and East Surrey moniker.

Credit terms confirmed

Ofwat stuck by the plan it consulted on in June when it published its decision document on credit terms for the business retail market last month.

Retailers will have to provide 50 days of collateral cover to wholesalers, while wholesalers will be unable to seek price review reopeners or end of period true ups for additional debts in the event of a retailer's default.

The regulator also stood by the seven credit options for the 50 days' cover it had previously scoped out:

- Cash – the retailer placing funds equal to 50 days of supply into a secure bank account established by the wholesaler.
- Letter of credit – from a bank, agreeing to make a payment to the wholesaler if certain contractual conditions are not met by the retailer.
- Third party guarantee – a guarantee of payment by a parent company or third party guarantor acquired before any service is provided by the wholesaler.
- Insurance – a surety bond issued by an insurance company on behalf of a retailer, guaranteeing the performance of the retailer's obligations.
- Unsecured credit – an unsecured allowance as a proportion of otherwise collateralised charges and liabilities.
- Pre-payment – payment in advance by the retailer of the estimated cost associated with delivering one month of service by the wholesaler, plus a balancing payment once the actual cost of providing the service is known.
- Bilateral agreement – terms to be negotiated between a wholesaler and retailer on a bespoke basis and published.

One new development was further detail on how the level of unsecured credit available to a retailer would be assessed. Some respondents to the June paper questioned the scale based on creditworthiness that Ofwat had proposed. Following a review of the evidence, the regulator decided companies with:

- an investment grade credit rating should be able to gain access to 40% unsecured credit
- excellent credit scores (a score of 9/10) should be able to obtain 20% unsecured credit
- good credit scores (a score of 7/8) should be able to obtain 10% unsecured credit.

To implement the arrangements, Ofwat said it planned to develop a change proposal for the relevant codes and discuss that proposal with the Interim Code Panel swiftly. It has also established a working group to develop further detail.

Awareness campaign

Open Water and market participants have agreed to collaborate on a national campaign to raise business customer awareness of retail market opening. The idea is for the national campaign to build on company efforts, and to that end:

- Ofwat has commissioned an England-wide survey on business customer awareness. 1800 eligible customers will undertake a telephone based questionnaire, followed by a further 80 qualitative discussions.
- Water companies had until 7 October to respond to a survey organised by Water UK into the extent of their efforts on both awareness raising and marketing. Ofwat will use this information to conduct gap analysis.

Details will be decided following the results of this work.

Ofwat looks to voluntary TPI code of practice

Ofwat hosted a workshop in London in September to scope out with stakeholders the content of a voluntary code of practice for third party intermediaries in the open water market.

The work follows its publication of a Customer Protection Code of Practice in May which holds water companies to a suite of customer protection measures, via a licence condition. This states retailers must take reasonable steps to ensure any TPIs working directly for them are aware of the code, and must have a Letter of Authority from a customer before dealing with a TPI.

Ofwat currently has no powers to regulate intermediaries directly, so is seeking to endorse good practice via a code of conduct that TPIs will voluntary be able to sign up to.

THE PLUS SIDE

Sue Amies-King sums up what the business retail market's biggest player Water Plus has to offer following its public launch last month.

As water companies prepared to enter shadow operation last month, the biggest retailer on the block, Water Plus, stepped into the light on its first public outing since the United Utilities/Severn Trent joint venture was announced in March. Led by chief executive Sue Amies-King, Water Plus made a big splash at customer exhibition and conference The Water Event at the NEC in mid-September – with a new brand identity, extensive hospitality, a large team of new and enthusiastic staff, and a perfectly timed announcement of a national contract to serve leisure chain David Lloyd's 84-site estate.

For customers, the move publicly announced Water Plus was open for business. For industry watchers, the debut afforded first sight of a company more rounded than was obvious from the two main reasons given for the joint venture from the March announcement. These were that Water Plus was big (400,000 customers across the north west, the midlands and Scotland, a 26% slice by site number and a turnover of around £1bn); and that the merger had been driven by a desire to cut costs given the low margin environment.

Amies-King fills in some blanks on the Water Plus story so far. United Utilities (where she held the post of business retail director before moving across to Water Plus) and Severn Trent reached agreement in principle on the JV around a year ago in summer 2015. The early weeks after the March announcement were dominated by the "huge amount of work" needed for its submission to the Competition and Markets Authority. "All we could do before we had clearance was plan," she says. "We couldn't share data or do anything practical – we couldn't even sign the lease on our building, we were still competing against each other."

The CMA process was mercifully smooth and unlike more conventional mergers, did not raise regulatory objection. "This is good for the market," Amies-King asserts.

Since the CMA

Since the merger was cleared, Water Plus has barely stopped for breath in gearing up for competitive operation and, more immediately, the public launch last month. Amies-King outlines the key activities.

Location – Water Plus has made its home in Stoke, which is approximately equidistant between United Utilities' Warrington base and Severn Trent's head office in Coventry. Its building is "state of the art", Amies-King says, and is intentionally open plan and designed to encourage staff to mix together freely, develop strong relationships and help build the company they are part of.

People – These are a blend of old and new. Water Plus has welcomed staff over from both its parent companies. The CEO points out though that only willing volunteers have been transferred; those who are keen and excited to be in the new retail environment – typically key account managers, marketing staff, customer service staff and the like. The remainder of the 400 staff total is made up of new recruits. Water Plus HQ was deliberately situated in a development in Stoke nearby to other retailers, including a number of financial services companies and Npower. Amies-King notes one benefit has been a ready-made pool of experienced front line and customer services expertise to recruit from. She adds that all staff "have been on the journey with us in creating this company and have been encouraged to contribute to our policies and ways of working as these have been worked out".

Brand – This has been designed to convey friendliness, simplicity and personal service – for instance, through the "With you every drop of the way" strapline. The Water Plus name itself is neat beyond that though, hinting at the coming together of two entities and, more importantly from a customer proposition perspective, clearly indicating the company's specialism is water but also that it offers more than that. From now on, all prospective customers will be approached under the Water Plus brand. All in-area customers are currently continuing to be billed by United Utilities or Severn Trent. Amies-King says there will be "a careful programme of customer communications" explaining the move with the intention of rolling out the new brand in area too by the time the market opens. The change has already been explained to large in area customers with key account managers, and the CEO says the response has been "wholly positive – it's been seen as forward-thinking".

Systems – Water Plus is using a market ready CRM system. This was already in service at United Utilities, lowering implementation risk. A stand-alone low cost back office capability has been developed. Amies-King comments that "to be a successful business in this market, you need to be in control of your costs". At the time of the interview, Water Plus was about a week away from starting Market Entry Assurance testing with MOSL.

Retail strategy – The retailer will compete nationally for customers of all types. Amies-King explains Water Plus has based its service proposition on what customers said they want from a supplier, namely: accurate timely billing; someone who understands the specific needs of individual businesses; help to save money; someone easy to do business with; a partnership type relationship; and a supplier that is there if something goes wrong. It has responded with a commitment to sector specialist account managers; investment in its billing system to offer both e-bills and consolidated bills; a team dedicated to making switching easy; and service assistance availability around the clock.

Value add

So how is Water Plus looking now? The company that surfaced at The Water Event is one that clearly plans to trade on more than just a cost efficiency ticket, though that of course remains important given Ofwat's stance on retail margins has not shifted. Amies-King: "Margins are low. We expect to be one of the lowest cost [to run] companies, compared with companies of a similar size."

However, she acknowledges simple price discounts alone won't be enough to win in this market and argues the JV's scale and its focus on costs will enable investment in service. "We have the scale to invest in great customer experiences," she says, mentioning as an illustration work Water Plus is undertaking to develop a full self-service portal for customers.

In addition, she cites projects that have already been delivered through investment by the combined entity: a new app for smaller businesses to self-audit their consumption was launched mid-September; as was a broker portal and broker commission payment system to make it easier for third party intermediaries to interact with the company. On the latter, Amies-King comments: "This will be a heavily intermediated market. We are working with our broker colleagues to help them understand water and to make it easy for them to work with us. We have expanded our team of dedicated broker relationship managers."

Among the other value added offerings Water Plus is putting on the table are: AMR and consumption analysis services; water efficiency advice and services including leak detection; and customer data services.

Fresh start

Amies-King points out, though, that the "Plus" of Water Plus refers to more than just value-added water services; "I see it as referring to everything we can do as a new company". She argues that while Water Plus has the benefit of drawing on the combined experience of two established companies with track records in the England and Scotland markets, it also has the clean slate that new entrants enjoy. "New entrants can be agile and quick to respond to developments, but we have that too." She explains Water Plus is not only completely separate from United Utilities/Severn Trent wholesale – legally, geographically and in terms of staff and brand identity – but it is also carefully transitioning away from the old business retail arms of each parent company too. "Effectively we are starting from scratch. We have a fresh start. We are agile. We are flexible. And we have the scale to invest."

> **Margins are low. We expect to be one of the lowest cost [to run] companies, compared with companies of a similar size.**

More investments are planned before the market opens. "We have further system drops to come over the next six months, and further proposition drops, including the full self-service portal," Amies-King details. "We'll be continuing to enhance what we offer."

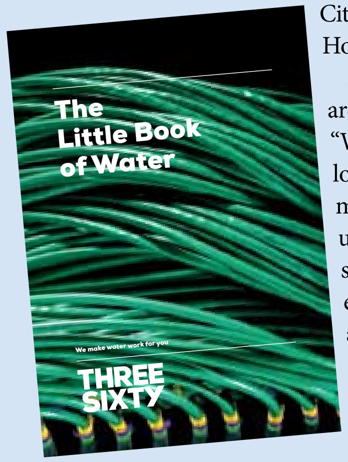
She is confident her company will perform well in the marketplace against those competing on an equivalent footing, and envisages "an exciting, mixed market" of at least 30 players. She sees the biggest threat coming from those without a real understanding of the sector. "We could see disruptive pricing in the early days, if companies don't really understand what they are pricing. Customers need to ask themselves whether what they have been quoted is sustainable in the long term, given the low margins." TWR

ONE EIGHTY FOR THREE SIXTY

Yorkshire Water has gone in the opposite direction from most of the rest of the industry in dropping any overt reference to water in its business retail rebranding. Managing director Robert Marrill explains the strategy.

Yorkshire Water's business retail operation has, in water industry terms, done a radical thing. In rebranding as Three Sixty, it has consciously stepped away from an overtly water-based identity. The name itself says little of the company's core focus, but neither does the silver grey colour of the logo or the design of literature produced to accompany the brand launch at customer show The Water Event in mid September. The front cover of its new The Little Book of Water, for instance, is dominated by cables; a brief flick through the inside yields arty shots of the likes of swirling purple velvet and tumbling golden grains. Needless to say Three Sixty's livery at The Water Event had many seasoned industry types raising their eyebrows and looking quizzical. Perhaps that was the point?

Managing director Robert Marrill says there was a bit of that in the thinking – "we did want to stand out from the sea of blue and green and appear fresher and slightly different" – but he insists the company is "not being different for different's sake". Rather the idea is to convey a message of "more customer, less water company". He explains: "The name is about looking out and beyond and on focusing on the customer's business rather than on ourselves." The pictures in the Little Book in fact relate to case studies contained within about customers Three Sixty has successfully helped do business better – wires for facilities management company City FM; the purple velvet for stately home Castle Howard; and the grain for brewer BrewDog.



And, Marrill points out, water-based references are not entirely out of the window. The strap line "We make water work for you" accompanies the logo and underpins the company's core brand message – that it will work to understand individual business needs and create tailored solutions so water works for each and every of its customers. More subtly, all the images in the Little Book are designed to reference water in some way – ripples, raindrops, waves. And if you look very closely, you will even see a water droplet at the base of the "X" in Sixty.

Cost, compliance and risk

Those are details but the intention is clear: the customer comes first. So how exactly does Three Sixty plan to deliver the vision in practice and stand out from the crowd in more than brand terms alone? "There are a number of things," Marrill says. "On the customer service side, we will be easy to do business with. We want to be brilliant at the basics – so accurate bills, timely communications, and everything easy to understand. We want to be a winning organisation and we have three core values: we are people focused [staff and customers]; transparent [he offers the example of breaking down prices if it is desirable so customers can see exactly what they are paying for] and honest – for instance we'll tell you if something is wrong."

In price terms, Marrill argues Three Sixty can be competitive and win deals, referring to its experience in Scotland as evidence. In terms of value added services, the company is going deep and narrow rather than shallow and wide, with particular focus on three areas it believes customers prioritise:

Cost. It will help customers reduce their cost bases, from checking fundamentals like tariff and meter size suitability, to deploying more accurate measurement/AMR technologies and supplying consumption management services.

Compliance. Environmental and regulatory compliance is not always straightforward for businesses to understand and manage; Three Sixty will offer expertise to make compliance simple for customers.

Risk. Ensuring operations can run without interruption is a top priority for most businesses, so back up and continuity services such as storage are a core part of the Three Sixty offering.

Despite the shift away from a water-based name, there is no immediate plan to delve into markets beyond water and wastewater – though Marrill says he expects that to come "in time".

Customers and competitors

The new brand isn't to be immediately unleashed on Yorkshire Water business customers. Initially it will be used as the company pursues out of area deals and when upselling additional services to in-area customers. Marrill is unable to absolutely confirm the longer term plan as much hinges (as it does for others) on Yorkshire securing agreement to exit the market. However, he said the direction of travel is to roll Three Sixty out across the board.

In terms of target customers, the company is interested in the full spectrum of segments including SMEs. "Small customers can get overlooked in all of this," observes Marrill. However, the company is not going all out for size. "We want to be the best water retail business in the UK; leading in thinking and approach; award winning. We are not aiming to be the biggest." It is no minnow as it stands at any rate: with around 100,000 customers, Marrill puts it "in the top five".

The company also distinctly has its eye on the long term. Retaining and enhancing the experience for Yorkshire Water's existing customers is a priority, as is creating sustainable, meaningful partnerships with new out of area businesses. "Customers who switch straight away are likely to be perennial switchers," observes Marrill. "We are in this for the long run. I don't worry too much about day one. Right now we are focused on shadow and go live. After that I think there will be a significant period of settling down. April is only a point in time; it'll take another 12 months to see where the market is."

Nor is he overly concerned about how other associated retailers are approaching the new market – an issue of course for all players but perhaps particularly pertinent for Three Sixty given its Yorkshire Water home market is bordered by the sector's giant Water Plus to the south and west (see Water Plus interview, p24-25). "We are focused on doing the best we can," he explains. "Of course we are aware of what others are doing, but we aren't rushing around panicking." On Water Plus he wryly observes its size means it has lots of attractive customers. He adds: "We are as likely to be challenged by the Waterscans of this world."

Kelda, culture and change

Within the Kelda Group, Three Sixty is a standalone business – now effectively a sister company to Yorkshire Water and the other operations in the Kelda stable. These include non regulated operations company Kelda Water Services; property manager KeyLand Developments; and contact centre/billing specialist Loop Customer Management. Like Yorkshire Water, Three Sixty uses a Loop system for its billing and customer service functions.

Headquartered in Barnsley, Three Sixty is around 120 people strong and, with the help of an organisational development coach, Marrill is working to cultivate a separate and distinct culture for the retailer. "Three Sixty is a baby at the moment," he says. But he adds that when the brand was soft launched internally a month ago, the group HR director came down and commented on how Three Sixty was a recognisably different business while fitting in with the wider group.

Marrill extends the baby analogy to depict how he sees Three Sixty developing going forward. "As a baby becomes a real person, we will grow into our space. Its not about painting a picture now of something that is fully formed." This is perhaps a healthy attitude, given no one really knows how the market will behave in the short term let alone further down the line. Within five years of opening, Marrill remarks that arrangements could have significantly changed, depending on factors including the government's decision on residential retail and how effectively the business market is performing. He speculates Ofwat could undertake a review and intervene in the market's design within a couple of years of 2017 if it believes the market isn't effective.

For now, Three Sixty's plan is to do its best with what's on the table. "Everyone would like more margin but we've got what we've got. Some people are very vocal about this but that is not in our nature. So you won't see us lobbying. We'd rather be talking to customers." Plus he says there is "still so much for everyone to do" to get to go-live. "It's no secret that everyone is finding it hard. Everybody is starting to sweat. We're not only creating a whole new business, we're creating a whole new market and the biggest risk is somebody isn't ready – particularly if it's a wholesaler. Shadow will be really useful in making things work. But I still expect we'll see lots of work-arounds." TWR

OFWAT CALLS FOR A SPEEDY DECISION ON DOMESTIC SWITCHING

Regulator beats the drum for a household retail market and urges the government not to dilly dally on making its mind up.

Ofwat urged the government for a fast decision on whether the residential retail market should be opened to competition when it published its final cost benefit analysis on the subject last month. In this, the regulator threw its weight unequivocally behind enabling household customers to switch supplier.

It pointed out companies and their investors would welcome an early indication so they can plan ahead and minimise cost by identifying the best approach. From a regulatory perspective, it said an early decision would enable it to incorporate provisions for market opening into its PR19 methodology (consultation is due July 2017); inform decisions on actions in the business retail market; and allow time for thorough preparations to be made and issues resolved. The sense was that a choice needs to be made either now or after 2020 and waiting would impart ongoing uncertainty. If the government opted to decide in a year or two instead, this could get in the way of a smooth start to the business market and planning for PR19.

Ofwat pointed out that when to open the household market was a separate consideration from if it should be opened. Once a decision in principle is made, the government can further consider how the transition should be made (for instance, all in one go or in stages) and when exactly. Matters to consider in terms of timing include capturing learnings from the non household market and paying attention to developments in the energy market, given prospects for multi-utility bundling.

Left behind?

Ofwat's messaging in its final analysis was surprisingly bold. Both DEFRA and the industry are understood to have fed back to Ofwat after it published its emerging findings in July that while it was for the government to make the yes/no decision on residential retail, a steer on the expert regulator's opinion would be welcome. Ofwat did not disappoint, firmly nailing its colours to the pro-competition mast and using emotive language. The release it issued on 19 September to accompany its cost benefit analysis boldly proclaimed: "Introducing competition to the residential retail water market could be worth almost £3bn and prevent water customers being left behind in a retail revolution."

While the message was not without mention of the uncertainty of future predictions and costs, it dwelt heavily on the positives: the £2.9bn benefit over 30 years; the innovation, improved customer service and new offers that would flow out; possible improvements in water efficiency and reductions in bad debt; and the widespread desire among customers for the freedom to choose their supplier – so "ending the final retail monopoly". Chief executive Cathryn Ross was quoted as saying: "We are living in an age of retail revolution, but water customers are being left behind…The uncomfortable truth is that, when it comes to retail offers, water companies provide an analogue service in a digital age."

It will be fascinating to see when and how the government responds. Ofwat's message would almost certainly have been music to the ears of David Cameron and George Osborne's government, but for the May/Hammond administration, introducing domestic water switching may be a bridge too far against the backdrop of Brexit. There was barely any political interest in water at the Conservative Party conference in Birmingham at the start of the month (see report, p4-5). Much might depend on how other stakeholders respond. If others don't join Ofwat's rallying cry for competition, residential retail could find itself swept under the carpet.

Outcomes polarise

But what of the latest cost benefit analysis itself? Ofwat has conducted a very thorough programme of work after the government requested in November 2015 that it evaluates the costs and benefits of introducing competition. This has included: commissioned research from Accent on customer views; qualitative and quantitative analysis; and a commissioned study from KPMG on lessons from energy. It has also actively sought outside input: through the formal written response process to its emerging findings (see box – Stakeholder responses); through workshops and bilateral meetings with key stakeholders; and by considering evidence provided by others including CC Water. Having received little criticism of its methodology, that remained unaltered in its final report. The detailed changes made since July in response to all this liaison, alongside additional work on Ofwat's part, are set out in the box – What has changed since July?

The upshot is a greater polarisation of potential upside and downside outcomes, compared with the emerging findings. Ofwat modelled outcomes against four scenarios ranging from one with widespread innovation and strong customer engagement, to one with disengaged customers and weak competition, against the counterfactual of the status quo:

- Scenario 1 – Lower cost, widespread innovation, strong competition
- Scenario 2 – Lower cost, some innovation, good competition
- Scenario 3 – Higher cost, some innovation, good competition
- Scenario 4 – Higher cost, little innovation, weak competition

As shown in the bar chart on p30, if the best case scenario emerges, the total net present value (NPV) of introducing competition into the household retail segment in England is calculated to stand at £2.9bn, up from the £2.3bn quoted in July. Scenario 2 remains stable, but there is less benefit on the table if Scenario 3 transpires – £185m NPV not the £655m calculated in summer. Should Ofwat's worst case scenario surface, the cost would be more than double that previously advocated – £1.45bn as opposed to £640m.

Bright side outlook

So both risk and reward possibilities have increased. But as noted, Ofwat's position has been to emphasise the upside potential rather than the downside risk, with a consequent focus on the scenario 1 outcome. In its September report, it defended the much derided best case scenario £6 average saving per customer (which rose to £8 in the final analysis) by setting out the "wider context against which this figure might be judged". This highlighted that the £2.9bn NPV benefit from household retail compares favourably with the NPV forecast from the new PR19 markets (water resources £1.2bn, sludge market £1.3bn and direct procurement £400m-£850m, each over 30 years); and far outweighed the £211m NPV attributed to non household market opening in the government's impact assessment.

Moreover, Ofwat gave another good airing to the qualitative benefits foreseen in July: customer service, demand management, environmental and resilience benefits offered by the likes of service bundling and technological development.

Mitigating risk

Of course the regulator acknowledged the potential downsides, but put forward the view that the way the market is set up, structured and regulated can go a long way to secure a good outcome and win stakeholder trust. It envisaged an ongoing >

WHAT HAS CHANGED SINCE JULY?

- A qualitative assessment of the value of choice to customers has been included. Ofwat said: "For a significant number of customers, the option of having a choice of supplier will be of value because it provides an alternative if they do not get the service they want from their current suppliers."
- Wastewater efficiency savings. An assessment of the potential benefits of competition with regard to wastewater has been added, with focus on treatment costs and resilience of the drainage system to extreme events. The savings would be achieved through increased customer water efficiency and other measures to reduce demand on the drainage system for example, by reducing surface water run-off from properties. This could benefit the customer through lower wastewater bills.
- Water efficiency savings. Following evidence from potential new entrants, Ofwat's quantitative analysis now includes an estimate of the potential benefits of competition for energy bills and carbon savings.
- Water resources resilience. Ofwat has added additional qualitative discussion of the benefits of water efficiency for water resource resilience. It said it had not attempted to quantify the value of potential resilience improvements nor the potential environmental benefits because the link between reduced demand and wider resilience on customer services is complex. "Nonetheless, these are important benefits that should be considered in any decision about whether to introduce residential retail competition. Retailers are likely to challenge wholesalers on their customers' behalf if there are repeated supply interruptions."
- Company costs. The approach to company costs changed in two areas. First, Water UK's submission on the costs of opening the business market has been taken into account; set-up costs for the business market are higher than estimated in Ofwat's emerging findings. The regulator applied the same methodology as used in the emerging findings to scale up these costs for opening a residential market, in the absence of any additional quantitative evidence on that point from stakeholders. However Ofwat excluded any costs associated with the voluntary restructure of businesses from the quantitative analysis on the grounds that legally binding separate retail price controls require accounting separation, which means that integrated companies would be able to take part in a competitive retail market.
- Market operator costs. Some incumbent retailers submitted more up-to-date information on market operator costs in the business customer retail market. These were used to update estimated costs for opening a residential retail market, increasing ongoing costs of operating the market.
- Switching assumptions. Ofwat carried out additional research on the back of pointers from a number or respondents, in particular towards the Competition and Markets Authority's energy market investigation. It lowered its assumptions on the switching rates used for each scenario.
- Customer search costs. Assumed customer search costs were increased to reflect evidence.
- Companies' customer acquisition costs. While some incumbent retailers argued for higher acquisition costs, some potential entrants set out the case for lower costs on the back of technology and multi-utility bundling to avoid marketing costs across their customer base. ·Taking account of views that the cost to retailers of acquiring customers could be higher or lower than assumed in its emerging findings, Ofwat included a wider range of costs and increased assumed acquisition costs across each scenario.
- Bad debt. Ofwat received representations on this from incumbent retailers and CCG chairs. As a result it included significantly more qualitative analysis of potential additional bad debt savings. According to the report: "We were not surprised to note that current incumbents held particularly strong views on why it would not be possible to reduce bad debt levels in the residential market significantly, or that potential new entrants disagreed. After consideration, we think the additional analysis we have done supports retaining the assumptions made in our emerging findings."

role for strong, effective, independent regulation – including to ensure appropriate assistance for vulnerable customers and those who genuinely can't afford to pay, and to ensure that all customers receive a good standard of service.

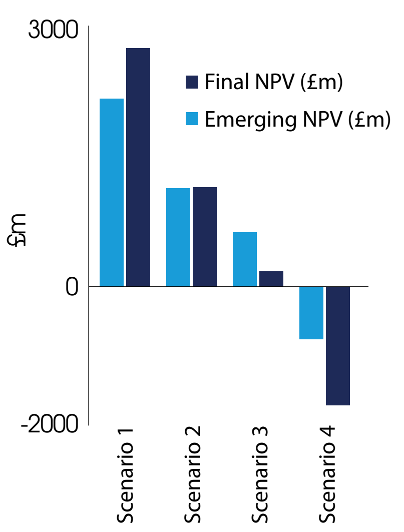
It highlights the following features in particular.

Entry and exit. Allowing incumbents to exit a market they are unable or unwilling to compete in would be essential, as would facilitating entry. Ofwat commented: "We know from the opening to competition of the business customer market, that it is important for new entrants to have a voice in how the market is set up to ensure that it works for all and not just for big incumbents. And ongoing regulation, through codes, licences, guaranteed standards scheme and competition law, would be needed to ensure companies that could influence the market did not distort it to their own advantage. We also expect good-quality data on customers and their consumption, and access to that data would be key to ensuring new entrants were able to compete. If necessary, regulation could be used to ensure this."

Public health and safety. There would need to be a requirement for wholesalers and retailers to work together to maintain public health and safety – if there were a threat to a drinking water supply, for example.

Resilience and long-term planning. Wholesalers and retailers would need the right incentives to work together to maintain resilience, to enable wholesalers to plan over the long-term, to ensure decisions reflect customers' needs and that customers of the future have access to water services at a fair price.

POLARISING NPV JULY-SEPT



Treating customers fairly. Minimum standards of service could be adapted to take any new market into account. Vulnerable protection could be achieved through a code of practice, and retail licences could include the requirement to abide by this code. Those who struggle financially could continue to receive help in a competitive market – perhaps through a universal service fund or something similar. Ofwat said: "It would be for the government to consider whether there was a role for tools that help customers with budgeting, such as prepayment meters and, if introduced, they could be regulated to ensure this was done fairly." Redress must also be timely and effective.

Enabling engagement with the market. Ofwat argued regulation could ensure that customers received good-quality, accurate information about their consumption, the services they receive and the price they pay. Customers who want to engage should be able to compare deals easily, and switching should be as quick, simple and hassle-free as possible. Good-quality, standardised data about customers and their water consumption is key to enabling service innovation.

Distributional impacts. The report said: "It is inevitable in competitive markets that some customers would secure a better deal than others, and that those who shop around are likely to do better than those who don't." Ofwat said there may need to be some form of protection, such as tariff regulation.

To support the development of a new household retail market should the government opt to proceed, the regulator offered its services "to carry out additional analysis, help in designing the market and carrying out implementation as required, and subject to appropriate resourcing."

Possible or probable?

Ofwat's work has undoubtedly been thorough, but one of the important missing pieces of the jigsaw is the probability of each scenario actually developing. This is crucial, as there would be little sense in building a business case on the back of a theoretical scenario that was unlikely to emerge in reality. If the government opts to follow Ofwat's advice, it would be demonstrating a degree of trust in the latter's expertise and insight into the market it regulates. Ofwat concluded: "We believe that the introduction of competition in the residential retail market in England would be likely to result in a net benefit. The scenarios we have created and considered are illustrations only and do not give an upper or lower limit on the net benefit or cost. We have also not ascribed a probability to each scenario. We do, however, have the evidence that:
- New entry on the basis of innovative business models is more likely than not.
- Multi-utility service bundles are more likely than not.
- Technology that is emerging in other sectors is likely to help reduce customer search and switching costs.
- New entrant business models could bring significant benefits in terms of water efficiency and wastewater management, and therefore resilience.

If the market can be designed and regulated appropriately, the potential benefits available are significant." TWR

PRESENT VALUE OF COSTS, BENEFITS AND NET BENEFITS, £ MILLION (2012/13 PRICES)

Breakdown of costs and benefits (£ million NPV)	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Retail savings in active share of the market	1,053	551	551	140
Retail savings in inactive share of the market	669	871	871	561
Wholesale spill-over benefit	811	496	496	228
Additional metering benefit	177	0	0	0
Additional bad debt benefit	856	455	455	0
Water efficiency benefit	771	196	196	0
Wastewater resilience	55	26	26	0
Set-up costs (all parties)	-367	-389	-733	-746
Ongoing operating costs (all parties)	-414	-443	-1,129	-1,129
Switching costs (customers and companies)	-694	-548	-548	-499
Total net present value	2,917	1,214	185	-1,445
Average saving per customer per year	£8.03	£3.67	£1.45	£2.84 additional cost

Source: Ofwat analysis

SUMMARY OF KEY STAKEHOLDER RESPONSES TO OFWAT'S EMERGING FINDINGS

Scale and distribution of costs and benefits

Respondents:
- Called for more distributional impact analysis, especially a need for further investigation into the potential detrimental effects that a new market could have on customers in vulnerable circumstances and on social cross subsidies.
- Questioned the basis of implementation cost analysis, especially the use of the business retail market as a model.
- Said costs should include upfront market costs as these would need to be recovered from customers and would result in bill increases in the near term.
- Argued for and against the bundling of utility services.

Ofwat:
- Agreed social tariff impact is an important point to consider further should a decision be made to introduce residential retail competition.
- Had not received any specific numerical evidence to enable it to assess the likely factor by which costs should be scaled up from the business to the household market. "Our final report therefore retains similar assumptions to our emerging findings, adjusted to reflect specific cost information on business market opening that stakeholders submitted."
- Maintained the view that there may be scope for companies to offer multi-utility bundles to customers in a residential retail market.

Customer debt

Respondents:
- Said Ofwat's analysis assumes that retailers operating in a competitive environment would have greater incentive and ability to reduce bad debt costs. The majority of incumbent retailers challenged the likelihood of this assumption without a change in government policy to allow disconnection and the use of prepayment meters in water.
- Argued information on customers has improved as has debt management practice – hence that there is less scope than indicated to improve debt collection through improving customer information.
- Pointed out bad debt could increase in an open market.

Ofwat:
- Acknowledged that PPMs may make a difference to the level of bad debt in the energy sector (in combination with disconnections) but considered other factors to be in play too – for instance that existing retailers would be required to locate and register all their customers.
- Did not think it reasonable or likely that residential retail competition would lead to higher debt.
- Dismissed the view that the debt landscape is improving. It said the counterfactual in the final report reflects the actual trend in the sector where the total level of revenue outstanding from customers' unpaid bills increased in the four years between 2010-11 and 2014-15.
- Said competition would drive a higher frequency of customer contact, particularly with new customers. This would position retailers to better address consumer debt.
- "As a result of this additional work there has been a significant increase in our analysis of potential additional bad debt savings which we include in the final report."

Customer support schemes and vulnerable customers

Respondents:
- Argued retailers would cherry pick, to the detriment of vulnerable customers.
- Some would find it difficult to switch – including the elderly or those with poor cognitive skills or physical impairments. This could result in the emergence of price differentials between different customer groups, with inactive customers at risk of facing higher bills than active customers over the long term.

Ofwat:
- Believes appropriate market design can incorporate mitigations to limit or neutralise cherry picking risk. Ofwat is ready to work with government to explore addressing these concerns if necessary.
- Said customer protection will be critical element of the regulatory design of a new market and it should take particular account of those customers in situations of vulnerability.

Customer engagement

Respondents:
- Said some the analysis that emerged from the customer research undertaken by Accent is unrealistic – e.g. that 50% of customers would be interested in switching given the choice and that 45% of customers would switch for better service without price benefit.

Ofwat:
- Acknowledged the 45% appeared high in comparison with experience in other sectors but reiterated its former position. "Our customer research found that there were customers who were interested in service levels rather than just price savings, for example, water efficiency and leak monitoring…Our analysis suggests that future products and services driven by technology and possibly multi-utility bundling could entice the 50% of customers who said they would be interested in switching to actually change retailer."
- Lowered switching assumptions across all scenarios.

Water and wastewater efficiency

Respondents:
- Argued many companies are investing in progressive metering programmes regardless of residential retail competition. These benefits should be included in the counterfactual, rather than as benefits in scenario 1.
- Questioned how metering and water efficiency would be funded in a new market.
- Doubted new entrants would focus more on water efficiency than incumbents.
- Suggested that the potential for customers to switch again would reduce incentives on retailers to expend resources on water efficiency work.
- Argued water efficiency could only be properly promoted in a new market by rolling out metering to all residential customers.

Ofwat:
- Stuck by its counterfactual assumption relating to water efficiency which is based on company Water Resource Management Plans. It argued these represent the best available information on expectations of consumption trends.
- Supported by responses from some stakeholders, it said there was evidence that there are new products and services available (with others likely to be developed in future) that can enable changes in customers' water usage.
- Did not assume that there will be any change to the level of currently projected meter roll out or any smart metering. "Indeed, we do not consider metering a prerequisite for residential retail competition, or promotion of water efficiencies, since it is possible to estimate water usage based on other factors such as house size and occupancy."