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THE WATER REPORT

POLICY | REGULATION | COMPETITION

Parting shots

Public health risk and financial resilience: Jonson Cox's final messages to directors as he reflects on his decade as Ofwat chair.

COMPETITION WATCH

- Metering roles and responsibilities options.
- Voting rights for self-supply.
- MOSL reports trading party performance holistically for the first time.
- Bilaterals programme passes a milestone.
- A levy on bills is needed for water efficiency.

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THE WATER REPORT COMPETITION WATCH

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EDITOR'S COMMENT

Everything for everyone

Some would say it's been a long time coming, but the elevation of the environment in Ofwat's draft methodology for PR24 (p4) is testament to just how much green concerns have stormed the agenda since PR19. This, and Ofwat's parallel ambition for a longer term focus, is great news. And it raises some interesting issues.

The juggling act Ofwat is trying to perform in managing multiple objectives has never been clearer. Alongside its traditional pursuit of efficiency, good levels of water/wastewater/customer service and reasonable returns for investors at an affordable price for bill payers – and its more recently acquired interest in resilience, innovation and governance – it is now also reacting to the demands of a changing climate and citizens armed with science. Rightfully, the regulator wants people to have a meaningful say (and bravely, in the current climate, has suggested open challenge forums to enable it). But the dynamics of that, if these voices are really listened to, will only layer complexity on.

Right now, we are still in the 'polite' phase of the review, in which it is perfectly legitimate to advocate delivering everything for everyone – more, better, greener services, all at an affordable price. But we will get to the point where all the costs get added up. Campaigners and even policy-makers tend to look at issues in isolation; it falls to companies to tot up the bill and to Ofwat to query it. Note too that while expectations are going up, what is 'affordable' is going down. The cost of living will undoubtedly play through this price review.

In this conundrum, the Government has done little to take the wheel. Defra's Strategic Policy Statement ducks the issue that Ofwat will ultimately have to make a call on: how to balance investment needs against affordability.

And as this plays out, there is a parallel narrative going on about who dropped the ball on the environment (sewage in rivers) in the past. The fact that it isn't perfectly clear exactly who should have done what and when (p18, p19) suggests the landscape is muddled. As the green agenda grows, so will the complexity. Clarification on roles and responsibilities is therefore becoming urgent. This might entail Ofwat assessing environmental outcomes as Jonson Cox suggests (p12). Or better integration of the water policy landscape, as mooted by Alan Lovell in his pre-hearing for EA chair (p33).

Water is a system, and somehow needs systemic thinking to govern it.

Karma Loveday, editor,
The Water Report

Feedback, comments and suggestions very welcome.

Contact me on karma@thewaterreport.co.uk or 07880 550945.

PR24: SQUARING A CIRCLE

Ofwat's draft methodology is asking companies to deliver greener, better services for today and tomorrow for an affordable price. Not unexpected, but quite the challenge.

On 7 July, Ofwat published its methodology for PR24, now open to consultation until 7 September. Running to 147 pages in the main document, plus 13 appendices and supporting documents, the complexity of PR19 seems little eased. Perhaps that's not surprising in the current environment: the regulator has the unenviable job of identifying a methodology that seeks to balance unprecedented challenges on both the environment and customers' pockets, at a time of rising and changing customer expectations.

It has clearly tried to grapple with this upfront in identifying four overarching ambitions for PR24, which dovetail with the challenges in hand:

- Increasing focus on the long term.
- Delivering greater environmental and social value.
- Reflecting a clearer understanding of customers and communities.
- Driving improvements through efficiency and innovation.

Aileen Armstrong, senior director of company performance and price reviews, and PR24 lead, emphasises the importance of this framing for PR24. "There are growing concerns about environmental impact, water quality, use of storm overflows, abstraction rates. And also the sector needs to make a bigger step towards meeting net zero. But there are pressures on people's finances. So in the PR24 draft methodology, setting the framework is really about setting that challenge to water companies to deliver better, more efficient service at a price that remains affordable."

She explains that from Ofwat's perspective, the four ambitions are not ranked in order of importance, but interdependent: "I think they are overlapping. It helps to have four ambitions but they do overlap…you do have to think about this range of issues. I wouldn't prioritise."

Continuity and change

Ofwat's view is that each of the four ambitions are a development, perhaps a refinement of what has gone before. That can certainly be seen of efficiency and innovation, which are Ofwat staples in ensuring bill affordability; and of understanding customers – this time the price review will take a distinctly different approach from PR19 or PR14, but the objective remains the same.

Armstrong says the same applies for delivering environmental and social value and focusing on the long term.

Nonetheless, there has been a distinct, and welcome, elevation in regulatory interest in both of these strands. Armstrong is astute in her observation that: "Now more than ever, it has got to be right to be talking about the long term and making sure that's where companies' focuses lies." Hence we see high priority afforded in the methodology to setting company five year business plans in the context of a 25 year Long Term Delivery Strategy for the first time (see p8). And a swathe of new environmental Common Performance Commitments (CPCs).

Net zero and SOs

The renewed focus on the environment and the long term come together most clearly in the methodology's approach to reducing greenhouse gas emissions and reducing storm overflow spills. Ofwat wants "to push the sector to make improvements as quickly as possible…We have therefore taken additional steps to drive this and allow companies to make faster progress towards meeting long term targets".

On emissions, a brand new "net zero challenge" has been included. Where firms go over and above the basic requirements, Ofwat will consider bids on a competitive basis, with a view to putting funding in the hands of the most efficient companies.

Armstrong comments: "Companies need to go further on net zero, and so on emissions there will be a Performance Commitment (PC) and we are setting them a stretching target there. But there is a lot to learn on how to efficiently reduce carbon. So the challenge part of it is there to say to companies who are efficient and can identify ways to go further faster, there will be that funding there to do that. So you are getting a double whammy in terms of being able to identify the best and most efficient ways to get faster improvement. And that will reveal that information for the whole sector and so you get a multiplier for that expenditure."

On storm overflows, all companies will be expected to meet the average 20 spills per overflow by 2025 pledged by Anglian, Northumbrian, Severn Trent and South West in their river health plans. PR24 targets are pending ongoing regulatory investigations and the finalisation of the Government's Storm Overflow Reduction Plan, but "robust proposals" for the next review are anticipated.

Exactly how Ofwat's four ambitions play out remains to be seen over the course of the price review. The remainder of this article summarises the key elements of the methodology.

Outcomes

- Ofwat has proposed 21 CPCs for WASCs and 11 for WOCs at PR24 (see table). Firms are advised to confine their bespoke PCs to two or three (these will be submitted early, in April 2023, so companies can factor the feedback into their business plans) – meaning in total there will be around half the number of PCs from PR19. The key outcomes will continue to be incentivised in future price rounds, meaning company investment and performance at PR24 will also be recognised in future periods.
- Asset health (mains repairs, unplanned outages and sewer collapses) CPCs remain in tact from PR19, as do customer CPCs largely (minor amendments to C-MeX). But there will be a new MOSL-administered BR-MeX CPC to incentivise wholesalers to perform better (on data quality, bilateral interactions and the like) in the non household retail market. This will be based on feedback from both business customers and retailers.
- There are a host of new environmental CPCs, including on biodiversity, emissions, serious pollution incidents, bathing water, river water quality and storm overflows. On water demand reduction, NHH demand will be brought into the fold alongside household demand and leakage; Ofwat is toying with combining the three into a single water demand PC (with separate reporting for the different elements) or keeping three separate PCs.
- Ofwat will set the service standards its expects from companies for these PCs through Performance Commitment Levels (PCLs). It told companies to propose "stretching but achievable" PCLs in their business plans and said: "At PR24 we intend to draw a clearer link between the cost allowances and the performance levels we expect companies to deliver."
- All PCs will have financial Outcome Delivery Incentives (ODIs) attached, generally applied symmetrically to out and under performance and based on customers' valuations of the service attribute. Ofwat generally plans to set the benefit sharing factor at 70% for all companies, and will calibrate final rates for each PC at the determinations phase.
- It will take a different approach for C-MeX, D-MeX and BR-MeX, with ODIs

set according to relative performance. PR19 C-MeX incentives (+/- 12% of allowed residential retail revenue) are set to be increased; D-MeX will remain unchanged (-12% - +6%); and BR-MeX will be set at -1%-+0.5% of wholesale revenue.

- All ODI payments will be applied annually through in-period revenue adjustments, though companies can request deferral.
- Where the impact of enhancement expenditure through PR24 outcome measures can't be adequately captured (for example, because it addresses a low probability event or because the benefits will accrue in PR29), Ofwat will use Price Control Deliverables (PCDs) to track delivery instead.
- Revenue at risk from ODIs will remain equivalent to around a +/-1% to +/-3% return on regulatory equity (RoRE) each year, excluding C-MeX, D-MeX and BR-MeX. Ofwat has proposed a new mechanism of sharing rates for total rewards once they reach certain thresholds each year. As a starting point, it proposed companies can earn or incur up to +3% or -3% RoRE without any sharing of payments, beyond which payments will be reduced by 50%. Beyond +5% and -5% RoRE, payments would be reduced by 90%. Caps and collars for individual ODIs will only be used on a targeted basis. There will be no deadbands.
- Super rewards (twice the size of standard rates) for very high performance on well-established PCs will be extended to all companies to encourage innovation. These enhanced ODIs will be outperformance only. Recipients will be required to share the knowledge behind their success with the sector in a timely, open and transparent manner – with a clawback mechanism if this is deemed inadequate.
- There will be another Innovation Fund in the next price period, with details to follow.

Cost allowances

- Ofwat will use the same overall approach to setting efficient expenditure allowances as at PR19 – "a combination of benchmarking models, cost adjustments and deep dive assessments, split across base and enhancement expenditure…a combination of catch-up efficiency, where less efficient companies catch-up with efficient companies, and frontier shift efficiency, where we expect even the most efficient companies to improve efficiency from improvements in working practices and the introduction of new technology." But there will be some adjustments.
- Base expenditure – this will include more of a forward look than at PR19. Armstrong comments: "There is a lot that companies are funded to do through their base costs. We expect an improvement on base costs – you expect that improved productivity going forward…But in terms of our models, we want to look at whether there are forward looking elements to reflect in the models. And that's where, if you've got additional complexity in treatment works for example – say different ways of doing things that haven't been there before – the models on a purely backward look wouldn't capture." Some examples might be incorporating phosphorous removal or ultraviolet into treatment processes.
- Residential retail – top-down aggregate cost models will be relied on solely this time, having proved their value.
- Enhancement expenditure – Ofwat plans to use historical and forecast expenditure to set efficient expenditure allowances. Where costs are material, it will use engineering deep dive assessments to identify an efficient cost allowance.
- Companies will need to provide "compelling supporting evidence" for any cost adjustment claims; there will be "a high evidential bar".
- On operational resilience, Ofwat is developing an integrated monitoring framework to provide a more complete view of asset health and operational resilience.
- Long-term investment will be facilitated through greater clarity on the treatment of multi-period investments and outcomes. Enhancement funding will be allowed in cases where preparatory work is essential to start work on schemes, even where there is still uncertainty of need. PCDs will allow enhancement funding to be returned to customers in the event of under- or non-delivery of outputs or outcomes.
- A "step change" in efficiency is expected;

> **We expect an improvement on base costs – you expect that improved productivity going forward…But in terms of our models, we want to look at whether there are forward looking elements to reflect.**

PROPOSED COMMON PERFORMANCE COMMITMENTS FOR PR24

	Water and wastewater	Water only	Wastewater only
Customers receiving excellent service every day	C-MeX (residential customer measure of experience) D-MeX (developer services measure of experience) BR-MeX (business customer and retailer measure of experience) (for English companies) Business customer satisfaction (for Welsh companies)	Water supply interruptions Compliance risk index (CRI) Customer contacts about water quality	Internal sewer flooding External sewer flooding
Environmental outcomes	Biodiversity	Leakage Per capita consumption Business demand (All three could be combined into a single water demand performance commitment) Operational greenhouse gas emissions - water	Pollution incidents Serious pollution incidents Discharge compliance Bathing water quality River water quality Storm overflows Operational greenhouse gas emissions - wastewater
Asset health		Mains repairs Unplanned outage	Sewer collapses

"companies should demonstrate ambition to deliver improving performance levels and affordable bills." The methodology set out several key principles for determining the performance levels an efficient company can deliver through expenditure allowances: including that efficient companies will continue to improve performance over the long term from base expenditure, and that the overall cost and service stretch will be considered when PCLs are set.

❙ Cost sharing will be simplified, so that rates are more symmetrical and there is less variation in the rates between companies.

❙ Companies should robustly demonstrate the delivery of long-term best value, taking account of "wider environmental and social benefits, costs, risks and affordability of customers' bills when developing their enhancement proposals". This will be easier said than done. "Therefore, companies need to approach the assessment of best value with an open mind and should consider a variety of options to identify the best solution for customers, the environment and society."

❙ Ofwat said it is keen to facilitate nature-based solutions (NBS). It is supportive of a route advocated by companies, to capitalise the net present value of the whole-life operating expenditure of NBS but said several challenges need to be overcome for this to become a workable solution, such as the risk of double funding as additional operating expenditure will be reflected in base cost allowances in due course. It also proposed an alternative: setting a ten-year operating expenditure allowance for NBS which are wholly or primarily based on ongoing operating expenditure, to provide additional surety of funding.

❙ Partnering – Ofwat encouraged the maximisation of co-funding with third parties where this is efficient, with contributions expected to be in proportion to the benefits that third parties will derive from the scheme.

Possibly a lower notional gearing will be set at final methodology. The regulator indicated it favoured a bigger equity buffer in the face of growing uncertainty.

Major schemes

❙ Direct Procurement for Customers (DPC) will be expected by default for all projects valued at or above £200m lifetime totex, in all parts of the value chain except bioresources. Ofwat reserved the right to explore DPC for smaller projects too, where there are particular delivery or financeability challenges because they are large compared with the size of the host company. Revised guidance on the 'separability' of schemes will be issued ahead of the final methodology in December. Negative value for money estimates will not be an acceptable reason not to pursue a DPC because value for money will only be tested by tendering; however the regulator reserved the option of allowing companies to deliver projects themselves if procurement is not in customers' interests.

❙ Price controls will include funding to run DPC procurement processes but not for in-house scheme delivery. Customers will pay for DPC schemes outside of price controls.

❙ Firms will be incentivised to run DPC schemes well – on time and creating value for customers. The grading of business plans will also consider how enthusiastically firms embrace DPC.

❙ Ofwat will review and add DPC conditions into the licences of companies with eligible schemes in late 2023/early 2024, if they do not yet have them.

❙ Development funding and incentives will continue for strategic water resource solutions, with large projects expected to proceed via DPC.

❙ The existing water trading incentive will remain until 2030 but a revised incentive will be put in place for PR29.

Risk and return

❙ The allowed return will be set on the basis of a weighted average cost of capital (WACC) for wholesale controls and a retail margin for retail controls – in both cases, set by reference to an efficient company with the notional capital structure. An early view on WACC will be offered in the final methodology in December.

❙ Possibly a lower notional gearing will be set at final methodology. The regulator indicated it favoured a bigger equity buffer in the face of growing uncertainty.

❙ Base return on equity will be set using CAPM, with cross checks. Ofwat will use a central estimate from within the CAPM cost of equity range to set the allowed return and retain a fixed cost of equity rather than index the allowed return.

❙ The cost of debt allowance will be based on a component for embedded debt using a benchmark for companies' balance sheet debt costs, and an indexed component for new debt using a benchmark index. Ofwat observed: "We expect that at PR24 the cost of debt will be materially lower than at PR19" – largely the result of maturing legacy debt being refinanced at lower rates.

❙ RoRE will be kept as the basis for measuring financial risk.

❙ The RCV will be fully indexed to CPIH from the start of the 2025-30 control period.

❙ The consideration of small company premium adjustments will be simplified; the PR19 customer benefits assessment will be discontinued.

DESIGN OF THE PRICE CONTROLS

❙ The structure of the PR19 price controls will be retained. There will be a total revenue control approach for water resources, network plus water and network plus wastewater, and an average revenue control approach for retail and bioresources. In addition, there are separate controls for Tideway and Havant Thicket.

❙ Water resource control – The current control boundary will stay. There will be "elevated scrutiny" of Water Resource Management Plans, with companies expected to consider innovation and operational interventions as an alternative to new expensive infrastructure. Planning must be adaptive, describing a core pathway based on no/low regrets investment and investment to keep future options open. In a change from PR19, firms will not be required to specify utilisation risk-sharing arrangements for large investments in water resource assets.

❙ Water and wastewater network plus controls – The measures here included changes to the regulation of developer services.

❙ Monopoly retail – Despite the current inflationary environment, Ofwat said there will be no automatic indexation of allowed revenue. Instead, expected input price pressure will be reflected in the revenue limit set for companies at the outset of the price control. Armstrong explained this was in line with PR19 policy and that other sectors don't get an automatically indexed return.

❙ Bioresources control – PR24 will further support this market. Business plans should set out a sludge strategy; stretching cost forecasts; and accurate sludge production forecasts.

❙ As at PR19, a Revenue Forecasting Incentive Mechanism will be set but Ofwat is considering excluding developer services revenue and changes in relation to third party costs and revenues.

Financeability and resilience

Armstrong offers this context: "The key point here is financial resilience is crucially important …companies need to finance improvements for customers and the environment and companies need to perform better. So they need to have that financially resilient base to be able to do that."

- Financeability will be assessed at the appointee level by reference to an efficient company with the notional capital structure that underpins the allowed return on capital, and by reference to a suite of cash flow financial metrics.
- The use of PAYG and RCV run-off will be retained, with a narrow range for RCV-run off rates set, "informed by a consideration of the remaining asset lives, that represents a reasonable balance of cost recovery between current and future customers". Details will follow in the final methodology.
- Companies should target a credit rating of at least two notches above minimum investment grade – so BBB+/Baa1, the same as PR19.
- Boards will be required to provide assurance on financial resilience. Ofwat will also specify a minimum suite of scenarios it expects companies to stress test.
- GOSM2? – Ofwat hinted at a possible incentive mechanism to deal with risky financial structures for firms who do not voluntarily yield. It will consult in summer on strengthening regulatory protections: "We consider these protections are best achieved through strengthened ring-fencing provisions in the licence…However, we may apply an incentive-based mechanism within the price review if we are not satisfied with progress achieved through other means."
- Firms are expected to set out how dividend and performance related executive pay policies for 2025-30 are aligned with delivery for customers, society and the environment. A view on a "reasonable" base dividend yield for PR24 will be indicated in the final methodology.
- Companies are encouraged to voluntarily share outperformance with customers outside of formal sharing mechanisms – for instance, if they outperform on cost of debt or because of high inflation.

Customers and communities

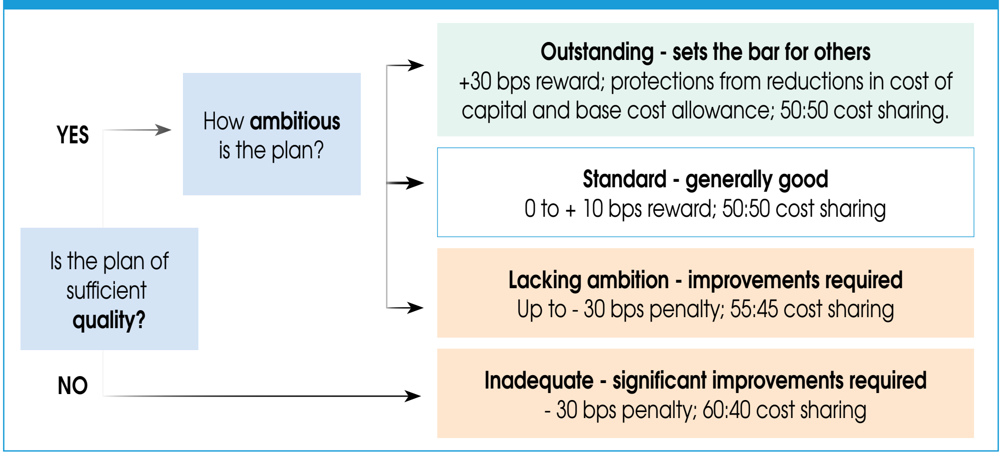
- The big reveal in the draft methodology was a proposal, similar to Ofgem's, for each company to host two open challenge sessions, for customers and other stakeholders to have their say on business plans. The first will be during business plan creation, for firms to take account of; and the second post submission to give Ofwat insight on what customers think of each plan. Armstrong enthuses: "We and CCW will be there in these challenge sessions but we want these sessions to be dictated by customers and stakeholders… It is part of package of things to make sure that we are really hearing from customers and wider stakeholders and that these are meaningfully reflected in companies' long term delivery strategies and business plans. Making sure that business plans reflect the needs, expectations and priorities of customers and communities is core to our approach in the draft methodology."
- Teamed with the collaborative customer research being undertaken at industry level (on priorities, ODI rates, affordability and acceptability) and the absence of a mandate for Customer Challenge Groups at PR24, this amounts to a significantly different approach to customer engagement than was followed at PR19.
- Ofwat also told companies on an ongoing basis to identify and support customers in vulnerable circumstances, including those who experience transient vulnerability; and who are struggling/at risk of struggling to pay their water bills. There should be twin track planning for scenarios with and without the introduction of a single social tariff by April 2025.
- The special circumstance of customers in Wales, given the different policy framework in play, has given rise to a new collaborative approach there, under the auspices of a multi-stakeholder PR24 Forum. According to Armstrong: "There is quite a theme through our proposals of reflecting customers' and stakeholders' requirements and reaching in where people are, rather than having our nice little framework up here and expecting it all to fit in. In Wales, it's about really reflecting the legislation there, the circumstances that are distinct to Wales and the different ways of working between England and Wales."

Business plan assessment

- The three-stage process followed at PR19 will be simplified to two, with the assessment of plans and draft determinations combined as a single step, followed by final determinations.
- Plans will be assessed on the basis of quality and ambition.
- Plans will be categorised into one of four categories – outstanding, standard, lacking ambition or inadequate – with associated financial incentives, as shown in the chart. For the first time, companies stand to attract penalties for poor plans as well as rewards for good, with a +/- 30 basis point return on regulated equity at stake, as well as different cost sharing factors. Armstrong points out that's a "big gap" between top and bottom incentives, adding: "There is no reason in my mind why any company should be 'inadequate' because that will mean they fail to meet minimum expectations."
- Outstanding companies will be protected from potential reductions in the allowed return on capital and base cost allowances between draft and final determinations, but would benefit from any increases. TWR

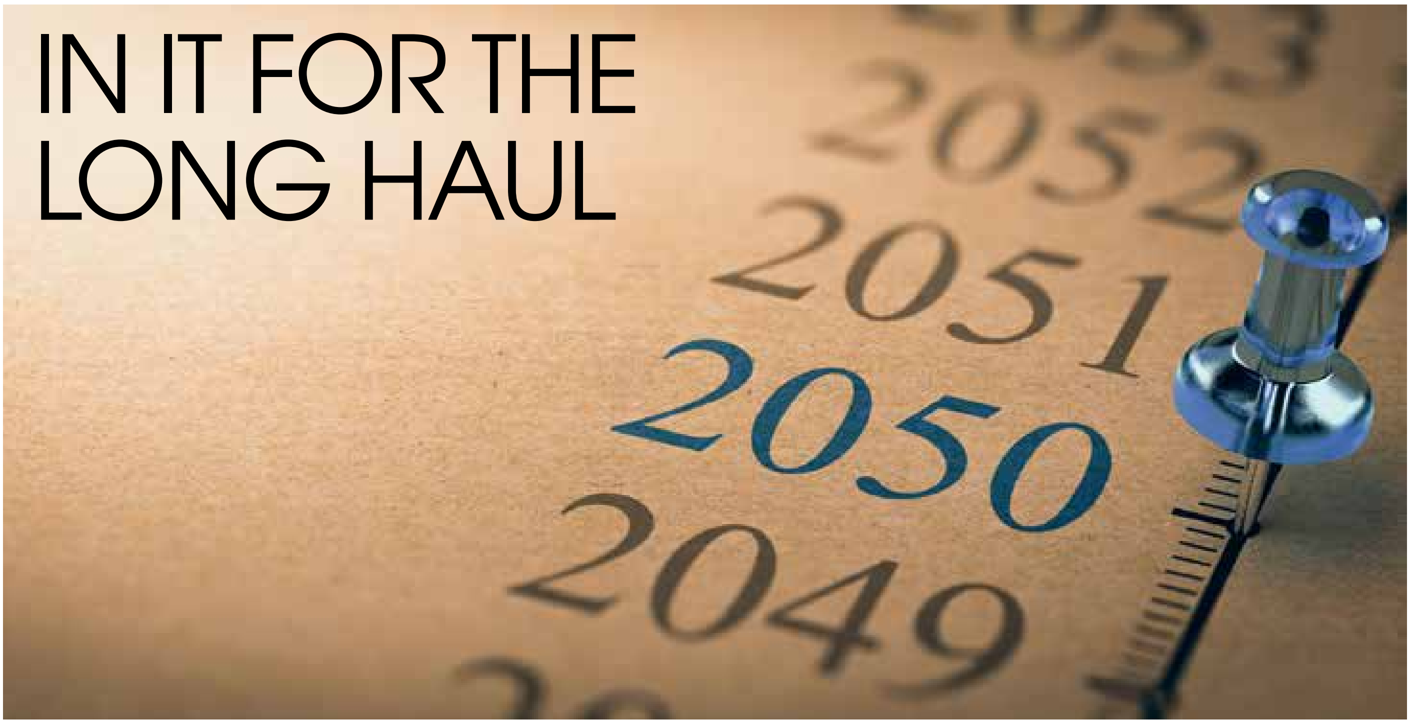
There is no reason in my mind why any company should be 'inadequate' because that will mean they fail to meet minimum expectations.

PROPOSED FRAMEWORK FOR DETERMINING BUSINESS PLAN REWARDS



INDUSTRY COMMENT

IN IT FOR THE LONG HAUL



It's a difficult task, but BRG's Colm Gibson advises water companies to put their shoulder to the wheel on delivering against Ofwat's new Long-Term Delivery Strategy guidance.

The UK water sector is inherently long-term in nature, with a significant proportion of assets being over 100 years old, and in some cases (such as the 'New River' opened in 1613 to supply London with drinking water) significant assets are over 400 years old. Despite this, it is only recently, with its publication of the Final guidance on long-term delivery strategies (LTDS) that Ofwat has mandated comprehensive long-term scenario modelling as a key input to its price control setting process. The new requirement to have Ofwat scrutinise such a comprehensive scenario modelling exercise provides both new opportunities and new challenges for companies at PR24.

Companies will need to develop scenario models that are able to cover the full range of scenarios that Ofwat is requesting. This is relatively standard for large companies in other sectors, but has been rare in the water sector. Companies are almost certain to have well developed financial models from PR19, and probably also econometric efficiency models (given Ofwat's previous focus), but are unlikely to have scenario models with anything like the sophistication required for this new task.

There are some good water sector examples. Severn Trent, for instance, developed a suite of scenario models in the early 2000s (in conjunction with Birmingham University) to validate its competition strategy. These models looked at a range of different potential ways that competition might have rolled out to confirm that Severn Trent's strategy was robust to all of them. Indeed, all companies have some form of scenario planning as part of their Water Resource Management Plans. That said, Ofwat's ambitions go significantly beyond what has been needed before.

Common reference scenarios

Ofwat has mandated eight "common reference scenarios", plus scenarios "beyond the reference scenarios" that companies "deem appropriate". The eight common reference scenarios are:

- *High climate change scenario*
- *Low climate change scenario*
- *Faster technology scenario*
- *Slower technology scenario*
- *High demand scenario*
- *Low demand scenario*
- *High abstraction reductions scenario*
- *Low abstraction reductions scenario*

These scenarios have markedly varying levels of detail provided, sometimes being defined by reference to other documents, and some being described by Ofwat. Companies will need to construct relatively large models to enumerate these scenarios in sufficient detail to meet Ofwat's requirements. Such enumeration means converting the relatively high level descriptions provided by Ofwat, into a detailed set or parameters that can be used to model the capital costs, operating costs, revenues, debts, financial ratios and output service levels.

Of particular note is Ofwat's requirement to demonstrate that

The large number of options each company has in deriving the parameters for each scenario means that different companies are likely to make different assumptions, leading to inconsistencies.

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"adaptive planning should be at the heart of the long-term delivery strategy", that "under this approach, adaptive pathways set out how decisions will be made under different plausible circumstances;" that Ofwat expects "the set of core and alternative pathways in each long-term delivery strategy to be able to deliver the company's ambition under at least all the reference scenarios;" and that "the strategies … should be subjected to wider scenario testing, beyond the reference scenarios".

Potential for inconsistency

Each company will need to calculate its relevant parameters, making a significant number of assumptions, and select from a potentially infinite variety of different approaches and datasets that could be adopted to derive the parameters. Companies, therefore, have significant flexibility, but face an onerous computational task in order to access this flexibility.

Indeed, the large number of options each company has in deriving the parameters for each scenario means that different companies are likely to make different assumptions, leading to inconsistencies. For example, in the "high climate change scenario", each company will need to make an assumption as to level of water demand for hydrogen production by electrolysis in their area. A water and sewerage company might assume that all water for electrolysis comes from the final effluent from a sewage treatment works, whereas an overlapping water only company might assume that there is an increased demand on its water distribution network to provide water to electrolysers, or vice versa. Both options sound plausible, and both seem to be equally consistent with Ofwat's specification, but can have materially different company parameters associated with them. Consequently, there will be scope for companies to challenge each other's scenarios once they are publicly available.

Companies will have even more latitude in defining their "wider scenarios" (which Ofwat has suggested should take account of "material local or company-specific factors as appropriate". This means that meeting Ofwat's requirements will not be quick or easy, and companies will need to start preparing soon in order to meet the PR24 deadlines. Key steps for companies are shown in the box.

KEY STEPS IN PREPARING A LTDS

1. Investigating the extent to which existing models – particularly the financial models used at PR19 – can assist with the task.
- What parameters would the existing models need as inputs?
- Do they need to be extended to cover a longer time period?
- Do they report on all the relevant outputs?

2. Taking Ofwat's high level scenario descriptions (which are often at a national or, at best a regional level) and crafting them into a more detailed description of each scenario as it applies to the company.
- What discussions with Ofwat and other stakeholders are needed to do this?
- What additional datasets need to be acquired or modelled?
- To what extent do the regional and company specific assumptions need to be consistent between companies?

3. Identifying, defining, documenting and enumerating additional relevant scenarios to meet Ofwat's "wider scenario testing" criteria.
4. Using the detailed scenario descriptions to enumerate each scenario for the company for the core pathways, and any alternatives up to 2050 (at least) – this is often regarded as a highly specialist task, and water sector experience might be at a premium. The output will be something akin to a spreadsheet with all the relevant numerical parameters needed to model each scenario.
5. Model each scenario in line with Ofwat's guidance.
6. Apply the relevant checks and balances.
7. Document the results in Ofwat's preferred LTDS format.
8. Use the first five years of data to form the PR24 business plan.

Better outcomes

As can be seen from the steps, this is not a short-term task, and companies will need to be sure they have the relevant skill sets and modelling capabilities allocated to the task.

The big opportunity for companies is to use the LTDS as proof that their plans are well grounded and logical. Ofwat frequently finds itself unable to support company plans because companies have not been sufficiently good at demonstrating that:

- *They have considered all the relevant options before landing on their chosen solutions.*
- *Customers will not regret paying for the investment, because it may not, in the event, be needed.*
- *The final plan strikes a reasonable balance between bringing forward investment where this will ultimately save costs (perhaps because of economies of scale), and waiting for new, better and more efficient technologies to emerge.*

Using the LTDS process as proof that companies have ticked all three of these boxes should help smooth the way to better PR24 price control outcomes for companies and customers.

House of Lords inquiry

There is an additional reason why companies should pay particular attention to Ofwat's LTDS guidance – namely the House of Lords Industry and Regulator's Committee's formal inquiry into Ofwat. The Inquiry is seeking evidence that addresses a number of specific questions, including:

- *Does Ofwat's price review process adequately promote sufficient levels of investment in water and sewerage infrastructure?*
- *In its engagement with the water industry, does Ofwat strike the right balance between being open to industry input whilst also providing robust regulatory oversight?*
- *Does Ofwat sufficiently consider the long term in its regulation?*
- *Does Ofwat strike a balance between more visible, short-term issues and long-term considerations?*

In each case, Ofwat may want to point to a successful deployment of its LTDS process as a helpful answer to these questions. I would, therefore, expect Ofwat to set great store by company's enthusiasm for the process, and evidence of early progress by companies. TWR

INDUSTRY COMMENT

HAVE ECONOMIC CONSULTANTS HIJACKED PRICE REGULATION?

Sir Ian Byatt was the first director general of Ofwat. Mark Falcon is founder and director of Zephyre.

April's Indepen Forum scrutinised what's behind the complexity of economic regulation in water and energy.

In April, the Indepen Forum debated whether economic consultants have caused unnecessary and excessive complexity in the regulation of water and energy. Sir Ian Byatt, the first director general of Ofwat who chaired the debate, and Mark Falcon, founder and director of Zephyre who presented on the topic, discuss their thoughts.

Sir Ian Byatt:

As a former regulator, I was shocked by the complexity of current regulatory processes and the insufficient weight given to the consumer interest. Mark argued that economic consultants have "highjacked" the process, by overwhelming it with long and complex submissions, most of which were never revealed to the public or to consumer bodies. What this means is that companies are getting a high-risk return for providing low-risk activities.

Reform is urgently needed and two changes stand out. Companies' submissions should always be published and they should be accompanied by a comprehensive, free-standing summary of not more than two pages.

Regulation should, like government, be of the people, for the people, and by the people.

Mark Falcon:

Following Sir Ian's final remark, there remains the task of ensuring that our system of independent economic regulation of the privately-owned monopoly utilities endures. Independence means independence of the firms and government: not of consumers and citizens and their representatives, ultimately parliament. Regulation must be such that a well-informed person can understand it. Unfortunately, it is now so complex that few can.

This is neither necessary nor accidental, rather the result of a desire by industry to put regulation beyond scrutiny. "Information capture" is defined by Professor Wendy Wagner (University of Texas) as where "industry-dominated participation in regulatory processes, (…) exerts substantial control over regulatory outcomes by producing excessive amounts of information (…) inundating regulators with complex information to obtain favourable policy outcomes".

Such capture thrives where diffuse beneficiaries – consumers – face impediments to participation in regulatory processes. Lacking pressure from such interests means that regulatory outcomes are skewed in favour of the businesses.

Instead of presiding over competing industry and consumer interests, regulators stand alone, bracing themselves against a barrage of information from broadly unopposed industry voices. This gaming excludes public interest groups that lack the resources to engage and puts regulators at the mercy of an unopposed group that can reinforce its position by threat of legal action – the system is "captured" by information.

> **Companies' submissions should always be published and they should be accompanied by a comprehensive, free-standing summary of not more than two pages.**

Without recognition and reform, such capture becomes worse and harder to fix.

A paradigm case is the way that the "allowed" profits of regulated firms are set.

By statute, the regulator must ensure firms can finance their functions by enabling investors to make returns commensurate with the risk. Such a return is called the "cost of capital" and dominates economic regulation of water and energy. One third of the recent PR19 and RIIO-2 appeals (by page count) was about the cost of capital. This was despite previous attempts to pin down this issue, notably the 2018 report for the UK Regulators Network (UKRN) Estimating the cost of capital for implementation of price controls.

While the RIIO-2 appeal led to 3,000 pages of documents on the CMA's website, 27,000 pages were visible only to the parties, including Citizens Advice as an intervener. These comprised "expert witness" reports on the cost of capital. If that isn't information capture, then it's difficult to say what is!

In the CMA appeals, common elements were implausible arguments, in the hope that they might stick, and demands for spurious accuracy, which had the objective and effect of deflecting attention from the real questions.

An example was the unanimous industry position that "Reliance on (index-linked government bonds) alone to estimate the (risk-free borrowing rate) will result in a value that is too low, as one assumption of the (agreed economic model for estimating the cost of capital (…) is that all market participants can borrow and lend without risk and at the same rate."

This argument depends on a distorted logic. By definition model assumptions are untrue but using them does not make the assumptions true! Time was wasted on this question at the water and energy appeals.

There were similar arguments on other components of the cost of capital. With Keynes "It's better to be roughly right than precisely wrong" especially when being precisely wrong is considerably in the companies' favour.

Fortunately, the CMA's RIIO-2 report acknowledged many of these concerns, as raised by Citizens Advice. They are now live questions to be addressed – by the recently appointed UKRN Cost of Capital Task Force, in PR24 and the RIIO-2 Electricity Distribution review.

I support Sir Ian's proposal for full publication of submissions, to deter implausible positions. I also suggest sanctions against unreliable expert witnesses (as in the courts), greater filtering of regulatory submissions (as in the courts), making it easier for consumer bodies to appeal, and greater public funding of consumer bodies to address the collective action problem and the imbalance of resources. TWR

The full note of the debate is available at: https://indepen.uk.com/questions

SHARING IS CARING

Shareholders stump up a multi-billion pound package to support Thames' turnaround.

Thames Water's shareholders offered tangible proof of their responsible owner credentials at the end of last month in committing to inject £1.5bn of new equity into the business, and to an extra £2bn of expenditure to fund performance improvements before the end of the current regulatory period.

Chief executive Sarah Bentley called it a "real joy" to see equity going in rather than out, in a reversal of the popular narrative. Alongside long foregoing dividends and already committing extra investment, the new package was tangible evidence, she observed, that Thames investors are "in it for the long haul" and "very committed to turn this business around". On top of that, it was "a real endorsement of the new team" she has assembled, and their turnaround plan.

Specifically, investors pledged an initial £500m of equity this financial year, with plans for an additional £1bn to be approved before 2025, as long as Thames' turnaround stays on track.

The £2bn of extra expenditure will be split across water, wastewater and customer service, and fund improvements to leakage, river health and more. Bentley cited investment in:

- Mains and water networks – building on activities already being funded through Thames' conditional PR19 allowances.
- The company's pioneering smart meter rollout, which she pointed out was supporting affordability amidst a cost of living crisis as well as water efficiency.
- The upgrade and capacity expansion of wastewater treatment works, including Mogden and Witney in Oxfordshire.
- Preparations for Tideway to come online.
- Improving customer service.

Turnaround acceleration

The capital injection will undoubtedly support the turnaround: it boosts the business plan agreed as the PR19 final determination from £9.6bn to £11.5bn, and adjusts the company's capital structure to help set it up for a PR24 outcome that will support its ongoing recovery.

Bentley said: "One year into the turnaround, we have made good progress in fixing the basics and tackling the structural challenges in our business as well as laying the foundations for our long-term recovery. However, everyone at Thames is aware that we're only at the start of our journey and there remains a huge amount to be done and delivered.

"We're also aware that none of the programme can be delivered without significant capital investment. With this new, substantial equity investment programme, our shareholders are both underpinning the investment vital for our improvement and also expressing their confidence in the long-term outlook for Thames Water. We warmly welcome their continued support."

She was also explicit that continued support will be necessary, emphasising that Thames' turnaround remains a multi-AMP project. The investment "increases my confidence in delivery" and enables the team to "move further on a number of fronts simultaneously". But, she cautioned, that there remains a mountain to climb: "The size of the challenge ahead is substantial."

Regulatory drivers

While Thames' shareholders have proved themselves willing, Ofwat's fingerprints are also firmly on the deal. The regulator has been clear that strengthening highly leveraged – and in its opinion, therefore risky – financial structures in the industry is a priority. It has been cajoling Thames, alongside relevant others, for at least a year and has brought considerable pressure to bear – not least through its actions at Southern Water. These resulted in the existing shareholders there packing their bags to make way for a new investor (Thames' former owner Macquarie) with £1bn of equity in its pocket. Ofwat chair Jonson Cox related that Moody's called the whole action 'virtual special administration' (p14).

Thames' current owners have obviously made a different choice. Cox must have left Ofwat at the end of last month with a considerable spring in his step; the Thames announcement came on the last day of his tenure. He said: "Our discussions over the last year with Thames Water's chair, Ian Marchant, and CEO, Sarah Bentley, about the need to strengthen the company's financial resilience have been constructive. Thames Water still has many issues to address to meet the service and resilience levels we expect, but seeing its shareholders putting in additional investment will help the management team to make the progress needed to deliver on its transformation plan."

Shareholders under pressure

The messages the whole episode sends are clear and meaningful.

First, that if determinations are set too tight, it is shareholders' rather than customers' problem. Accepting the PR19 final determination is understood to have divided the Thames executive of the day, and the settlement now looks to be insufficient for even basic needs. On top of the price caps themselves, the company is subject to the Gearing Outperformance Sharing Mechanism and the punishing cost sharing rate associated with its plan going into the significant scrutiny camp. And that comes on top of legacy long term challenges.

It was before her time as chief executive, but Bentley defended the then-team's decision not to appeal to the CMA. "Directors and shareholders knew it was an incredibly challenging and demanding plan," she shared, but pointed out that with a leadership in transition and a global pandemic on the doorstep, it was not the moment to appeal. Now, she added: "We're all looking forward, not back."

Second, any remaining highly leveraged companies might be wise to read the writing on the wall, as Anglian Water seems to have done last year with its voluntary deleveraging. With action also now taken at Southern and Thames, Yorkshire Water in particular may be considering its options. TWR

OFF WATCH

As he leaves Ofwat after a decade, Jonson Cox talks about his trust, governance and financial resilience agendas, and regrets not knowing more about river health sooner.

When Jonson Cox bid farewell to Ofwat on 30 June, he had been in post as chair for a few weeks shy of a decade – no doubt longer than he, or anyone else, anticipated when he was appointed back in July 2012.

It was always going to be a colourful tenure; Cox specialises in turnarounds and restructurings, and had a background in board and executive roles in regulated infrastructure including, significantly, Yorkshire Water and Anglian Water. He has not disappointed. Cox has seen three CEOs go and come, and been through two complete (PR14 and PR19) and one part (PR24) price review, with PR19 incorporating a raucous CMA referral.

He has rarely minced his words and has been far from shy to challenge where he has perceived shortcomings. In his own words to a recent conference, he said as Ofwat chair "I've raised challenges, pushed boundaries, tried to look around corners, taken some initiatives. I haven't always got it right; of course not. But I hope and believe we are in a better state today than we were a decade ago."

Formative days

The running theme underpinning Cox's chairmanship has been trust: he has prodded companies to do the right thing for customers, delved into the uncharted territory of corporate governance to get boards to behave more responsibly, and – publicly on stage and page – called out legitimacy shortcomings. He explains he has consistently endeavoured to bring the water industry back to a core public service focus, while ensuring it remains an attractive proposition for investors.

This agenda was set early on, influenced by the context in which he took on the role. "I came in with a sort of pre-taste of the situation that we are in now," he recalls. PR09 had been "extremely beneficial" for companies, as he knew firsthand from his Anglian experience. Dividends were in the mid-teens, and inflation was high at 15% cumulative over 2010-12, simultaneously pushing up bills and inflating shareholder value.

Five companies – Anglian, Thames, Yorkshire, Southern and Northumbrian – had moved from publicly listed to privately owned – "and all of that had behavioural consequences for the sector which I thought were profound and hadn't been explored". The public lost trust in 2013 in the big six energy companies, and Cox was keen water would not go the same way. To boot, Ofwat's prior attempts to change company licences had culminated in the Section 13 standoff – or as Cox puts it, "a complete breakdown between sector and its investors and the regulator".

River health blind spot

So are we in a better state today than a decade ago? PR19 was markedly less generous than PR09, and the sector has made impressive progress in many areas. But some hallmarks of 2012 are, Cox says, "disarmingly familiar" now. Inflation is spiralling at a rate that dwarfs 2012 values, and Ofwat remains concerned about the conduct, performance and financial resilience of some companies.

On top of that, there is a new, high profile drain on public confidence in the sector, relating to sewage pollution, environmental compliance and river health. The public is, frankly, appalled that storm overflows spill so frequently and that only 14% of rivers are in good ecological condition. In an opinion article jointly written with England's chief medical officer Chris Whitty and Environment Agency (EA) chair Emma Howard Boyd, Cox bluntly said about a week before his departure from Ofwat that human faeces in rivers is a serious public health issue, and that it sits squarely on the shoulders of water companies and their directors to address it (see p19).

"There is an unfortunate 'plus ça change' about where we are today," Cox reflects. "We have all been shocked by that environmental data [flow to full treatment, FFT] that we got for the first

I do think it's really shocking that companies did not know in some cases what FFT meant… It is shocking that boards were not measuring that, were not looking at it, were not aware of it. I think it is a real indictment.

We now work closely with the EA and are discussing the extent to which Ofwat takes a role in assessing environmental outcomes. The public think we are *the* water regulator, so it is our reputation on the line.

time from the EA in October and what that shows about river health and the loss of reputation that goes with it." He is clearly frustrated that this issue has severely and unexpectedly damaged public confidence in the sector, just as he leaves it. "I'm gutted that we only recently got this data and, though we haven't fully dealt with it yet, we have made swift progress in enforcement and getting commitments."

Cox chiefly blames company boards for the situation: "I do think it's really shocking that companies did not know in some cases what FFT meant… It is shocking that boards were not measuring that, were not looking at it, were not aware of it. I think it is a real indictment." He adds: "The question arises: did they know? In which case there is a problem. Or did they not ask? They are damned either way."

Doesn't the fact that all companies are falling short on FFT indicate a systemic issue? Cox: "You might criticise environmental regulation a little for not tightening up storm overflows…I think there may be a permitting issue on some storm overflows, so some permits may have allowed a situation where they can discharge in fair weather not just storms."

Could Ofwat have done more? Cox admits that with hindsight, river health should have been a higher priority. "I fully hold my hands up and say: if I had known the data on rivers was as bad as we now know, yes, part of my environmental theme would have been river health. Clearly I wasn't shy about speaking out about other things, so I think I would have spoken out on that earlier." But he points out that until recently "everyone really believed the mantra that we had wastewater discharges sort of under control. We had the coastal treatment works treating with UV and rivers were OK. Obviously we now know that isn't the full picture."

He points to an important consolation though: that events of the last decade have shifted the dial on how companies are responding now this issue has surfaced. "Four companies have put forward some pretty ambitious plans, largely at their cost, to get this sorted out before 2025. At least to get back into compliance. I think we would have had a worse fight ten years ago."

Environmentally friendly

River health aside, Cox rejects the suggestion that the environment hasn't been a focus for Ofwat. It has allowed around £1bn a year for green improvements since privatisation. Where assets are inadequately maintained or resilient, it points to companies underspending allowances, rather than insufficient amounts being approved. For instance, in the 2015-2020 period, Ofwat says companies underspent their price review wastewater allowances by 5%. Cox says data submitted during the CMA appeal showed Yorkshire, Anglian and Northumbrian spent only 57% of their WINEP money in the last price period. "That was shocking," he observes.

He concedes he doesn't know whether the companies delivered their outcomes in full for the lower amount. "Ofwat does not measure delivery of outcomes for the environment: that's been the job of the EA." He argues: "We now work closely with the EA and are discussing the extent to which Ofwat takes a role in assessing environmental outcomes. The public think we are *the* water regulator, so it is our reputation on the line."

He continues: "We get all this criticism that we don't care about the environment. First, I can't think of any environmental scheme we have turned down of any significance and that was well justified. Second, think about the framework: the EA sets the WINEP; Water and Drainage plans are required by Defra. We take what is given to us to fund on the environment and we have never, ever consciously made any decision to rebalance against the environmental agenda. It was my CEO's [Rachel Fletcher] proactive stance that provoked the Net Zero plans for 2030."

His environmental priorities in 2012 were water resources (on the back of the drought and running two companies) and cli-

> **Cox views as his greatest triumph successfully "changing the outlook on how you run a water company".**

> **I suppose there is no way of beating about the bush: it was a failure of Ofwat at the time not to consider the consequences of all the gearing up.**

mate change. He argues considerable progress has been made since, pointing to the innovation of RAPID (for which he again gives Rachel Fletcher the credit) and progress on leakage. "Well isn't that an interesting story," he says of the latter, recalling the Ofwat board's decision to set a 15% reduction target in 2018 when leakage was flatlining – which the sector subsequently half met by 2019-20. "Managements that protested about the 15% target and then they delivered half of it in 12 months should be embarrassed, or maybe celebrate, what can be done with tough regulation and challenge," he observes.

Demand reduction through water efficiency has, however, proved elusive, and judging by the emerging regional water resource plans, future water resources are far from secure. Cox calls on companies to step up. "Are we seeing the right leadership from the sector as a whole?" he questions. "I'll pick out two areas…On wet wipes, it's a scandal that the sector as a whole hasn't used its pretty mighty power in the economy collectively to get wet wipes made biodegradable. People will always flush stuff so wipes must be biodegradable as well as not flushed. And I think there is a need for much stronger campaign on water demand."

Customer first

Cox's number one theme in 2012 was delivering for customers. Not only was the high inflation environment a driver, but customer service in water trailed competitive sectors, and he was worried that the new private structures some companies had adopted threatened public trust – from opaque corporate structures, to high executive pay and the priority given to shareholder returns. He comments: "I felt the sector during that period of going from public to private had got too much towards what shareholders wanted out of an asset that was seen more as a financial asset than a live operating asset. And what we really needed to get back to was running the business well."

Ofwat's founding director general Sir Ian Byatt had blazed a trail by introducing the Overall Performance Assessment, but in Cox's tenure, Ofwat went much further, pioneering Performance Commitments (PCs) and Outcome Delivery Incentives (ODIs) at PR14 and PR19 to refocus minds and shift the balance back to the customer. Cox views as his greatest triumph successfully "changing the outlook on how you run a water company".

He offers this more detailed view. "Have we got it right? Some of it… The first time we did it [ODIs], we got the calibration wrong. Severn Trent's gains were flattered by a mis-calibration. But it showed people that there is money to be made. And we had far too many bespoke ones [PCs]. This time around [PR19] there are more common ones and next time around [PR24] there will be even more focus on common targets, but we needed to learn and refine data to do that.

"And I notice it now, that there is much more focus on fully spending the opex element of totex – on really running the business well as opposed to just getting by. I count that as a really important, in that we have said to people: 'how you run the business really matters'. It is your first thing to deliver for customers and for the environment, and that has got to be the bigger driver. Returns should be earned by doing that rather than by just clever financing."

He adds that the new approach has brought a welcome level of dynamism to the sector, in terms of how companies perform relative to each other. "So if you take Severn Tent, through most of my tenure in the sector it was always a third quartile performer whereas it is now a top quartile performer. And that illustrates that strong leadership, strong boards can make a difference and lift performance."

Together with this sharp focus on operational performance, the decade has been characterised by low bills. Has that left the sector better or less able to tackle the long term challenges it now faces? Cox takes issue with the premise of the question: "It's really important to say – because the opposite is said by companies – that [low bills] has never been an objective for me. Yes I agree bills should not be more than they have to be, but we've had a declining cost of capital so of course that's enabled us to bring bills down, as has sharpening up efficiency targets and the productivity in this sector which had flatlined…I'm not aware that we have ever turned down an investment need that was well-justified. We turned down ones that were poorly justified but not well justified ones. I don't believe we have ever constrained a company."

Turning to the long term element of the question, Cox argues five yearly price reviews are popular with investors and have not been a constraint, and that we should proceed with caution on replacing the five year review. "Twenty-five year plans must be adaptive as circumstances change; you need 25-year aspirations, 25-year plans on resources etc. The next step, in the price review, will ask for long-term objectives, e.g. on leakage or pollution, [but] what I think you will see us doing will be being as interested in the five years beyond the next AMP, with more carryover of performance from, for example, AMP8 to 9. Remember, for all management talk about the long-term, most managements don't have a horizon beyond ten years."

Price review outcomes

Another of Cox's 2012 priorities was finding a 'fair outcome' from regulatory reviews – including tackling WACC bidding and creating a less intrusive price setting process. There have been major achievements from regulation since, not least the creation of the totex and outcomes approach, the introduction of performance linked incentives, and reducing the WACC without, seemingly, deterring investors on mass.

Intrusion doesn't seem to be such a concern any longer. Cox argues: "We are setting the terms on which England and Wales buy water for a five-year period. Do you expect that to be a simple procurement?… We're spending £55bn of customers' money to set the terms on which they buy their water – it's completely justified to get it right and unfortunately, there is a history of some companies finding loopholes in our regulation."

Does he have any PR19 regrets now we can see the path ahead for PR24? Specifically, should more investment have been made while the cost of capital was falling and interest rates were at all time lows, to head off a 2024 bill shock during a cost of living crisis? Cox: "We set bills at the right level for the outcomes the companies could deliver if they perform well… I don't believe in smoothing. As a customer I don't see why I should pay early, before delivery, just to smooth the bill."

He seems pleased the PR19 final determinations were sufficiently challenging for three major companies to appeal them, alongside Bristol Water. He dismisses the view that companies 'won'. "I look at it and think, okay, so we got adjusted by 20 basis points on the cost of capital, but largely our model held up and is intact." He adds: "The change in the WACC is 20 basis points, which was on equity. If they had put all their effort into being fast tracked, they'd have got 10 basis points and avoided a 12 month process."

While he won't be in post to see PR24 play out, he offers the following advice for companies heading into the review, given the pressing affordability situation the country faces. "It is for companies to say to their customers 'this is how we have struck the balance'. The company that comes out of the next price review well will have really thought about where to strike that. Are they still back in the day where they like capital expenditure because it all builds their RCV and when they sell the company they sell it off at a valuation based on RCV? Or do they say 'actually the most precious thing we have is the relationship with the customer and we need to make sure the customer is happy to pay us in perpetuity for their water supply'? So a company that comes forward and hasn't thought really hard about that and not really challenged itself, is going to do badly."

Exactly how that balance is struck clearly remains to be seen. Water UK's recent 2050 White Paper argued that on current investment levels, sewers are expected to last for 500 years and mains for 167 years. If asset replacement rates are to increase to improve resilience and serviceability, it will cost – and that's before we even start factoring in enhancements to water resources, tackling storm overflows, delivering on the new Environment Act targets, transitioning to net zero – and more.

Cox reflects: "I'm very relieved that water customers at the moment are not seeing increases by and large. But if that changes, that changes. But at least I think we've changed the thinking and boards are much more aware that they can't just say 'the outcome will be what the outcome will be'. They have actually got to own it, and ask 'is the outcome right'?"

Financing policy

Cox says his greatest mistake that was in his control was "not pushing harder and faster on financial resilience". Though pushing it from the start, it wasn't until 2018 that it reached a crescendo, when then environment secretary Michael Gove leapt in wholeheartedly to call out practices (including on dividends, pay, tax, opaque structures, debt and operating performance) that he believed were fuelling the re-nationalisation debate.

The problems were not of Cox's making. He inherited a sector where structures he perceived as risky were already established: sector gearing was at 70% of RCV in 2013 compared to the notional 60%, with some companies over 80% gearing. Financial returns dominated management time, with dividend yields on equity in the mid-teens per cent, even reaching 24%, compared with today's 4% guideline. Cost of capital was also high, leading to water assets being in high demand and company sales reaching over 130% of RAV.

Should Ofwat ever have let such structures take hold? Cox tries, briefly, to stop short of criticising his predecessor but concludes: "I suppose there is no way of beating about the bush: it was a failure of Ofwat at the time not to consider the consequences of all the gearing up. But equally it was a failure of those who bought the water companies that they thought they could load more risk on." He adds: "I do find it extraordinary the argument that you gear up at your own risk…because my own understanding of how institutional investors work is it is extremely difficult for them to go back and ask for more money from their investment committee when it turns out they didn't ask for enough in the first place. That's what has bedevilled change, and why it has taken me ten years to get to the stage I want to be at, before I leave here of, companies being more resilient."

The financing picture today is undoubtedly more balanced. The WACC is lower, there are pain/gain share arrangements in place, and debt costs have come down, strengthening financial structures. But gearing remains doggedly high for many firms, relative to regulatory aspirations, and complaints about pay, bonuses and dividends are as popular today as they have ever been in press and Parliament.

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I was promised a change on our licence powers after I sorted the Section 13 problem, and I'm delighted to say that during my tenure we finally got that. Legislation always takes time. We'd be foolish not to use that to strengthen the capital structure of companies for resilience. The public is entitled to expect that companies will not fail.

A distinct feather in Ofwat's cap was last year's restructuring of Southern Water. "We'd been on the case for a long time. We'd given the owners of Southern a year to sort it out themselves otherwise we would have intervened…it was really important. Moody's has described our intervention as a virtual special administration. We were saying, 'you have got to put some money in or we take control or you find someone else who will put some money in'. And effectively under our guidance they found a new owner who bought 60% of the equity, put £1bn in and the old shareholders are leaving with their tail between their legs. That is how it should be if you don't run a company well, and it was a hell of a lesson to everyone else."

The lesson was, it seems, heeded by Thames Water's shareholders in the nick of time for Cox. The day before he left Ofwat, the company announced a £500m new equity injection, with a further £1bn to follow, and a £2bn expenditure increase at shareholder expense (see p11). It was quite the high to go out on, after year-long discussions about the need to strengthen Thames' financial resilience as a highly leveraged firm with multiple, major challenges.

Though it will no longer fall to him to pursue, he suggests that any remaining highly leveraged companies, notably Yorkshire Water, would be wise to take action too. "They would be very ill-advised to get into the PR24 process without strengthening their capital structures," he comments. "They may all think the CMA did away with our gearing sharing mechanism – well, we put that in with short notice because something had to be done. We've got a bit more time to think about it this time – something a bit smarter."

Licence change powers

More generally, Ofwat is looking today to strengthen financial resilience standards via licences – in the face of industry opposition. "I don't get it, but even the companies that have no worries on this front made objections when they should have been saying 'this is a levelling up process – all those who are getting away with having much less resilient structures – let's have them all levelled up'. So we'll see what happens. We put out a discussion paper, the next stage may be a consultation. This theme is not going away and Ofwat has the powers now to sort it."

These powers came into force in January and mean that while Ofwat has to demonstrate it has made due attempt to consult and listen, it can now impose a licence change, rather than have to get every company's consent. Companies have the right to appeal if they are unhappy. "I was promised a change on our licence powers after I sorted the Section 13 problem, and I'm delighted to say that during my tenure we finally got that. Legislation always takes time. We'd be foolish not to use that to strengthen the capital structure of companies for resilience. The public is entitled to expect that companies will not fail."

He adds: "But can you imagine having a company saying in the public domain 'we don't believe Ofwat should require us to be financially resilient?' It wouldn't land well with customers, especially after what has happened in energy."

A final point of note here is that the House of Lords Industry and Regulators Committee is part-way through an inquiry into Ofwat's statutory objectives, powers and resources (p18) which could lead to additional powers yet, potentially in the sphere of governance.

Board leadership and governance

Cox has been the driving force behind Ofwat's board leadership agenda, culminating in the introduction of principles on board leadership, transparency and governance (BLTG) in January 2014, with revisions in 2019. The revised principles crystallise objectives for boards including relating to responsibility, competency, independence and accountability. The principles were made a licence requirement in 2019.

He explains: "I've been interested in corporate behaviour for a long time. In my career before 2012 I had sat on really good boards and boards that weren't so good. And I believed inherently that there was an advantage to companies that had really strong boards. And then I thought about what I had heard when sitting around the Water UK board table, where I had heard all sorts of absolutely appalling stories from fellow chief executives, about how boards behaved in the new world of privately owned companies."

He offers some examples of "totally dysfunctional" arrangements: investor boards reserving rights to strategy and structure, leaving the regulated company board as purely operational; insufficient independent representation and non-independent chairs; non-executives in highly leveraged companies lacking understanding of risk and controls; "directors who came with lots of side kick assistants who risked seeing the company through an Excel spreadsheet".

Cox explains: "So the whole thought process was: what if we took the UK Governance Code, recognise companies are private so let's have investors at the table in proportion; rely on independent NEDs as well. Let's have independent chairs; and let's have proper scrutiny by audit because we rely on data from the company – a company that misleads us means we can't do our job, so let's have honest data. Let's have remuneration lined up with performance for customers. That was the genesis of the idea and I slightly pinch myself to think we succeeded."

He adds: "I got a lot of criticism from other regulators who argued it was not our job to intervene, that the capital markets will sort it out. Well clearly the capital markets weren't sorting it out because we had these dysfunctional boards. I went to one company board in my first six months and they had 13 investors on the board – and others who didn't know they were directors – there were three independents and hosts of management."

So what difference have these changes made in practice? Cox believes there has been a marked improvement. He says regulated boards have been professionalised, have a direct relationship with Ofwat, and have became the main decision making body for each company. He recalls that as a company chief, he had a "virtual lock" on regulatory dealings. As Ofwat chair, he has expanded that relationship to board members, ensuring "more efficiency in the transmission of our messages, with higher quality NEDs". He continues: "I remember days when NEDs didn't really understand what a price review was about – I don't think any water company board could not understand what it's all about now."

Has this fed through to improved outcomes for customers? "I think it has, it's hard to distinguish that from all the other things. But I think in a world that has moved in our direction, I genuinely think we were ahead. If you think about where the world has moved on public purpose for business, governance, what shareholders are now saying in listed companies, I think we were there first."

Yet there remains work to do. Emerging failures in environmental compliance demonstrate board shortcomings. Board composition could be more diverse. And deregulation on the back of stronger, trusted governance seems some way off.

On a related note, Cox gives credit to the strength and quality of Ofwat's own board and leadership team over the decade, including being willing to hold its line. "A strong Ofwat has got to be able to engage with the sector, but it must never get captured; it has to retain the constructive tension. So you've got to be able to have very difficult conversations with chief executives, with the board, really difficult conversations as well as work collaboratively. You've really got to understand what they are trying to achieve and you've got to be able to challenge and support…if we were all soft and cuddly, we wouldn't do the job."

Mixed on markets

Cox is proud of Ofwat's work to open up previously unassailed parts of the water value chain to competition. "The job of the regulator is constantly asking 'are there ways of finding more value here'?" he observes. "The first one was Tideway and I've been a principal sponsor of Tideway. So far it has been a massive success…the fact that we could go out at the time and get the lowest cost of capital we had ever had, and get highly competitive bidding for it and get an asset built for a 2.47% cost of capital I think is pretty brilliant." He is excited to see United Utilities put its Haweswater Aqueduct out to tender next, with two more projects in the first tranche and a number of RAPID strategic water resource schemes likely to follow.

Cox concedes that in contrast, the non household retail market, notably the smaller end, has been "disappointing" but says that was no real surprise. "It was patently obvious that if you take the cost of the customer service bit – 9-10% of the value chain – if you carve that out, and in terms of efficiency gains if you take 10% off your costs for instance – that's 1% of the water bill. Who's going to switch for that?" He champions large and medium sized companies' right to choose their supplier and press for innovation but argues "I think it's more difficult to see how that plays for micro businesses whose average consumption is similar to the average domestic."

He rejects the assertion that many retailers are technically insolvent and that the market, in its current form, is unsustainable. "I think some of the retailers are a bit slow to get to grips with their business and that's all I'm going to say."

Parting advice

Cox's wealth of knowledge and experience will undoubtedly be missed by the Ofwat board and wider sector as he moves on to pastures new – including as chair of the Port of London Authority. Does he have any advice for his successor, Iain Coucher? "You are not there to please people; you are there to challenge; you are there to act in the place of competition."

Coucher and the Ofwat board will have their work cut out despite Cox's decade of challenge to the sector. Chiefly in determining complex future investment needs within an affordable bill envelope, against the backdrop of rising inflation and a living costs crisis. But also in pushing industry 'laggards' to up their game operationally; checking that spend is in keeping with allowances; strengthening financial resilience where this falls short; negotiating legitimacy as inflation swells returns; responding to citizen science-derived priorities; and of course delivering the newly minted environmental priorities specified by the government in its Strategic Policy Statement. TWR

> **It was patently obvious that if you take the cost of the customer service bit – 9-10% of the value chain – if you carve that out, and in terms of efficiency gains if you take 10% off your costs for instance – that's 1% of the water bill. Who's going to switch for that?**

WATCHING THE WATCHDOGS

The OEP, Wild Justice and the House of Lords Industry and Regulators Committee are all questioning whether regulation is working for the environment.

The storm over storm overflows has spilled over and, despite best efforts to turn the heavy guns on water companies (see p19), is also now lapping at the feet of those charged with overseeing river health and water regulation.

In a significant move, given it has only been in existence a few months, the Office for Environmental Protection (OEP) has launched an investigation into the roles of Ofwat, the Environment Agency and the Defra secretary of state in the regulation of storm overflows. Its aims are to determine whether these authorities have failed to comply with their respective duties in relation to the regulation, including the monitoring and enforcement of water companies' own duties to manage sewage. It added that in doing so, it will seek to clarify the respective duties.

The statutory investigation, under section 33 of the Environment Act 2021, follows a complaint submitted to the Interim OEP by Salmon & Trout Conservation UK.

Ofwhere?

Meanwhile Ofwat specifically has become the subject of a legal claim filed in the High Court by not-for-profit nature conservation advocate and legal activist Wild Justice, seeking a judicial review of what it described as Ofwat's failure to regulate sewage discharges under the Water Industry Act 1991 and the Urban Waste Water Treatment Regulations 1994.

This followed a formal letter to Ofwat in April in which Wild Justice set out its concerns and sought a response. "Their response didn't convince us," the activist said. It subsequently launched the next phase of its action, badged "Ofwat – where are you?" and opened a crowdfunder seeking £40,000 to cover its legal costs so far. The sum was exceeded in the first day, with over 1,500 individuals donating.

Wild Justice, which is working closely with Windrush Against Sewage Pollution, commented: "We believe that Ofwat has gone missing in addressing its legal obligations to ensure sewage works are fit for purpose in the 21st century. Ofwat – more like Ofwhere?! Our challenge aims to make Ofwat take action."

A judge will decide whether the challenge can proceed.

House of Lords inquiry

While less pointed, Ofwat's work is also the subject of a live inquiry by the House of Lords Industry and Regulators Committee. The inquiry is broad: the Committee is considering Ofwat's performance against its statutory objectives; whether Ofwat has the powers and resources needed to meet those objectives; and Ofwat's relationship with the Government and other regulators.

Given his high level interest in river water quality, the very first witness, Environmental Audit Committee chair Philip Dunne MP, ensured pollution was high on the Lords' agenda. Among his contributions was the view that Defra's draft storm overflow reduction targets had to be grounded in reality, and that while he had received some "flack" from campaign groups about them, he was cognisant of cost of living issues. He argued the matter must be given "higher priority, which does come at some cost" but that costs could be kept down as they have been with the Thames Tideway Tunnel.

For his part, expert witness Professor Ian Barker, managing director of Water Policy International, criticised the storm plan as a "single sector solution; water companies: sort this out," – for what is in actual fact a complex, multi-sector problem. More widely, he said there was "clearly something amiss" with water regulation, given sector performance for customers had gone up while the state of the water environment was "at best standing still". He observed an "unhappy synchronicity" between the timing of price reviews and elections, and noted PR24 in particular could be difficult given the economic backdrop.

In the same session, fellow expert witness Annabelle Ong, director at Frontier Economics, observed a long term view had been "missing in previous price controls" but she hoped would be addressed by the new policy on Long Term Delivery Strategies. She called for greater regulatory collaboration, and regulation at outcome rather than output level, specifically championing the ideas of Outcome Based Environmental Regulation propagated by Frontier and Wessex Water, and adopted as policy by Water UK.

Chaos and control

The theme of greater collaboration was also championed by Mark Lloyd, chief executive of the Rivers Trust, in the Lords' evidence session with green campaigners. He called for a "whole system approach" for water, noting that at present, there is a "lack of cohesion that is really poor". He offered some illustrations: conflicting objectives on a single water course, with some actors seeking to slow flows and others to speed them up by dredging; storm overflows, where reducing freshwater to sewer via a host of catchment actions should be pursued, rather than the "sticking plaster" of bigger storm tanks; and new developments like in the Ox-Cam Arc that cause a host of water pressures but companies are not statutorily consulted.

"There's a failure of water governance," Lloyd reflected. "At the moment, it's just a chaos of plans…many of which don't get delivered." He added: "I hesitate to use the word shambles" but remarked that it does sometimes feel like that. Ofwat should play a role in improving this picture. In the past, he added, there has been "too much emphasis by Ofwat on keeping bills low".

Guy Linley-Adams, solicitor at Salmon & Trout Conservation, endorsed that last point. He said a preoccupation with keeping bills down over the past two and half decades had "squashed environmental spending". Like Barker, he remarked on the timing of price reviews taking place every five years, just ahead of general elections. "Incumbent governments do not like to be responsible for water bills going up," he said, adding: "I think Ofwat has felt under political pressure to keep bills down at all costs."

Referencing recent revelations about sewage in rivers, Linley-Adams remarked "all this is now unravelling". He argued Defra's Strategic Policy Statement should have been clearer that the environment is Ofwat's business; and said shareholders should be called on to release more investment to balance bill pressures now.

The inquiry continues. TWR

DIRECTORS: DIRECTLY RESPONSIBLE

Watchdogs point to water firms as chiefly responsible for public health risks from sewage in rivers.

As Government and regulators have faced challenge over recent weeks about their own conduct concerning storm overflows and river health (see p18), there has been concerted effort to put the emphasis back on the role and responsibilities of water companies.

Public health – a choice

In a pointed, jointly-bylined *Sunday Telegraph* opinion piece, Ofwat chair Jonson Cox, Environment Agency chair Emma Howard Boyd and England's chief medical officer Chris Whitty argued bacteria from human faeces in rivers that might be ingested by water users is a serious public health issue, and that it sits squarely on the shoulders of water companies and their directors to address it.

The trio said the use of storm overflows to discharge raw sewage must reduce, and discharges of waste containing viable organisms from sewage treatment should be eliminated, as has happened at coastal bathing waters using UV treatment.

While the opinion article acknowledged the issue needs be seen as a serious public health issue by water companies, government and regulators, "in addition to the ecological and environmental impact which forms the basis for much regulation," they went on to say: "The principal public health responsibility for ensuring human faeces and viable human faecal bacteria do not get into waterways rests squarely with the water companies and their directors. Ministers have already signalled they want action, and companies should aim to go much faster than the minimum. Regulators will hold companies to account. It is time for wastewater companies to act. It will be a matter of choice if they do not."

South West Water enforcement

As if to hammer home the point, Ofwat last month opened a new enforcement case against South West Water, as part of its investigation into wastewater treatment compliance. It said the move was prompted by latest environmental performance data and ongoing concern. It has served South West Water with a formal notice to provide further information for enforcement purposes.

Five firms – Anglian, Northumbrian, Thames, Wessex and Yorkshire – are already subject to enforcement notices, and all wastewater companies remain subject to investigation. Ofwat said so far the investigation has exposed concerns including:

- Issues about the quality and completeness of the information companies have about how their wastewater treatment works are performing.
- What they do with that information to ensure the works are adequate, operating correctly and not causing environmental harm, such as through sewage discharges.

Chief executive David Black commented: "We have now opened enforcement cases against the majority of wastewater companies in England and Wales. From what we have seen so far, the scale of the issue here is shocking – companies must resolve any problems at wastewater treatment works and do so quickly. Where they have breached their obligations, we will not hesitate to act." Ofwat can fine companies up to 10% of turnover.

Leaders and laggards

Meanwhile there was some positive feedback from the regulator for some firms on their responses in the face of criticism. In a statement, it highlighted the broad spread of wastewater company responses to its March demand for firms to spell out how they intend to protect river health.

The regulator praised Anglian Water, Severn Trent, South West Water and Northumbrian Water for all committing to reduce their storm overflow spills to an average of 20 per year by 2025 and to ensure their operations are not responsible for water bodies not achieving Good Ecological Status by 2030. It also noted United Utilities and Wessex Water had committed to reduce use of overflows by 2025.

In contrast, Ofwat said other firms had shown "limited ambition to act before 2025 beyond pre-existing plans set three years ago". It challenged these companies in particular to address storm spills being caused by operational problems such as pump failures as a priority, "in line with their legal duties to effectually deal with the contents of sewers". It also flagged room for improvement from many in making their plans public and accessible.

Ofwat said the commitments made by leading companies would help set performance benchmarks on storm overflows at PR24 and warned those who fail to act now that they may well face more challenging improvement targets at PR24. This was subsequently cemented in the draft methodology for PR24 published at the start of this month (see p4). TWR

DRAFT DWMPS PUBLISHED FOR THE FIRST TIME

Water and sewerage companies in England have for the first time published statutory plans on the long term management of drainage and flooding.

The nine English WASCs are now consulting on the new 25 year Drainage and Wastewater Management Plans (DWMPs), with Welsh Water's plan to follow.

The plans have been created collaboratively with stakeholders and take a holistic approach to all relevant issues.

The consultations run until September, after which the DWMPs will be finalised and inform PR24, future price reviews, and the sector's wider response to challenges including resilience, climate change, population growth and improving river health.

Water UK, which led the development of the DWMP framework back in 2018, has provided links to all the plans on its website: https://www.water.org.uk/news-item/dwmp-consultation/

INDUSTRY COMMENT

GO TO JAIL! DO NOT PASS GO! DO NOT COLLECT £200!

The May Indepen Forum deliberated on getting company directors to do the right thing.

Under Section 172 of the 2006 Companies Act: "A director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole" where members mean shareholders.

That interpretation has come under fire, nowhere more than in essential service monopolies. Under their licences, these companies have duties to customers, the environment and wider society. Yet failures in the conduct and performance of some essential service monopolies have called their ownership and governance arrangements into question.

In its pre-event briefing note, Indepen pointed out that regulators have responded: Ofgem with a licence requirement for distribution company boards to feature two "sufficiently independent directors"; and Ofwat with its Board leadership, transparency and governance (BLTG) principles.

The Indepen Forum debated the situation, the regulatory provisions, and how boards might best balance shareholder and other interests going forward.

What was behind BLTG?

In their opening remarks, the speakers considered the thinking behind, and the effectiveness of the BLTG.

On the former point, the second speaker set out the context for launching the BLTG principles.

- *First, they pointed to concerns that water companies were being treated more as business assets than operating assets, a trend that had worsened after 2006 as many companies transitioned from publicly listed to privately owned. They argued that reform was necessary, noting there was helpful precedent for regulatory intervention, given former Ofwat director general Sir Ian Byatt (see p10) had introduced licence conditions to focus attention on the operating company.*
- *Second, a storm had brewed up following a generous PR09 settlement, small compared with the position today, but nonetheless significant at the time. Dividend yields were in the mid-teens and inflation and hence RCV growth at 15% over three years. The speaker pointed to a stark warning for water on loss of public trust in utilities, noting Ed Miliband's scathing characterisation of the Big Six energy firms, a reputational knock from which they had never really recovered.*
- *Finally, the speaker argued that improving board leadership could be interpreted as a deregulatory step, whereby stronger boards could mean less need for the regulator to get involved.*

The second speaker said that the principles had encountered vocal opposition, including from other regulators. For example, some had argued that Section 172 alone was sufficient and additional regulatory provisions were unnecessary, while others were of the view that given water company investors' interests are inherently long term, they are naturally aligned with the long-term interests of customers and citizens. On the former, the speaker opined that Section 172 is "a bit mealy mouthed" as regards directors' duties to stakeholders beyond shareholders, adding that it has not prevented some arguing in defence of the primacy of the shareholder interest. On the latter point, the speaker noted that listed company shares can be sold at any time, and that some private investment comes from closed end funds which inherently are not aligned with long term interests.

Governance transformation

Both speakers felt that BLGT had proved their worth, resulting in improvements in governance and high quality iNED appointments.

The first speaker added that the policy of making the board of each regulated company the decision-making body, and of giving a significant role to independent directors had brought real change. Regulated company boards are now the most powerful body, rather than any board higher up in an organisation. Moreover, boards have been professionalised and formalised, increasingly featuring very experienced leaders from the world of business, the civil service or the third sector. This has brought a diversity of thought, which speaker one praised, noting: "The groupthink risk is real in this sector."

> **Regulatory interventions have encouraged a new level of thinking, prioritisation and professionalism – which will be much needed as utilities and regulators face challenges together.**

The first speaker concluded that regulatory interventions have encouraged a new level of thinking, prioritisation and professionalism – which will be much needed as utilities and regulators face challenges together – not least the issue of meeting future investment needs within an affordable bill envelope against the backdrop of rising inflation and a living costs crisis. They saw an opportunity for a more collaborative approach between the regulator and the regulated to address such challenges.

The second speaker added that trust may be a hurdle for companies to deliver what is needed, given the sector has been "caught out on the environment" – specifically relating to river health – a position which may worsen once inflation pushes equity values skywards (by up to 65% over three years). The speaker applauded the "small number" of companies who have sought to counterbalance this with increased environmental investment.

Moreover, some water companies have financial resilience issues that must be addressed (see p11). The speaker said there is a correlation between higher leverage and poorer operating performance and that financial fragility is "not compatible with a public service ethos". TWR

- The full note of this debate is available at: https://indepen.uk.com/questions

Hampshire recycling scheme receives nationally significant designation

Environment secretary George Eustice has formally agreed to a request from Southern Water to exercise his power under the amended Planning Act 2008 to direct that the proposed Hampshire Water Transfer and Water Recycling Project be treated as development of national significance for which development consent is required.

The scheme has been designated as nationally significant on grounds including that it will:

- Provide a substantial number of people across Hampshire with a resilient water supply during drought conditions and would be a key piece of strategic regional infrastructure in meeting the modelled supply deficit for Southern Water's water supply zone.
- Make a significant contribution (c. 47%) to resolving the overall supply demand deficit in Southern Water's Western Area of supply.
- Support the delivery of up to 87,000 new homes by 2045.
- Have the capacity to be upgraded to support further increases in population growth, housing supply and / or further water resource pressures.
- Mitigate against the social and economic risks of debilitating water restrictions.

The decision noted the project was complex and substantial, and would "benefit from an application being determined in a timely and consistent manner by way of the Development Consent regime, and by removing the need to apply, and the uncertainty of applying, for a large number of separate powers and consents".

Mixed response for WRSE plan

82% of respondents to Water Resources South East's (WRSE) emerging regional water resources plan disagreed that the emerging plan, which presents the most cost-efficient adaptive planning solution, should be used as the basis to further develop WRSE's draft best value regional plan.

The group explained that many who disagreed opposed the construction of a major reservoir at Abingdon (SESRO), with others opposing the Havant Thicket water recycling option, or expressing that they wished to see the Severn Thames Transfer canal option brought forward and prioritised ahead of SESRO.

Among those who agreed that the emerging plan should form the basis for the best value plan, there was particular support for the focus on environmental ambition and demand management measures; for the long term approach being taken; and for the need to ensure plans could adapt to future uncertainty. WRSE received a staggering 1,150 responses to the consultation. It will use the feedback to inform its Draft Best Value Regional Plan, which will be published on 14 November 2022, alongside draft Water Resources Management Plans. The group will make more detailed information available as part of this, including on bill impacts, costs, carbon and environmental assessments.

IN BRIEF

United Utilities has issued the tender for the country's first Direct Procurement for Customers project: its £2bn, 33-year Haweswater Aqueduct Resilience Programme (HARP). The tender closes on 17 August.

Anglian Water has submitted the planning application for its 57km Elsham to Lincoln pipeline, the most northerly section of its £400m investment into hundreds of kilometres of interconnecting pipelines to prevent water scarcity.

The **Scottish Government** has asked **Scottish Water** to investigate connecting customers on private water supplies, who are at risk of a loss of supply due to water scarcity, to the mains. This is in anticipation of prolonged dry conditions this summer. SEPA has already issued water scarcity warnings to many areas in the east of the country.

EA calls for more detail on regional water resource plans

The Environment Agency gave a mixed report on the emerging water resource plans published in January by the five regional water resource planning groups.

The Agency welcomed the work on:

- Proposing demand management options and new water infrastructure solutions to tackle the forecast water supply deficit.
- Planning changes that will leave more water in the environment, "although the approach to this varies between regions".
- Starting to work with other sectors and looking wider than public water supply.

However it also noted: "Our review shows the regional groups have challenges to overcome, and expectations to meet, before consultation on draft final regional plans in autumn 2022. The emerging plans did not all show detailed proposals of potential solutions. And the planned environmental enhancements were variable and did not meet our expectations in some places."

Water customers can't cross subsidise other users in multi-sector reservoirs

Public water supply customers should not subsidise other users in multi-sector reservoir (MSR) systems, RAPID has emphasised following the publication of a study undertaken by CEPA and Agilia.

The study examined the legal and commercial models that could facilitate the delivery of MSR systems, including regarding funding, financing, development and delivery within the existing legal framework. It considered how each of these elements might be affected by the inclusion of different types of user (for example, flood management, irrigation, industrial users, leisure/tourism), and different models that might be pursued.

RAPID said costs and risk must be fairly shared between users.

The key findings of the study were:

- Identifying and designing a water resource solution that represents best value for each user may be difficult – economies and additional benefits will need to be traded off against complexity and risk and therefore the case for including each user needs to be tested.
- Developing a financeable model when non-water company and non-public sector off-takers are added to the scheme may be challenging. All international examples to date have been extensively supported by public funding and financing.
- Small users are unlikely to be able to participate in a MSR system without an intermediary.

Despite the challenges, RAPID backed further investigation of MSR systems.

ENERGY PRICES: JUGGLING THREATS AND OPPORTUNITIES

Water companies are suffering as energy prices continue to rise, despite an armoury of strategies to manage the situation. But high prices also offer an opportunity for those companies that are investing in renewables.

Energy has always been a major cost for water utilities – both in direct payment and, more recently, in indirect costs such as accounting for carbon emissions. Dramatic price rises and huge price volatility in recent months has redoubled that cost – but it has also opened a window of opportunity for water companies to take a greener, more active approach.

Price pressure

The cost is obvious: even before winter spikes, Thames Water had seen its power bill rise by £16m in the six months to the end September 2021, up from £63m over the period in 2020. The medium term trajectory for power prices continues upwards.

Industrial buyers like water companies contract for power months or even years ahead, to try to lock in advantageous prices, but that also represents a risk: in a rising market, buying far ahead comes with a risk that prices will fall unexpectedly, leaving the buyer overpaying. Equally risky, the total power required may be lower than the demand estimated a year or more in advance, so companies want to avoid buying too much power. Companies therefore make a judgement on how much of their projected needs they buy far ahead, and then top-up nearer the time, as price and volumes become clearer.

Eventually water companies use the so-called 'near term' markets (days or hours ahead, or so-called 'imbalance' when companies need to draw additional power unexpectedly at the moment of use) to fine-tune supply. That means they are exposed to volatility, in which the power price 'spikes' to a multiple of the underlying price, often for less than an hour, which can hit water company power buyers as hard as the underlying increase in prices.

Hedge options

Managing power costs in this complex market has required some forward thinking by the industry's energy buyers. As well as buying ahead, they may take advantage of other market 'hedge' options, effectively taking out insurance against price rises – accepting a small upfront cost to avoid the risk of a much larger cost if the market goes against them. A company's strategy evolves with the market indicators. Anglian Water discussed this tradeoff in its annual report for 2021/22, saying: “The market cost of power has fluctuated significantly in the year. The business hedges its costs by locking in wholesale electricity rates in advance, which has mitigated increasing electricity rates in the year, however we did see a modest increase in gas costs which were not economic to hedge but these were offset by a decrease in consumption and lower non-commodity prices. In the final few months of the year management spent considerable time reviewing the hedging strategy and will continue to do so over the coming year.”

Indirect power costs are important too. In its annual report Bristol Water noted that the cost of wholesale energy had risen by £5.1m. But it also saw an £0.8m increase in the cost of chemicals, which it linked directly to energy markets.

Response strategies

How are companies responding to a power market that expects (but is of course not certain of) high prices at least for the next three or four years? None can avoid an increase.

United Utilities says that power is a significant cost for the business but it notes that the commodity price element of the cost represents only around half of the bill, while the rest relates to various other charges such as power network use-of-system charges and other levies. The company had locked in prices in advance of the volatile market this year but nevertheless its power costs rose 16% to £99.6m in the year to end March 2022, despite a hedging strategy that saw it fix prices well below market rates for the year. Overall, in the year to March 2022 it paid on average £78/MWh, compared to the market rate at the end of the year of over £200/MWh for the coming year.

United Utilities says it has locked in “over 90% of expected consumption for 2022/23, and around two-thirds of expected consumption across the final two years of AMP7, at rates that compare favourably to the current market rate.”

South West Water owner Pennon says its £56m power bill represented 20% of its underlying operating costs in FY 2021/22 for the regulated water business, of which £28m related to wholesale power prices.

For the upcoming year, FY2022/23, Pennon says that indicative pricing in late May 2022 had put day-ahead pricing at around £100/MWh and prices in the upcoming winter season at £230/MWh.

Pennon says it has “de-risked” around two thirds of its power needs for FY2022/23 – but that certainty comes at a higher price than in recent years: “We expect our power costs to rise between 50% and 75%.” Further ahead, it has de-risked around 40% of its power needs, “locking in rates around 10% above the 2021/22 outturn.”

Generation ups its game

United Utilities bought power on the market at £78/MWh, but its total average cost of power over the year was £65/MWh. That is because it had its own power sources. Some are part of its renewable energy company United Utilities Renewable Energy (UURE), with which company it has fixed-rate power purchase agreements (PPAs). It also had additional self generation, at zero cost. The company began the ‘active process’ of selling its renewable energy business, UURE, in May 2022, after announcing the planned sale last year.

UURE’s buyer will acquire the long term PPAs with United Utilities along with the power plants. That is a mixed blessing for the buyer: it will have to supply UU at prices that are likely to be well below what it could achieve on the market at the moment, but UU remains as a buyer even if prices fall.

In the Midlands, Severn Trent saw its power bill increase by 14%. But it said in its annual report that was “much less than the average market wholesale energy price increase of more than 250% year-on-year”. It highlighted a “natural economic hedge against higher energy prices, with Bioresources and Severn Trent Green Power generating the equivalent of around half of Group consumption”. Its group companies supplied 550GWh, of which 277GWh was from its non-regulated renewable energy sites, while group consumption was 1,090GWh.

For the coming year, where it has to buy from outside the group, Severn Trent has fixed the wholesale price of around 90% of its wholesale energy import for 2022/23 “through physical hedges with suppliers, financial hedges with bank counterparties and natural hedges from export of self-generated energy”.

Other power sales meant Severn Trent’s non-regulated business, Green Power, saw turnover increase by £3.6m to £55.5m and EBITDA up 24% – an increase that would have been larger if intra-group energy deals had not limited the amount of power that Green Power could sell at prevailing wholesale market rates. Bioresources also benefitted from the high energy prices.

Pennon thinks that a move towards green energy reflects the wishes of stakeholders. Since the PR19 Final Determination, it perceives “a marked shift in the focus on the environment from customers, the media, government and other stakeholders”. Pennon says “as part of our target to achieve net zero carbon emissions by 2030, we have identified renewable energy generation investment opportunities which will decrease our reliance on wholesale power markets”. It is installing new solar PV which will help to more than double its self-generation capacity to meet more than 10% of the company’s needs.

Renew lease of life

The turmoil in the power industry may give a boost to all the water companies’ green power plans. Long term stable power purchase agreements are attractive to many industrial customers who are following the same strategy as water companies and fixing prices for at least part of their supply for the long term – rather than, as had previously been the case, assuming there will be cheaper power available on the spot market. And where green generation is not linked to long term PPA, its owners have been benefitting from high spot power market prices. Both can help make the case for renewable energy projects that would previously have looked less economically attractive. It’s a good time for water companies to take advantage of their renewable resources. TWR

| Janet Wood is editor of New Power magazine. https://www.newpower.info/

It’s a good time for water companies to take advantage of their renewable resources.

UNDER A BUSHEL

An Israel-based firm has, for a decade, tackled public health and water resource issues armed with data from the sewer. The UK has too, but says Trevor Loveday, wastewater companies here are missing a trick by not making more of this contribution.

Recent media reports of findings of polio virus in samples taken from a London wastewater treatment plant focused largely on the alarm angle. The headline was that one of most feared of childhood infections – one from which the UK had been declared free by the World Health Organisation in 2003 – could be back among us. But there was another story: that UK water companies routinely monitor for polio and other public health threats. Public awareness that the industry provided such a valuable service was low. But because it does, the exact source of the polio finding could be tracked down before it turned into an outbreak.

Only days before this news broke, *The Water Report* was talking to an Israel-based company, Kando, that has specialised for more than ten years in providing analytical services to wastewater treatment facilities in its home country as well as others. Chief executive Ari Goldfarb is acutely aware of, not just the low profile of the public health work of the UK wastewater industry, but also the potential value that work has for a sector that doesn't enjoy much in the way of appreciative comment. On that ticket he urged the UK water sector to raise the public's awareness of its contribution to health through wastewater monitoring. It was, he said, "a great, great, great opportunity for the water company to improve its status – an issue all over the world not just the UK."

Public purpose and systems thinking

Goldfarb holds up Israel as a leader in the West of water reuse. In line with that, he says the sector's policymakers and regulators focus on extracting "higher effort from the water sector to perform better to improve the quality of life for the people".

He contrasts this public purpose imperative with a prescriptive approach to regulation, asserting: "To give a better service and better protection to the environment, the motivation shouldn't be just regulation and policy. What we've been seeing over the years is once the motivation is just policy or regulation, you will do the minimum possible to achieve the regulation or policy."

The capacity to present data to a community to improve people's lives is almost unlimited.

In upholding a commitment to wider service and environmental issues, he says the water industry creates a need for it to intervene upstream to the source of the wastewater: "It's not just the treatment plant that is treating the wastewater, it's all the system."

He is addressing here the intractable problems caused by throwing wet wipes, oils, solvents heavy metals and other noxious and damaging material into the drains and sewers.

He warns that ignoring wastewater until it arrives at the treatment stage ultimately wastes money and jeopardises health. The impacts of that approach, he says, include poor quality raw material entering the treatment process leading to poor quality effluent.

So for the past decade, Goldfarb says Kando has been enabling utilities to locate the source of damaging industrial effluent: "Wherever there is a change in wastewater quality, we can identify it, we can identify the source of the change. So we can give an early warning to the treatment plant that there is a change in the wastewater quality, coming from this factory or industrial source and it's going to hit the treatment plant in three hours and this is the damage it is going to do." Goldfarb says Kando has been providing this early warning service on industrial effluent in cities in Israel, Italy and more recently it has been cultivating opportunities in the UK.

With water stress putting the prospect of direct potable reuse (DPR) of wastewater on the radar of UK water companies, Kando's operations in Texas may also have future relevance here. Kando is working with the council of the Texas city, El Paso. Drought presents the city of about 800,000 people with a growing water supply challenge and it has turned to DPR. "One of the biggest issues with DPR is making sure the wastewater quality is good enough to protect your treatment. What we have seen over time in El Paso is, we identify the sources of change in the wastewater quality and we have then brought on change in behaviour of the people who caused the change."

This, he says, enables Kando to improve the production of reused water and to reuse more wastewater than the earlier 50:50 blend with conventionally sourced water. "This is a great demonstration of how you can make reuse safer once you control wastewater quality upstream," he adds.

Public health and disease

And along with data on industrial effluent Kando can, he says, extract information on public health issues: "When I'm talking about public health this is related to two types: first to diseases like Covid, influenza, polio and others; and second to public behaviour such as abuse of substances or dietary trends that threaten health."

Kando recently started its first a national public health project in Israel covering all communities in the country. Under this project, the health ministry is provided with public health data based on wastewater analysis. Any changes in wastewater can inform decisions on the need for public health interventions.

As an example he points to the Covid pandemic where he says evidence of the outbreak in Israel was visible in wastewater before people had symptoms. At the same time, a polio outbreak became visible in the wastewater which led to "educational effort in communities that were not vaccinated," says Goldfarb.

He explains the government needed to bring the data to the

attention of the people so they could take part in any decisions: "So the government would not be the one to dictate the public health decision. Members of the public are mature enough to make their own decision once they have the data."

Goldfarb says El Paso and another project in Cincinnati, Ohio are both providing opportunities for the local utilities to communicate the wider benefits to public health from analysing data harvested from wastewater. They include information about day-to-day behaviours that have implications for health. Examples include dietary mores, substance abuse and even mental stress levels.

Kando is currently considering launching a study into nutrition among communities. "We have been approached by a city in the US that is investing a lot in education about nutrition," says Goldfarb. The premise for the investigation is that testing might reveal changes in diet that relate to specific education measures by the city. That could provide indicators of success or otherwise in an education campaign much more swiftly than conventional feedback and follow up after publishing the campaign. "We have already seen changes related to specific holidays and events," he shares.

And a work in progress includes a study in wastewater of hormonal identifiers of stress that are known to be present in faeces and urine. While the study is "in a very early stage" it provides an indicator, Goldfarb says, of the potential gains in public understanding of public health: "The capacity to present data to a community to improve people's lives is almost unlimited," he says.

Privacy and data sharing

An important issue associated with publishing public health data is the preservation of privacy. Goldfarb emphasises that data from wastewater analysis can avoid invasions of privacy. "You get statistical information about the community; you see trends and changes in the population and communities without going into specific individuals' data."

With Kando marshalling and analysing data from sources worldwide there are clearly significant opportunities for sharing insights and data to improve outcomes. Goldfarb agrees but believes water sectors worldwide are missing a trick. "Water utilities need better communication on solutions." He asserts there is not enough sharing of data and water utilities are "trying to solve their problems without sharing their data with others". He adds: "We have a lot to learn from other sectors about sharing data. I think this is something we should all think how to improve over time."

Golfarb claims Kando's systems bring financial benefits but he emphasises also the reputational gains to be had for water companies in providing support to public health measures. "The main value is reducing risk and reputational gain and financial value over time to the client. That is something we have to prove before we start a project."

Legitimacy leg up

Wastewater networks bristling with sensors and links to Cloud-based analytics are already part of the vision for an upgraded water infrastructure here in the UK and elsewhere. And clearly that would present opportunities to name and shame industrial or even community pollution recidivists. The dynamics of that in the UK, where water companies are often accused of being the polluters, are interesting.

But the public health role of wastewater analysis is of enormous value to the public and, therefore, worthwhile promoting. The absence of any profile for that work in the UK – as demonstrated recently in the lack of awareness of existing polio screening systems – is an exercise in hiding a light under a bushel. Tellingly, UK groups involved in studies of a role for wastewater analysis in Covid monitoring made little reference to polio tracking in their public announcements.

At a time when the water sector's legitimacy is being questioned, particularly on the impact of its practices on the environment and public health, the value in promoting its role in providing solutions to public health challenges is clear. And Goldfarb's observations suggest the sector's efforts in performing and promoting that role might be strengthened by greater sharing of data – not only with each other but also with the public. It would be worth the effort for the very real gains it could bring as well as a means to offset the burden of being characterised as a threat to wellbeing and the environment. TWR

INDUSTRY COMMENT

COORDINATION STREET

Matthew Whaley explains how the Mayor of London's Infrastructure Coordination Service is unlocking societal benefit through promoting cross-sector streetworks collaboration.

In 2019, the Mayor's Infrastructure Coordination Service (ICS) was established to improve the coordination and delivery of infrastructure in London, responding to a need recognised in industry by the Mayor and his London Infrastructure Group. Since then, the ICS has been working with highways authorities, utilities, and other works promoters to pilot collaborative streetworks delivery methods. This involves encouraging utilities to adopt a 'dig once' approach, whereby utilities collaborate on the same section of road to deliver their works. The overarching objective is to reduce the frequency and scale of disruption to London's economy, society and environment as a result of repeated or siloed works.

To do this, the ICS leverages the power of data, digital tools and new applications such as the GIS based Infrastructure Mapping Application (IMA) to facilitate the planning and delivery of schemes. These tools allow for development of collaborative opportunities by identifying, in advance of delivery, geospatial overlaps in utilities asset investment programmes.

Between 2019 and 2021, in the pilot phase of the ICS, this approach delivered eight collaborative streetworks schemes, realising 426 days of reduced road network disruption and c£831k in delivery cost savings for work promoters. In one instance, a single collaborative scheme is estimated to have delivered between £2.3-4.1m of economic benefits to Londoners. In addition, the pilot phase of work saw considerable knowledge sharing in relation to collaborative delivery methods. This spanned a wide range of aspects including construction methods, permit sharing and local resident and business communications and engagement. The ICS also promoted wider regulatory and organisational change, which led to Cadent and SGN adopting a streetworks collaboration incentive for their GD2 business plans, whilst also hiring collaboration specialists to advance these opportunities.

Collaboration as standard

In summer 2021 the ICS entered a second phase of work seeking to build on the successes of the pilot. In this phase, one of our key objectives, amongst others, is to establish collaboration as the business-as-usual delivery method for works promoters in London. In combination with the GD2 incentive, this will drive an increase in the number of collaborative schemes delivered annually. As this materialises, focus will also shift from proving the value of streetworks collaboration for Londoners to ensuring that the collaborative streetworks schemes delivered are the most impactful.

With grant funding from the BEIS Regulators' Pioneer Fund, we have been working since September 2021 on the development of key tools and methodologies which will support the ongoing expansion of the collaborative streetworks programme in London. To provide a wider perspective, we were supported in this project by a working group comprised of representatives from utilities operating in London and Sheffield County Council. The areas of investigation sought to build on the practices and knowledge developed in the first phase of work, in particular the use of data and digital tools as well as the use of the gas sector economic incentive:

- *Benefits assessment: Developing a framework to assess social, environmental, and economic benefits of collaboration to support decision making and prioritisation of schemes.*
- *Monitoring and evaluation (M+E): Creating a functional monitoring and evaluation tool which can be applied to all schemes to understand impacts and value created.*
- *Incentivisation: Investigating opportunities to design a common regulatory incentive for collaborative streetworks that can operate across different regulatory systems. Also investigating wider levers to incentivise collaboration.*

Benefits assessment and M+E

During the first phase, the ICS carried out robust monitoring and evaluation work to prove the value of delivering streetworks collaboratively in London. This was delivered on a handful of schemes and tracked key metrics such as days of disruption saved (due to fewer overall days on site), value of journey time saved to road users (due to reduction in days of disruption to the road network), and reduction of vehicle emissions. The methodology involved undertaking 'bottom-up' assessments, including actual traffic counts and modelling to understand the impact a collaborative scheme had compared to the works being delivered in isolation. An example of this was monitoring and evaluation for a scheme in Stoke Newington, with Cadent and Thames Water collaborating, which demonstrated that £2-4 million worth of benefits were delivered.

Going forward, we aim to expand the monitoring and evaluation programme to reflect the growing needs of the collaborative streetworks programme. This will aim to support the prioritisation of future schemes by quantifying the benefits and value delivered by collaborations at project and programme scales.

To do this we want to use the knowledge built in the first phase's monitoring and evaluation and add other objectives:

- *Improve datasets by providing comparable monitoring and evaluation data for all collaborations delivered.*

> **The intention is to establish similar incentives within the electricity and water sectors.**

- Improve understanding of a wider range of benefits delivered by streetworks collaboration across social, environmental and economic factors.
- Widen the inclusivity and user-friendliness of M+E across the industry.
- Simplify the delivery of M+E and associated processes.

To support these objectives it is also important that monitoring and evaluation results are available faster than before, without the need for specialist technical support and bespoke analysis, and at a lower overall cost.

With the support of Simetrica-Jacobs we developed a bespoke benefits assessment strategy in line with HM Treasury Green Book guidance and evidenced by a wider range of pre-existing economic studies. This covers a wide range of aspects, mapping how scheme characteristics result in outcomes and benefits for society, environment and the economy (see Figure 1).

This framework underpinned the subsequent development of a functional spreadsheet-based monitoring and evaluation tool which can be implemented on all collaborations by project managers. The tool is easy to use, delivering results in under an hour, and works on a 'top down' basis meaning users are only required to input basic scheme characteristic information with no need for bespoke analysis or modelling. The tool tracks key metrics to help evaluate the impact of a scheme across the social, environmental and economic factors identified in the benefits framework ('Impacts'). Outputs also include a series of normalised output figures to support scheme by scheme comparison.

Incentivisation

The ICS, in partnership with London's gas companies Cadent and SGN, worked with energy regulator Ofgem to design an innovative financial incentive for GD2 that encourages gas companies to undertake collaborative streetworks with other utilities and asset owners across London. The rationale for the incentive was supported by research undertaken by Simetrica-Jacobs in 2019 on behalf of SGN which found a negative wellbeing impact of £1.60 per household per day of disruption within 500m of streetworks. The incentive itself operates by providing a set financial reward payment (up to an overall cap) per collaborative scheme delivered (meeting a set of minimum engineering based qualifying criteria) over GD2.

The introduction of the incentive in April 2021 has significantly increased gas companies' appetite to deliver collaborative streetworks and provided additional focus and potential funding for the companies to pursue these opportunities. Cadent and SGN have recently hired collaboration specialists to facilitate joint works. These experts are also reviewing ways to change their organisations' internal processes to enable further collaboration and embed it as a core way of working. The intention is to establish similar incentives within the electricity and water sectors. Thames Water has already hired its own collaboration specialist even before a water incentive is in place, recognising the benefits that collaboration can bring.

Overall the GD2 incentive continues to provide a clear and effective means to encourage ongoing collaborative delivery. Furthermore, the supporting evidence base provided by the SGN and Simetrica-Jacobs' research (2019) ensures that a line of sight is main-

Matthew Whaley is senior infrastructure policy officer at the Greater London Authority.

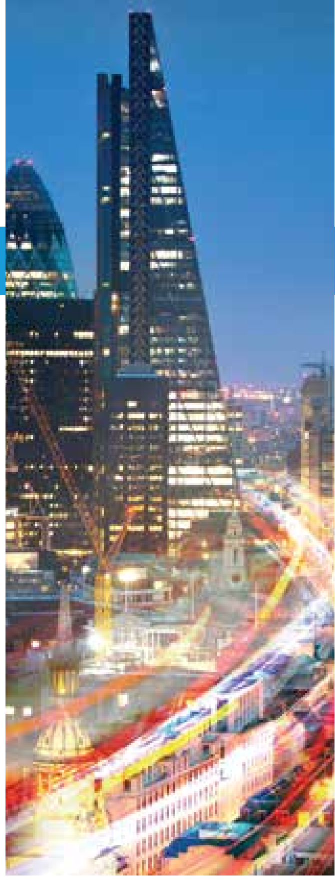
FIGURE 1: OUTCOMES OF COLLABORATIVE STREETWORKS AND ASSOCIATED IMPACTS (BENEFITS)

Outcomes
Comparing collaboration vs counterfactual individuals projects

- Reduced community disruption
- Reduced travel disruption
- Reduced air polution/noise
- Reduced carbon emissions
- Reduced embodied emissions
- Increased long-term resilience of road infrastructure
- Efficiencies in delivery
- Learning and knowledge sharing
- Additional investment

Impact
Benefits for valuation

- **Loses avoided** by local buinesses
- **Improved wellbeing** of local residents
- **Value of journey time saved** for road users (local and non-local)
- **Value of carbon saved** for wider society
- **Cost saved (long term)** to highway authorities, from reduced maintenance required
- **Cost saved (short-term)** to utility companies
- **Innovation benefits** for utility companies and highway authorities
- **Benefits from additional infrastructures,** e.g. SUDS for wider society



INDUSTRY COMMENT *continued*

tained with the social outcomes which drive collaboration as a way of working.

Moving forwards, we wanted to build on these successes and understand how an incentive might practically be implemented in other regulated sectors participating in streetworks collaborations. This included understanding compatibility of the GD2 incentive with different regulatory systems in water and electricity, as well as understanding how differing engineering characteristics of schemes, and investment drivers across sectors, would impact any incentives. Furthermore, with the potential expansion of incentives to other sectors, there is a need to identify and address any risks of double counting due to multiple works promoters receiving reward payments for a single scheme.

Moreover, we took the opportunity to investigate wider emerging questions relating to incentivisation of collaboration and social outcomes. Going forwards an increase in the amount of monitoring and evaluation data we have for schemes will show that some collaborations deliver proportionately more value to Londoners than others. The current GD2 incentive values all collaborations equally, however as more schemes are delivered in the future there may be a need to ensure that the most valuable are prioritised for delivery. Similarly, we wanted to investigate how the breadth of benefits and values identified in the framework we developed with Simetrica-Jacobs could be incorporated into an effective incentive.

With the support of Jacobs, we engaged extensively with the project working group and undertook wider research to develop a recommended future incentive form, based on a balanced scorecard typology (see Figure 2). This looks to capitalise on the advantages of the GD2 incentive whilst serving as a useful guide to support the development of subsequent incentives in future regulatory periods. The five themes of the scorecard are based on the most important collaboration success factors identified with the working group over the course of the project.

An important advantage of the balanced scorecard as the basis for an incentive is the transparency of outcomes delivered by a collaboration. In the future this could be used as a way of adjusting reward payments based on the value delivered by individual schemes, ultimately ensuring prioritisation of the most valuable collaborations. Furthermore, the scorecard weightings allow for flexibility to prioritise certain outcomes over others and account for differences in priorities across companies and sectors.

A challenge with the balanced scorecard approach is that it requires mature business processes and provisions supporting it to operate effectively. As the ICS programme is in a phase where collaborative practices are still developing, we have identified a possible phased approach to implementation which we expect to span multiple regulatory periods (see Figure 3). Furthermore, our wider research on levers to incentivise collaboration identified measures, such as ongoing data sharing, which could complement the implementation of economic incentives.

Next steps

Going forwards, we will be engaging extensively with stakeholders in regulators, utilities, and highways authorities to share our findings and identify any areas to take forwards. We aim to implement the learning we have developed to continue driving outcomes for Londoners and the environment, embedding collaboration as 'business as usual' in streetworks delivery.

The immediate next steps will entail undertaking training sessions with works promoters to support the use of the M+E tool on all collaborative schemes. We will also be using the tool to provide M+E data on the schemes delivered previously. In the medium term, we expect to use the data and knowledge gained to support prioritisation of schemes to maximise the benefits delivered by collaborative streetworks.

Finally, we will explore how we can inform any discussions relating to potential future regulatory incentives in the energy and water sectors, using the work done as part of this project. Alongside this, we will continue our supporting role for all sectors with key tasks such as assessing qualifying criteria for 'strategic' projects under the GD2 incentive. TWR

FIGURE 2: EXAMPLE OF POTENTIAL BALANCED SCORECARD TYPE INCENTIVE FOR STREETWORKS COLLABORATION

Theme	Benchmark	Weighting	Actual performance	Out/under performance
Social value	45	25.00%	46	0.56%
Collaboration	43	40.00%	45	1.86%
Customer/user experience	43	15.00%	40	-1.05%
Quality and cost savings	35	10.00%	30	-1.43%
Innovation	44	10.00%	50	1.36%
Total performance		**100.00**		**1.36%**

FIGURE 3: IMPLEMENTATION ROADMAP FOR TRANSITION TO BALANCED SCORECARD

PROCESS

STEP 1	STEP 2	STEP 3
Maintain the Ofgem RIIO-GD2 Wellbeing Incentive where it is used and extend to other regulators where feasible to do so.	Develop a Mini-Balanced Scorecard, adding Social Value measurements to the RIIO-GD2 Wellbeing Incentive.	Develop a full-scale cross-sector Balanced Scorecard, building on the lessons from Step 2.

INDUSTRY COMMENT

FRESH THINKING

Mariana Gonzalez explains her new role at Galliford Try, furthering its asset optimisation and sustainable growth agenda.

Mariana Gonzalez is the newly appointed head of process solutions in Galliford Try's Environment business.

Water utilities face significant challenges in the next few years as the sector seeks to reduce its carbon footprint and provide customers with reliable services at minimum investment and operational costs.

Although progress over the last few years has been made to reduce direct and indirect carbon emissions by increasing process efficiency and reliability, more aggressive efficiency improvement programmes to reduce emissions from pumping and treatment operations are required as part of the mix to achieve a net zero target. As Greenhouse Gas (GHG) emissions from the process come primarily from grid power consumption and methane, plus nitrous oxide emissions from wastewater and sludge treatment, the optimisation of these processes is essential to achieve the carbon target.

In addition, operators need to focus on increasing asset reliability, and it is crucial for relevant decision makers to have the key information available to quantify the risks of asset failure and to gain a clear understanding of their link with maintenance programmes and capital expenditure. This allows them to operate within the expected consent limits at minimum risk and cost.

Based on my experience, in many cases capital expenditure allocated to resolve compliance issues can be significantly reduced or even eliminated if alternatives are explored, based on sound evidence derived from robust data analysis. Consequently, understanding of potential savings that can be achieved from the optimisation of existing assets is becoming increasingly vital for the sector.

Source to sea

Galliford Try is working with our partners in the sector to address these needs. Our move into markets adjacent to the business's more traditional design and build space offers the opportunity to optimise the performance of assets, potentially reducing operational expenditure, realising lower carbon footprint objectives and reducing pressure on capital interventions. Our transition to an organisation that offers a holistic water cycle approach, providing the water sector with tangible asset performance improvements, is advancing rapidly and becoming an attractive commercial proposition to our clients.

This 'Source to Sea' strategy, discussed in detail by managing director of our Environment business, Stephen Slessor, in The Water Report's April publication, covers the following five principles:

- *Laser focus on operational excellence in existing frameworks.*
- *Identifying growth opportunities and re-shaping accordingly.*
- *Offering digital integration/solutions for wastewater catchments.*
- *Differentiating as the greenest construction partner focused on carbon reduction.*
- *Developing alternative commercial models with utilities including participation in research and development.*

Based on these principles, and in recognition of the fact that we are now working across the whole water cycle, we believe that asset management and optimisation is our future. In response to this, we have created an Asset Optimisation team, with a complete focus on asset performance management. This team offers clients innovative robust solutions, emerging from the optimisation of the existing assets.

We are now providing our clients with the opportunity to carry out complete site, catchment and network investigations to identify savings and improvements. As we understand the relevance of robust data gathering to produce reliable models that enable adequate assessment of asset performance, our new Assets Optimisation team is working alongside established artificial intelligence providers aiming at maximising savings and minimising GHG emissions. Our output comprises an array of solutions based on data capture, sound analysis in establishing the root cause of failures and incidents, and asset optimisation. Galliford Try's holistic approach enables the effective decision-making required to unlock savings by identifying opportunities, associated risks and mitigation options.

Sustainable growth

We are ramping up activities as more clients see the benefits of this new offering and it has now become a target area within our Sustainable Growth Strategy.

This initiative allows Galliford Try to position itself at the forefront of an innovative approach supporting our clients in the water industry. This is not a new concept, but the utilisation of artificial intelligence to optimise the control and the operation of each stage of the process is now not only a possibility, but also a requirement to achieve the sector's cost and emission targets.

I am a chartered chemical engineer, and I started my career in the oil and gas industry, before moving into the water sector in the UK and successfully completing an MSc and PhD in anaerobic digestion of sewage sludge at the University of Surrey. I have acquired a wide and extensive amount of experience in all process areas of the water industry, including water, wastewater and sludge treatment.

I believe that one of my strongest attributes is my ability to understand the problems that the water utilities face from their client's point of view and to be able to translate them into practical solutions that align with the principles of the consultancy and D&B sectors.

I am delighted to be appointed to lead this business area within Galliford Try at such an exciting time when GHG reduction and energy savings are at the top of everyone's agenda. I am looking forward to developing and growing the team further while we expand our offerings to our clients. TWR

In many cases capital expenditure allocated to resolve compliance issues can be significantly reduced or even eliminated if alternatives are explored, based on sound evidence derived from robust data analysis.

INDUSTRY COMMENT

UNDERGROUND OVERGROUND

Atkins' Guy Ledger provides an update on the National Underground Asset Register, which is putting worker safety and cost savings at the top of the water agenda.

There are 4m kilometres of underground pipes, fibre, cables, power lines, and sewers that are constantly being upgraded, mended, and maintained, sometimes under emergency conditions. This is a huge undertaking, involving a long and detailed planning exercise to find these buried assets. That process is slow, costly, and not as effective as it could be.

Water and wastewater pipes, typically laid below telecoms, power cables and gas pipes, require workers to navigate a congested underground when digging, posing a real risk to people's lives. The disruption caused by accidental strikes also affects customer service and supply.

Jo Parker, chair - Water and Sanitation Community Advisory Board, Clive Surman-Wells, innovation director of Northumbrian Water Group, and Karl Simons, formerly of Thames Water now at Fyld AI, have recently discussed these challenges in the water industry, and how the new National Underground Asset Register known as NUAR, can help. Parker put it succinctly: "We desperately need to improve how we repair mains. You can't start to make progress with how you repair mains, until you know exactly where they are and how deep they are."

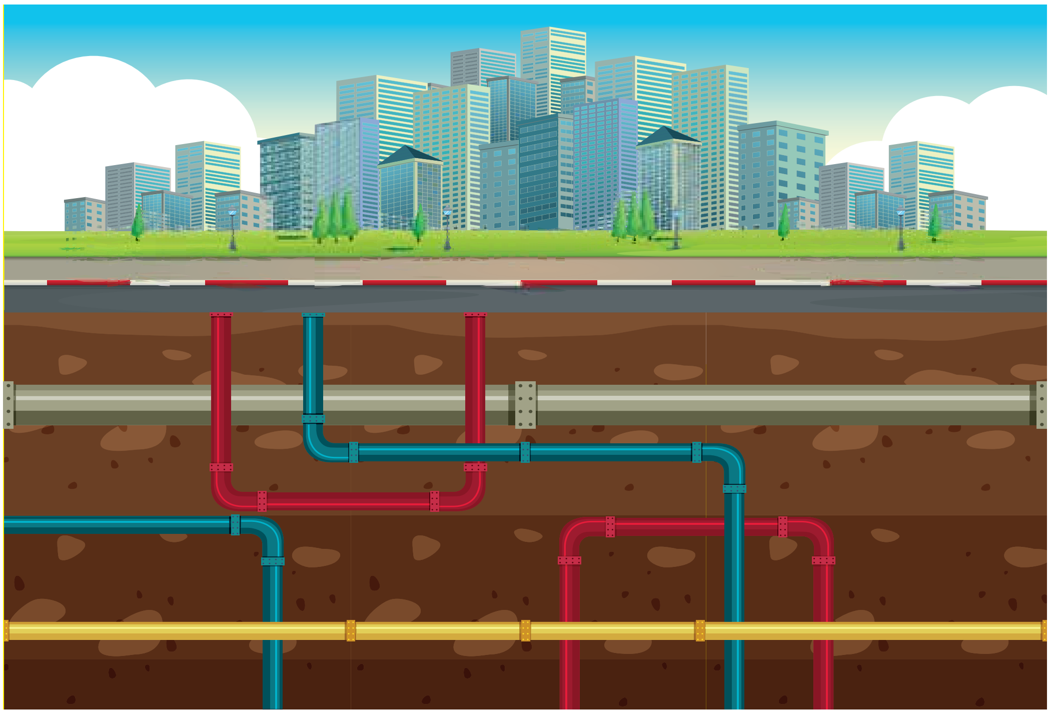
What is NUAR?

NUAR is a highly secure, user-friendly and intuitive platform with asset owners sharing their data, as they are required to do now, but in a simpler, faster, digital way. NUAR will improve the efficiency and safety of underground works by creating a secure, auditable, trusted and sustainable platform. It will provide a consistent, interactive digital map of buried asset data, accessible when, where and how it is needed by those planning and executing excavations on behalf of underground asset owners. It will also lead to better communication between parties and help to improve data quality.

Simons further identified issues around 'real-time' visibility of underground infrastructure to the field worker at the point of works – "an age-old problem since we started putting water pipes in the ground. We've turned into an environment where we say to the field worker 'you must use safe digging practices' and the reality is the field worker has certain tools at their disposal which means they are able to detect the presence of electricity, but fibre optics are largely undetectable at the moment."

These comments, so familiar to everyone in the water industry, beg the question: how can we leverage investment by the UK government in NUAR, to transform the planning and execution of street works?

Surman-Wells had this to say about innovation and Northumbrian Water Group's approach: "It's a bit of a cliché but innovation is in our DNA. We have to innovate in order to deliver on our business plan." Northumbrian has a proven track record, as Surman-Wells continues: "We run an annual innovation festival, it's business as usual now." The National Underground Asset Register was born out of this activity.



The NUAR story

Surman-Wells provides some background. "In 2017 during the very first Innovation Festival, three of the sprints that we ran, all concluded that what we needed was a better map of what's under the ground. One of the outputs of those sprints was the realisation that the way we were working with existing tools wasn't doing the job." How did we get from that set of conclusions, to NUAR being realised? He continues: "In 2018, we actually ran a specific sprint and we termed it a 'Mapathon''. We got all the right people in the room and didn't let them out until they came up with three things: a pilot platform, which was really a prototype platform, a very simple sharing agreement and a business case." He talks about how this event created a consortium in the North East of the companies who realised and grasped the shared vision that became the NUAR platform.

Surman-Wells states that this was, "expanded to a small pilot *in Sunderland. Then with the help of the Geospatial Commission we expanded it from Berwick all the way down to Teesside, engaging all the local authorities in that area to widen the field of data sharers. The Geospatial Commission funded that expansion alongside a second pilot building on proof of concept by another water company, Thames Water in London." This was innovation at work, not just for the water industry, but for all asset owners, whether they are pipelines, utilities or telcos, along with local authorities – for the benefit of everyone.*

Secure by design

Creating a single view of what's under the ground is not a new idea, people have been talking about it for 20 years, and some have had a go with some success, but without long-term, wholesale adoption. Understandably, people had some concerns, many around security and data sharing. Parker comments on this: "Are asset owners currently tracking and collecting back all the CDs and deeds they provide? I doubt it. Did they ensure that no one who left the company took CDs with them? If you think of how password protection has improved because of on-line banking it will be more secure as you'll be able to track what people are looking at and identify patterns of activity."

Surman-Wells provides some detail on how these concerns were dealt with up front "by introducing really good security around any new systems, strong cyber-security, carefully worded data sharing agreements, and good practice in managing who has access to the system and for what purposes." Clearly, these measures provide asset owners with confidence when sharing their data.

Christian Compton, Atkins cyber-security lead for NUAR comments: "NUAR is a very important project for the UK Government financially and reputationally. It requires that all relevant cyber security best practice and guidance is meticulously adhered to throughout, from the technology used, to the various people and processes involved too. It requires a security minded approach through its whole lifecycle. Stakeholder engagement is at the heart of this, working in full collaboration with CPNI (Centre for Protection of National Infrastructure) and NCSC (National Cyber Security Centre) too." Compton adds: "As a result of this approach to cyber, NUAR is being championed as a security exemplar model for future projects to follow."

There is the additional benefit of improving data quality for asset owners, with Surman-Wells adding: "Data improvement is being designed into NUAR. If somebody digs a hole and the map says there is a gas main running across their excavation, on their way down to the target sewer and they don't come across that gas main, then what we should be doing is telling the gas company 'we dug a hole and didn't find your main, your plan's wrong'. That is nigh on impossible. The NUAR platform allows for this feedback loop."

How will NUAR help water?

For NWG, Surman-Wells considers the benefits will fall into two or three areas. He states: "The primary one is the safety of our workforce. It's not a silver bullet that you use NUAR and suddenly you don't get any strikes. But it is definitely going to contribute to a reduction in strikes through improved buried asset data quality, improved access to the map, and having a single view that a field worker and a planner can interrogate whilst on the job."

Parker adds her comments about provision outside office hours: "As far as emergency repairs go, it's brilliant because you can just go straight on the system, you can see what sewers are there and start to plan for flood alleviation. It will help fire authorities know where water and gas mains are too."

NUAR is not just a nice to have though, as Surman-Wells makes clear. "The benefit of putting better mapping and better information into the hands of field workers and planners means that we can reduce our back-office data-prep costs, which we estimate to be between £0.5m and £1m annually. In 2017 the cost of repairing accidental damage by third parties to NWG's buried assets was just over £1m. Those third parties will pay us compensation, so that's not a cost to NWG but it is a cost to all those other organisations. And we are spending time on avoidable, unnecessary repair work at the expense of value-added work for our customers." These figures are clearly specific, however the Geospatial Commission business case identified that with up to 60,000 accidental strikes annually, savings to the UK economy total about £2.4bn.

Convincing the sceptics

Initially, the project was not without its detractors, as Surman-Wells mentions: "We had sceptics within NWG. There are lots of stakeholders, in operations, health and safety, planning. Once we had the pilot platform up and the sceptics saw it, they instantly got it. Almost without exception they wanted to stop using the existing established system and processes and switch to the pilot. The message was very clear – 'This is so much better than anything we've had before, please can we have it ASAP'." He concludes: "As asset owners we have been able to get involved in how the system should work and we feel we've been listened to. The resulting NUAR will truly meet our needs."

At no cost to themselves during the NUAR build phase, water companies in England, Wales and Northern Ireland have the opportunity to cut costs as projects will be shorter and more efficient. They will save opex, capex and emissions, as well as improving safety and customer satisfaction.

What next?

The NUAR build phase is a three-year programme which started in September 2021, delivered by Atkins and its supply chain for and in collaboration with Geospatial Commission. The NUAR platform will hold underground asset data from asset owners in England, Wales and Northern Ireland. Onboarding has already started. Three initial rollout regions, Wales, North East England and London are already uploading data. The system is scheduled to go live across these three regions in 2023.

Over 120 organisations have already signed up to NUAR and shared their data. Contact Tim.over@AtkinsGlobal.com or nuar@cabinetoffice.gov.uk to get on-board. TWR

By Guy Ledger, NUAR programme director, Atkins.

> **We desperately need to improve how we repair mains. You can't start to make progress with how you repair mains, until you know exactly where they are and how deep they are.**

CCW calls for single social tariff by April 2025

CCW has called for a single social tariff to be launched no later than April 2025, in time for the start of the next price period.

It set down the challenge, which will require new legislation, as it published a report charting the progress that has been made over the past year in delivering the proposals set out in its independent review of water affordability on behalf of the UK and Welsh Governments.

Emma Clancy, chief executive, said: "The cost of living crisis has raised the stakes for the water sector and both governments to make sure we put in place a new water affordability scheme that ends the current patchwork of help across England and Wales. It's within our grasp and we cannot afford to miss this opportunity."

More widely, the report was very positive in documenting that six of ten key recommendations had been implemented, and that the water sector had implemented 26 of the 40 more detailed actions recommended.

CCW challenged the sector to work towards adopting the remaining actions from its review and to use their own profits to enhance support for customers struggling to stay afloat.

Ofwat issues new payment guidelines

Ofwat has issued new guidelines for water companies to help customers pay bills, get help and repay debts. The regulator told companies to:

- Offer more flexible payment options for customers on irregular incomes and zero hours contracts.
- Talk sensitively with customers struggling to pay to understand their circumstances and resolve problems without needing to take debt recovery action.
- Use more complaints, research and other customer feedback to make real time improvements to payment, help and debt services.
- Make full use of data to find those customers who are struggling and offer them support.

Ofwat is also bringing forward plans to develop a new customer-focused licence condition.

Companies step up on cost of living

Among the initiatives taken by water companies to ease cost of living pressures for their customers have been the following:

- United Utilities shareholders added £142m of support to the £139m package of financial aid provided via a social tariff to help 200,000 households in the North West until 2025. At the same time the company pledged to keep the average household water bill flat for this year.
- Anglian Water unveiled a £65m package for customers struggling with the cost of living – its biggest ever assistance pledge. The help is part of a longer-term package that will see Anglian set aside £232m between 2020 and 2025.
- Severn Trent set up a £30m fund to aid 100,000 low-income households in paying their water bills. Under the scheme, bill reductions of up to 90% will be available to eligible households.
- Yorkshire Water shareholders added £15m to the existing bill support package through to 2025, taking total support to £115m. It is estimated this will help 100,000 households a year. The company reported the number of its customers needing bill support has doubled in the last three months.

Water UK report calls for asset maintenance reforms

Analysis by Economic Insight for Water UK proposed two reforms to the regulatory framework for PR24 to promote investment in asset maintenance while ensuring efficiency.

First, price control deliverables (PCDs) should be part of the package to deliver specific asset maintenance and replacement projects identified by companies. Economic Insight noted: "PCDs could be used by companies to fund specific asset maintenance and replacement activities *over and above* the volume of asset maintenance and replacement activities that have historically been achieved (and implicitly funded) through base costs."

Second, dedicated cost allowances for asset maintenance and replacement activities, with a specific under/outperformance sharing rate, should be introduced to encourage a step change across the industry.

Options for a sustainable approach to asset maintenance and replacement, pointed to the need for a step change in funding at PR24 and beyond.

Lawrence Gosden takes over as Southern Water CEO

Southern Water has appointed its chief operating officer Lawrence Gosden as chief executive. He started on 1 July, taking over from Ian McAulay who retired.

Gosden began his career as a graduate at Southern Water and has over 30 years' operational and capital programme delivery experience in the water industry, including 12 years at Thames Water in a variety of senior executive roles. He returned to Southern in 2020 to take up the COO post.

Gosden said: "Southern Water has made great strides in improving transparency and putting in place the foundations of change. We know we must continue to improve, and quickly. Working with the committed teams across Southern Water, we are ready to deliver the next phase of the transformation our customers and the environment deserves."

PR24 outcomes hinge on AMP8 delivery models

Elements of the supply chain could fail and the delivery of outcomes for customers and the environment be at risk unless appropriate delivery models are adopted in AMP8, warned a new report from the Water Industry Forum.

The paper, *The optimal delivery model for AMP8 - a view from the supply chain,* called on water companies to build capital delivery approaches in 2025-30 around two distinct delivery models:

- A programmatic approach with visibility of a committed and adequately defined long-term workload to allow for a long-term sustainable relationship with the supply chain.
- A client-side ownership approach, with late engagement with the supply chain, providing the supply chain with certainty of requirements and clarity on process and integration risk.

The paper highlighted the "challenging and volatile backdrop for water service delivery" for AMP8, "beset by supply chain disruption from Brexit and Covid-19, high inflation and skills shortages, and more rigorous biodiversity and sustainability goals changing the nature of the market".

EA chair-to-be highlights water policy integration and the long term

Better integration of the water policy landscape, and the need to deliver on long term water needs, were two priorities specified by Alan Lovell, the government's preferred candidate for chair of the Environment Agency, when he was questioned by MPs ahead of his formal appointment.

On the long term, Lovell said, reflecting on his time as chair of CCW: "There is such focus within the Consumer Council on talking to consumers, of course, about the level of bills, and the same is true, in my opinion, of the economic regulator Ofwat, that it has been under pressure to keep bills down. That has caused me some worry in terms of the long-term future of the water industry in particular. One of the many reasons why I am extremely keen to do this role is to play a larger part in the water sector as a whole and making sure that we are fit for 50 years' time."

Given his previous experience as an expert in rescuing troubled companies, the MPs questioned Lovell extensively on whether he had been appointed to turn the EA around, or at least restructure it. Lovell said "this is, in no sense, a turnaround" but he emphasised a keenness to look at options for greater integration between regulators. He said: "There needs to be better integration of the total water policy landscape." Lovell supported an idea he said had been put forward by Natural England chair Tony Juniper for "an integration committee established involving EA, Natural England and the Forestry Commission, under ministerial leadership, which I think would give an opportunity to see if closer co-operation could be achieved without the disruption that would be caused by a reorganisation".

Among other points of note from the session were:

- Personal views in favour of smart meters; ring fencing water company fines to be spent on river restoration projects or similar rather than going to the Exchequer; and water companies receiving funding from developers via the new infrastructure levy to fund wastewater enhancements necessitated by new build.
- He said water is good value for money compared with other utilities, and "having clean water is fundamental and is worth paying a high price".

Eustice confirms Schedule 3 SUDS provisions to be switched on

Environment secretary George Eustice confirmed the Government is intending to switch on the sustainable drainage provisions set out in Schedule 3 of the Floods and Water Management Act 2010. He said: "We are going to activate the provisions that were in the last Water Act, 2010 or thereabouts, to activate the more formal requirements for sustainable urban drainage. The truth is I think that has been put off for far too long. If we have the housing growth ambition to meet the need that there is, we will need to see those new developments fully embracing our sustainable urban drainage to take pressure off the drainage systems."

On the issue of whether it would be appropriate for fines paid by water companies to fund local river restoration, rather than go into Treasury coffers, Eustice replied in the negative. "It is quite a fundamental principle under our system that a fine goes back into the central pot and is not ring-fenced for a particular thing. I think that the Treasury would be very concerned about the thin end of the wedge if we were to depart from that."

Eustice was answering questions from the Environmental Audit Committee on a wide range of issues.

IN BRIEF

Water minister **Rebecca Pow** resigned from her ministerial post on 7 July, amidst the mass resignations in the Conservative Party and its leadership hiatus.

Ofwat has consulted on proposals to change the regulation fee cap in Condition N of water company licences. It explained that since 2015 its budget has been set by Treasury through the Comprehensive Spending Review and that change was needed to ensure this budget can be funded.

Severn Trent and Wessex Water have partnered to launch an open market challenge to find innovative solutions for the treatment of sludge. The two will use Wessex's Marketplace platform to invite interested third parties to come forward with new ideas to maximise the value of sludge, while minimising environmental impacts.

Anglian Water will invest £50m to create 26 new treatment wetlands across the East of England, as part of its Get River Positive pledge. The first three will get underway early in 2023.

Wetlands work, Wessex finds

Constructed wetlands could successfully deliver a natural alternative to chemically treating wastewater before it is returned to the environment, according to the findings of an investigation by Wessex Water on its pioneering site at Cromhall Water Recycling Centre.

The investigation into the effectiveness of the rural South Gloucestershire site – the first of its kind in the water industry designed to remove phosphorus from sewage effluent – assessed how the wetland removed nutrients, organic pollutants and chemicals and delivered biodiversity enhancement following its construction.

The findings revealed that annually, the wetland reduced concentrations of phosphorus to within the proposed permit limit of three milligrammes of phosphorus per litre. The reported noted, though: "To allow nature-based solutions such as Cromhall ICW (Integrated Constructed Wetland) to become viable alternatives to 'traditional' treatment approaches, there needs to be acceptance that the performance will vary due to the natural processes involved."

A summary of other findings, including a 111% boost in biodiversity value, are shown in the table.

Water quality	Biodiversity
27.5% reduction in total phosphorus 19% reduction in suspended solids 62% reduction in ammonia >60% reduction in nitrogen >70% removal of specific emerging contaminants >95% reduction in microplastics	Increase of 8.9 habitat units, a 111% increase in biodiversity value (Biodiversity Metric 3.0) 3.14 hedgerow units, a 42% increase in biodiversity value Projected increase to 33 biodiversity units over a 30-year period Over 22 birds species, including 2 red list species Six bat species recorded in one night

THE WATER REPORT

COMPETITION WATCH

WATER2BUSINESS AND ANGLIAN TOP HOLISTIC PERFORMANCE REPORTS

MOSL unveils new multi-metric trading party performance reporting

Water2business emerged as the highest performing large retailer, and Anglian Water the highest performing wholesaler, in new league tables published by MOSL scrutinising trading party performance across a suite of metrics. At the bottom of each table were Castle Water among the large retailers and Severn Trent among the wholesalers (see tables).

Wholesalers were measured on, amongst other things, the relevant Market Performance Standards (MPS) and Operating Performance Standards, as well as R-MeX and legacy long unread meters. Retailers meanwhile were measured on areas including MPS, complaints and long unread meters. The new holistic tables are a way of reviewing the performance of market participants across a range of measures in one place.

There were separate rankings for small retailers, as well as self-suppliers and New Appointments and Variations. Self-suppliers outperformed the wider market, with Blackpool Borough Council and Kellogg's (as well as Veolia Water Projects) securing perfect 100% overall scores.

AMPR

The tables accompanied MOSL's publication of the fourth Annual Market Performance report, this time covering the 2021/22 year. This covered trading party performance on individual metrics, as well as wider market performance for the year. MOSL noted 2021/22 saw performance return to more normal levels following the Covid hiatus.

The report also covered the effectiveness of the 2021/22 Market Performance Operating Plan, the market audit, and the work of the Market Performance Committee . It detailed the composition of the market, and noted that no new trading parties had entered during the year in question.

The report was published against the backdrop of ongoing Market Performance Framework Reform, through which future performance standards are being reviewed. TWR

RETAILERS WITH MORE THAN 5000 SPIDS

Name	MPS Score	Rank	Data Quality (DQ) Score	Rank	Vacant with Cons (WC) Score	Rank	LUM Score	Rank	Complaints to Retailer	Rank	Complaints to CCW	Rank	Ranksum	Average%	Total Rank
Water2business	94.79 %	2	99.99 %	2	99.20 %	3	94.09 %	1	13.20	3	0.20	1	12	97.02 %	1
First Business Water	91.63 %	3	100.00 %	1	99.29 %	2	90.60 %	5	0.00	1	2.60	3	15	95.38 %	2
Everflow	95.44 %	1	97.43 %	10	98.84 %	5	92.51 %	2	5.90	2	5.50	7	27	96.05 %	3
Pennon Water Services	84.47 %	8	99.92 %	3	99.59 %	1	86.01 %	7	15.70	4	3.20	4	27	92.50 %	4
Business Stream	88.83 %	6	99.61 %	6	98.08 %	6	92.35 %	3	26.50	6	2.20	2	29	94.71 %	5
Wave	90.39 %	4	99.76 %	5	95.53 %	10	90.72 %	4	16.60	5	4.00	5	33	94.10 %	6
Clear Business Water	84.38 %	9	97.94 %	8	99.16 %	4	87.03 %	6	52.90	8	4.90	6	41	92.13 %	7
Water Plus Group	90.16 %	5	99.88 %	4	98.01 %	7	85.46 %	8	82.50	10	9.60	8	42	93.37 %	8
SES Business Water	84.61 %	7	99.37 %	7	97.75 %	8	74.68 %	10	60.00	9	9.60	8	49	89.10 %	9
Castle Water	84.36 %	10	97.78 %	9	97.40 %	9	82.12 %	9	40.00	7	10.80	10	54	90.41 %	10

WHOLESALERS WITH >1000 SUPPLY POINTS

Name	OPS Metering and verification score	Rank	OPS Customer Service and Disconnection Score	Rank	MPS Score	Rank	UPRN Score	Rank	VOA Score	Rank	GIS Score	Rank	LTV Score	Rank	LLUM Score	Rank	RMEX Overall Score	Rank	RankSum	Average%	Total Rank
Anglian Water	97.43 %	5	100.00 %	1	98.09 %	2	80.27 %	3	58.14 %	5	93.48 %	5	99.58 %	1	99.28 %	4	76.67 %	4	30	89.21 %	1
Affinity Water	100.00 %	1	100.00 %	1	91.50 %	7	74.02 %	5	64.19 %	3	89.98 %	9	97.47 %	8	97.94 %	10	86.25 %	1	45	89.04 %	2
Yorkshire Water	95.73 %	8	100.00 %	1	97.44 %	3	90.88 %	1	63.36 %	4	94.34 %	4	95.25 %	14	98.35 %	9	76.67 %	4	48	90.22 %	3
Bristol Water	99.11 %	2	98.41 %	8	95.42 %	4	51.19 %	12	39.91 %	10	95.64 %	3	99.22 %	2	99.98 %	1	75.00 %	6	48	83.76 %	4
Portsmouth Water	98.74 %	3	100.00 %	1	99.38 %	1	16.38 %	15	13.61 %	12	93.45 %	6	98.80 %	5	99.92 %	3	78.57 %	3	49	77.65 %	5
South Staffordshire Water	97.09 %	6	100.00 %	1	88.53 %	8	74.79 %	4	50.10 %	8	97.29 %	1	95.46 %	12	96.79 %	12	73.33 %	10	62	85.93 %	6
South West Water	94.77 %	10	99.57 %	6	94.26 %	5	72.93 %	6	52.90 %	6	86.49 %	12	98.14 %	7	98.90 %	7	74.44 %	7	66	85.82 %	7
Wessex Water	95.62 %	9	97.83 %	9	78.69 %	11	53.97 %	9	35.98 %	11	91.88 %	8	98.31 %	6	99.98 %	2	73.75 %	9	74	80.67 %	8
United Utilities Water	98.20 %	4	98.42 %	7	93.26 %	6	52.07 %	11	52.73 %	7	89.54 %	10	90.07 %	15	96.55 %	13	79.09 %	2	75	83.33 %	9
Thames Water	96.99 %	7	91.60 %	10	79.05 %	10	85.71 %	2	65.38 %	2	93.18 %	7	96.64 %	10	95.42 %	15	72.73 %	13	76	86.30 %	10
Northumbrian Water	85.05 %	13	90.00 %	12	80.61 %	9	64.44 %	8	75.88 %	1	96.24 %	2	95.33 %	13	97.46 %	11	73.30 %	10	79	84.26 %	11
Southern Water	80.87 %	14	90.48 %	11	72.39 %	14	53.23 %	10	40.70 %	9	70.04 %	15	99.16 %	4	98.59 %	8	74.44 %	7	92	75.63 %	12
South East Water	89.11 %	12	65.22 %	15	68.39 %	15	72.01 %	7	7.61 %	13	76.82 %	14	99.20 %	3	99.22 %	5	64.29 %	14	98	71.32 %	13
Sutton and East Surrey Water	93.86 %	11	85.71 %	13	72.41 %	13	35.82 %	14	0.91 %	15	88.64 %	11	96.78 %	9	99.16 %	6	73.33 %	10	102	71.85 %	14
Severn Trent Water	74.59 %	15	84.55 %	14	78.49 %	12	45.17 %	13	1.76 %	14	83.00 %	13	95.84 %	11	96.46 %	14	60.00 %	15	121	68.88 %	15

INDUSTRY COMMENT

GET VOTING RIGHTS RIGHT

Responding to MOSL proposals to alter membership voting rights, Neil Pendle argues self-suppliers are an asset to the market and their voice must not be diluted.

Neil Pendle is managing director of Waterscan, which acts as market facilitator for most self-supply retailers.

Self-supply is a retail water market success story. From Greene King entering on day one in 2017, there are now a further 15 self-supply retailers who collectively outperform the wider market (see p34) and are delivering on water efficiency. There is no doubt that self-supply has changed the dynamic of the market for the better, but its expansion has also changed the make-up of the MOSL membership.

Andrew Johnson, head of legal at MOSL, presented to the June Self-Supply User Forum (SSUF) and expressed concern that the market's voting structure is no longer fair and proportionate, given self-suppliers – who each have a vote as MOSL members – collectively therefore have a lot of market influence. MOSL is proposing to amend its Articles of Association to address perceived voting imbalances. The current preferred proposal is that membership classes would be divided into wholesalers, retailers, self-suppliers and NAVs, and that each class of membership would have a fixed percentage of the vote. MOSL would also like to reduce the number of votes to reach quorum from 75% to 50%.

The unanimous response from participants was that the proposal as drafted is unacceptable and would diminish the role and contribution of the self-supply community.

By definition, self-supply retailers come from outside the industry and provide a valuable and different perspective from other trading parties: one focused on customer outcomes and collaboration. It is vital, therefore, that the community is effectively represented in the market. The current proposals would dilute self-supply voting rights to such an extent that they could be ignored, without offering an alternative that would adequately protect the self-supply voice. It is also vital that the community is able hold MOSL to account on delivery of its business plan objectives and ever-increasing market operator costs.

Self-suppliers are an asset to the market. They have already addressed the key challenges holding the market back, most notably on data insights and water efficiency, and they continue to challenge and press for a greater pace of change. MOSL should be considering ways to enhance their voice, not diminish it. TWR

OTHER KEY POINTS OF DISCUSSION FROM THE JUNE SSUF

Strategic Panel priorities

The community challenged the generic nature and associated lack of stretch in the Strategic Panel's three priority outcomes published for consultation: value creation, customer service excellence and water efficiency. Alongside seeking more explicit detail and more strategic direction on these three unobjectionable outcomes, two specific areas surfaced from the discussion as self-supplier priorities: resolving the data issues that have plagued the market since it opened; and driving greater focus on sustainability.

Within the data area, fast access to standardised smart meter data took centre stage. There was clear frustration that only Thames and Anglian among the wholesalers are rolling out smart meters comprehensively. One self-supplier commented: "We are overwhelmingly in support of prioritising data availability and access through enhanced metering…This is the one area we feel we have been let down by the market in pursuit of achieving our strategic aims. Not only is there a dearth of smart metering technology rollouts by the wholesalers, but the inordinate high AMR charges and inconsistencies in the market dissuade customers from pursuing their own initiatives to fit their own technologies." This was part of a wider narrative from the community on the urgent need for transparent, good quality data to be made available, and on getting the basics right.

On sustainability, self-suppliers sought resilience, water security and net zero to be prioritised. Forum members called for the following, among other things: green tariffs, better information from wholesalers on water stress, and water efficiency targets for the market.

Among other strategic outcomes desired by the community were:

- Incentive reform – the right incentives to drive the right behaviours on targeted performance improvement, and tougher penalties to dissuade perverse behaviours.
- Consistency – particularly of tariff and price structures, the current inconsistencies of which were called out as hampering efficiency.
- Innovation and a more streamlined process for change; the current arrangements were described by one participant as "pedantic".

The June Forum also discussed other strands of transformation-related work underway currently, notably Market Performance Framework (MPF) reform.

Net zero example

The community's interest in sustainability was also evident in its appetite for insight on the carbon impact of water treatment and supply. Current approaches are inconsistent, which can inhibit action.

The keynote speaker at the SSUF was the Environment Agency's Simon Dawes. He presented the EA's net zero route map, *Emission 2030 – It's time to play your part.* Dismissing "low carbon versions of what we've always done," the Agency has developed a 92-action plan, majoring on nature-led approaches, to cut emissions by 45%. This has been woven into the organisation's governance structures, including through the setting of carbon budgets across the organisation and aligning management incentives with carbon performance. Progress is reported quarterly.

Moreover, given 84% of the EA's carbon impact lay in its supply chain, suppliers have been made a fundamental part of the Agency's wider sustainability strategy and engagement.

Self-supply performance

Finally, the SSUF heard the community's market-leading performance continued in the quarter. Meter reading and auditing activity has returned to pre-pandemic levels. 3500-4000 meter reads and 150-200 audits are undertaken each month, resulting in 100% data accuracy and just 1.27% long-unread meters. Waterscan also reported the positive impact of the new bilaterals hub on issue resolution: it has achieved its target of resolving all bilateral queries within 30 days. Billing inaccuracies are now consistently <1% as a result.

METERING: WHO SHOULD DO WHAT?

PA has presented an everything-on-the-table report for MOSL, setting out 12 options for future roles and responsibilities for NHH metering.

Hot on the heels of the report MOSL commissioned on behalf of the Strategic Panel's Metering Committee on enhanced metering technology in the business market, MOSL last month published a second report under the banner of its ongoing Strategic Metering Review. This one, from PA Consulting, considered the options and merits of potential changes to current roles and responsibilities relating to non household (NHH) meters.

Setting the big picture scene at the launch webinar, MOSL CIO John Davies pointed out data is at the heart of improving the market, and metering at the heart of data. Highlighting PR24, the Retail Exit Code Review, incoming Environment Act targets and other sector challenges including on leakage and net zero, Davies said of the need for change: "Let's not kid ourselves this is fine tuning." On the metering roles and responsibilities piece specifically, he asked delegates to reflect on the fact that "we are where we are today, but where do we want to be?"

TABLE 1: 12 OPTIONS IDENTIFIED

#	Option	Summary
1	Wholesalers responsible for all market meter reads	Wholesalers obliged to submit reads on behalf of market for all meter read types within own Wholesale Area
2	Wholesaler Reads (Defined circumstances only)	Meter read responsibility switches to wholesaler in defined circumstances only, such as where there is evidence of long
3	Wholesaler Reads and data service (for smart meters only)	Meter read responsibility switches to wholesaler where smart metering is installed
4	Data Platform	New NHH market wide data platform to improve access to and standardisation of data for market participants
5	Integrated meter ownership and data service	New market structure with an independent meter asset provider and data platform as a service
6	Full NHH Smart Metering/Technology Rollout	Mandated and coordinated smart metering / smarter technologies roll out programme for all of the NHH market
7	Targeted Smart(er) Metering/Technology Rollout	Mandate on wholesalers to deploy smart / enhanced metering technologies at a defined sub set of premises only
8	Retailers own and are responsible for metering assets	Responsibility for metering assets transferred to incumbent retailer for all NHH SPIDs from a specified date
9	Asset data improvement programme	Centrally governed programme of initiatives to improve known metering issues
10	Wholesaler smart(er) replacement service offering	Retailers can request Wholesaler to install smart meter / enhanced technology and provide access to data.

Time for change

Where we are today is increasingly well understood. Current arrangements (in the simplest terms, wholesalers own the meters but retailers are responsible for reading them) were made five years ago ahead of market opening. Experience since has exposed problems: "a number of complexities and frictions in the market that have increased costs and risk, especially for retailers, and which have led to sub-optimal outcomes for customers," the report observes. There are high volumes of long unread meters and "concerns that accountabilities and incentives in the market are misaligned, resulting in trading parties being measured, and in some cases penalised, for meter asset and meter reading performance, parts of which are beyond their control". Moreover technology has moved on.

So it seems a no-brainer to look again at these roles and responsibilities, with a view to making changes to create value, optimise efficiency and maximise the potential for innovation. So far so good. The sticking point is: how? It's a complex issue, and trading parties come at it from very different positions, let alone other stakeholders.

Collaboration and compromise

Against that backdrop, PA scoped out 12 options, with the brief, at this stage, to take nothing off the table (see table 1). The options are not mutually exclusive but rather could be used in combination. Introducing them on the webinar, Claire Yeates, sponsor of the project on behalf of the Metering Committee and Waterscan's strategy director, preempted their presentation by appreciating stakeholders would have "really differing views". She urged that they look at the options from a market perspective, considering the impact for customers and the environment rather than narrow organisational concerns. She implored delegates to approach the exercise in hand – to consider whether any options had been missed out, or whether any that were included should be disregarded – with "collaboration, cooperation and perhaps a little bit of compromise".

It soon became apparent that views did differ considerably. It was all the more valuable given that, that PA had gone to lengths to consider options that really var-

TABLE 2: INITIAL PRIORITISATION

	Option grouping (Priority order)	Options	Description
Must be progressed further as market and data improvement is key driver for the SMR these options are most closely aligned to the immediate SMR priorities.	1 Potential 'must have'/'No regrets' options	**a. Option 9** Asset data improvement programme; and… **b. Option 4** Data platform	These are options that should be implemented and will provide a robust framework for developing metering in the market. They are also no regrets options.
	2 Performance improvement	**a. Option 1** Wholesaler responsible for all market reads; or… **b. Option 2** Wholesaler reads in defined circumstances only	The best of these options could be selected, to tackle meter reading costs and long unread meters. Also to incentivise wholesalers to implement smart metering for NHH customers.
If it is confirmed that accelerating smart metering in the NHH market is a critical driver for NHH market improvement then these options should also be high priority.	3 Smart metering options	**a. Option 6** Full NHH smart metering/ technology rollout; or **b. Option 7** Targeted smart(er) metering/ technology rollout; or… **c. Option 10** Wholesaler smart(er) replacement service offering; or… **d. Option 11** Retailer/customer installation of additional technology	The best of these options could be selected, depending on individual wholesaler circumstances and building on the Enhancing Metering Technology work.
This is a radical change and should only be considered if other options are not viable or successful	4 Fall back position	**a. Option 5** Integrated meter ownership and data service (as an option, only where wholesalers are not investing in technology)	A fall back position if there is insufficient traction bywholesalers on smart metering deployment and data improvement in the NHH market.
No clear case to progress at this stage, based on current evaluation	5 Not prioritised for further evaluation	**a. Option 3** Wholesaler reads and data service (for smart meters **b. Option 8** Retailer own and are responsible for assets **c. Option 12** Competition in metering Non Primary Services	Option 3 deprioritised as a specific option on basis that similar outcome would be delivered via a combination of wholesaler responsibility for reads (Options 1 or 2) and data platform (Option 8 and 12 currently viewed as unattractive due to delivery complexity and low likely benefits.

ied in nature and focus. The report offered the following as headline groupings – options that would:

- Increase participant responsibilities and incentives to focus on resolving known metering issues, such as long unread and hard to read meters (e.g. Options 2 and 9)
- Place increased NHH market meter reading responsibilities on wholesalers (e.g. Options 1, 2 and 3)
- Create a market-wide platform for sharing and accessing smart meter data to drive market performance and evolution (Option 4)
- Introduce new metering asset ownership models for the market (e.g. Options 5 and 8)
- Mandate and accelerate smarter technology roll-out in the NHH market (e.g. Options 6 and 7)
- Provide more control/optionality for retailers and customers over when and where smarter metering technologies are deployed (e.g. Options 10 and 11)
- Open more areas of metering activity to competition to increase the market's capacity to resolve metering issues (e.g. Option 12).

Benefits and challenges

Given the shortcomings of existing arrangements, it was little surprise that the study identified a range of potential benefits from reforming roles and responsibilities. These included expediting the resolution of established issues by charging those best placed to address them with the job; enabling greater economies of scale – for example by combining wholesalers' activities around smart meter deployment and meter reading and consolidating NHH and HH meter reading; accelerating the market's evolution towards smarter technologies and data sharing; and arming retailers with greater choice and ability to offer smart-enabled service offerings to customers.

On the flip side, it identified challenges of change. The market would need to be mindful of factors including any negative customer impacts; increasing complexity and the need for hand offs; market participants' ability to cope with change; and even the creation of new monopolies – should for instance a central data platform provider or single meter asset owner be founded. Clearly some options would be easier and swifter to progress than others; some would require legal and/or regulatory sponsorship.

Preliminary ranking

While keen to leave everything on the table for discussion at this stage, before a deeper analysis of priority options is undertaken in phase 2 of the work (July 2022 to March 2023), PA compiled a provisional ranking of the various options, to indicate which it considered most applicable for further investigation.

This analysis considered factors including likelihood of positive outcomes delivery, potential impacts of various parties, and the scale of effort and complexity involved in delivering each option. It stressed this was "a valuable first step towards the development of more detailed evaluation and business cases for reform to metering roles and responsibilities as part of the SMR".

The results are shown in table 2. Each stakeholder will no doubt have their own view on whether PA has made appropriate selections. They can feed back until 22 July. TWR

We are where we are today, but where do we want to be?

MULTI-TASKING

Multiple processes were successfully launched in the latest bilaterals release, improving the market for customers and simultaneously providing learnings for future change programmes.

The Bilaterals Transactions Programme has passed another major milestone: a successful multi-process release at the end of May, which trading parties and customers are now benefiting from.

Four processes went live in the bilaterals hub under phase 3 of the programme on 31 May, each with a retailer and wholesaler-initiated version: meter repair or replace, customer complaints, customer enquiries and trade effluent enquiries. The release also provided new functionality, including the ability for trading parties to decide whether to connect to the hub via the web portal or system-to-system integration for each process, enabling deferrals for non-business days and improving the quality of performance reports.

John Gilbert, MOSL's head of planning, calls the successful launch of phase 3 "a significant milestone for the programme". He reports: "A huge amount of testing, planning and learning went into this release by MOSL and trading parties" and it paid off – one week on from the switch-on, there had only been one defect, and that was resolved very quickly. Following extensive work to scrutinise potential blockers, test connectivity and demonstrate hub interfacing, all trading parties were ready on time, and provided assurance to that effect ahead of the day.

Being agile on agility

While a successful multi-process release is much to celebrate, it's worth noting that it wasn't the original plan.

After the triumph of launching the hub itself and the first and most frequently-raised bilateral process – meter verifications ('C1s') – in September 2021, MOSL and trading parties had agreed to take an agile approach to subsequent process releases: essentially, implementing each process as it became ready. Meter repair or replace and customer complaints were estimated to go live between January and March.

However, following discussions after the launch, trading parties fed back that the near-continuous cycle of development and testing was difficult to resource and that they would prefer more time to prepare. It was then agreed that processes would be grouped and released in tranches, with the first multi-process release deferred until May.

Gilbert acknowledges the difficulty for wholesalers and retailers to "constantly rebalance and prioritise". He notes too that as a regulated sector, the water industry is more accustomed to fixed delivery schedules. That said, he points to the agility of the programme to date as an aspect of its success. For instance, he offers the example that trading parties fed back that there would be little benefit in putting a particular high volume process in the hub, so MOSL was able to take it out of the programme. "If we'd had a 'waterfall' [traditional] programme, this wouldn't have been an option," he says.

Ultimately, a "good compromise" was found between the agility championed by MOSL and the waterfall approach that many companies are used to. Processes are being consolidated into groups to launch, which helps create "breathing space" for trading parties. Gilbert comments that this "ups the ante a bit for MOSL", but that the collaborative and collegiate approach it has adopted throughout the bilaterals programme meant it could adapt and respond to the market's wishes.

So in the event, since the launch in September, there was only one further launch in February, focused on providing additional functionality requested by trading parties (such as the ability to upload attachments and auto-close functionality) – ahead of the May phase 3 delivery.

Gilbert reflects that the programme is, to an extent, a "victim of its own success" in that trading parties are asking for more functionality as their confidence in the bilateral hub and its capability grows. "But it's a balance," he adds. "While it's great to be asked to add more functionality to the hub, it's important that we work within the programme's time and budget constraints and make sure we justify and get a consensus from trading parties for anything we want to do that goes beyond this. The programme has to work for everyone, from the smallest retailer to the largest wholesaler."

> **It's important that we work within the programme's time and budget constraints and make sure we justify and get a consensus from trading parties for anything we want to do that goes beyond this.**

Success so far

"The success is in the numbers" Gilbert says, offering the illustration that 24,000 C1 processes were raised in the 12 months before go live, with 19% of submissions to the central operating system (CMOS) failing (4,000 rejections), compared with 27,000 C1 requests in the eight months since September (12% higher) with only 1,500 rejections (a 62.5% reduction).

Furthermore, he says the choice to offer a twin approach to engaging with the hub – an automated, integrated High-Volume Interface (HVI) and a "log on, click and submit" Low Volume Interface (LVI) option via a web portal – was "the right choice". The LVI has proved unexpectedly popular, even with some of the larger players. "The ability to switch between using the HVI and LVI for processes is a real benefit for trading parties," Gilbert comments.

"THE SUCCESS IS IN THE NUMBERS"

12 MONTHS BEFORE GO LIVE:
24,000 C1 REQUESTS
4,000 REJECTIONS

8 MONTHS SINCE GO LIVE:
27,000 C1 REQUESTS
1,500 REJECTIONS

So all in all, "the mood music was very good" for the first two phases. Admittedly, costs were a significant 30% higher than planned, but this, Gilbert says, was outstripped by 100% higher than anticipated financial benefits – "so substantial saving" in the round.

Phase 3 has not let the side down. Multiple processes have been successfully launched, going some considerable way to tackling the wholesaler/retailer interaction friction that is, as Gilbert notes, "as old as the market". While delighted with the smooth delivery of phase 3 and the performance of the hub, Gilbert emphasises that everyone involved is cognisant that the ultimate objective is to fix a persistent problem that has been causing customers grief and money since day one, and shouldn't have been there in the first place. Agreeing a standardised approach to bilateral processes will go a large way towards tackling operational transaction inconsistencies.

Gilbert: "The language of processes and systems can seem quite removed from real life, but the launch of this next set of processes will make a big difference to the speed and reliability of things that really matter to customers, whether it's asking for a meter to be replaced or making a complaint – both of which we know are often significant pain points for customers."

Additional benefits

There are further benefits, too. Firstly, greater visibility for MOSL at the heart of the market. Gilbert explains: "Agreeing standardised processes and sharing information via a central hub also means that we, as the market operator, have unprecedented visibility of each process from end-to-end, enabling us to identify snags and benchmark companies' performances."

Secondly, forging a path to making introducing change in the market easier. Gilbert explains that "Code changes were identified as a major risk [regarding delivery of the programme] in the early days". The process was laborious and complex initially, but has now greatly improved. Rather than all the detail being worked through in previous Code Panel meetings, a subcommittee – the Code Advisory Group - looks at proposals in advance and assesses whether they are fit for purpose, so the "heavy lifting has been done" by the time it reaches the Panel (now Code Change Committee).

Finally, success on the complicated and persistent bilaterals problem has "enhanced belief in the market and MOSL," contributing to its pledge to deliver on its promises and make the market easier to do business in. "If you don't deliver on promises, you can't expect trust to grow," Gilbert reflects.

Lessons and next steps

That's important, he says, because MOSL's to-do list remains long. It includes, but is not limited to, the Market Performance Framework (MPF) Reform, the Strategic Review of Metering, and the Data Improvement programme.

He believes much can be learned for these work areas from the bilaterals experience – for instance, from the consultative approach that has been taken to the broader governance arrangements (these are now being followed for the MPF).

As far as the bilaterals programme itself is concerned, Gilbert emphasises the team won't rest on its laurels. There are three more phases to deliver by the programme close date of November and work to do beyond this point to tie up any loose ends. Ofwat has already approved the Code change needed for phase 4 to be implemented on 2 August. This concerns processes B1 (meter installation), B3 (meter testing) and B7 (meter change) and an amendment to B5 (meter repair or replace).

While the market has come a long way since September, Gilbert says the risks remain the same:

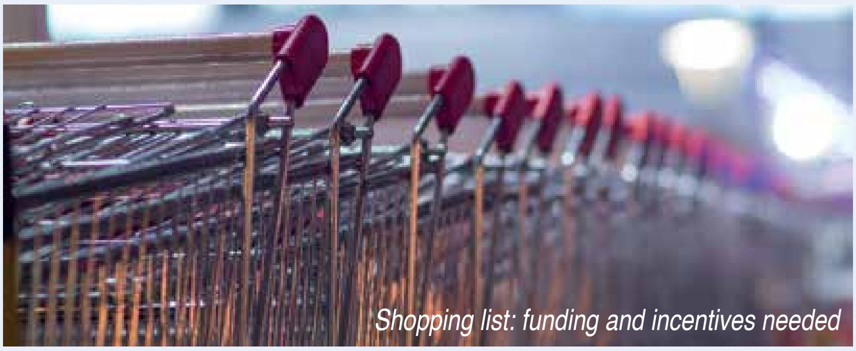
- Trading party engagement and readiness – for the next and subsequent phases. Plus, there is a newly emerging risk that the programme slips down the radar for trading parties as they grow accustomed to releases and have to grapple with other changes, including MPF Reform and balancing input to regulatory reviews such as PR24.
- Developing complex processes in a finite time – with a new concern that the existing high quality hub product is not compromised.
- Efficient delivery against budget – Gilbert is most conscious that it is "trading parties' money" MOSL is investing and is mindful in particular of getting the right balance between delivering the 'minimum viable product' promised and providing the additional functionality that trading parties request.

He explains that by September, a "shopping list of additional functionality and the associated cost" will be prepared to put forward in a consultation for members. That way, he says, trading parties can decide whether to fund the improvements – or not.

Finally, Gilbert reports that he has already started working on plans to close down the programme after November, and for the hub's transition to a 'business-as-usual service', which should be complete by March 2023. TWR

Everyone involved is cognisant that the ultimate objective is to fix a persistent problem that has been causing customers grief and money since day one, and shouldn't have been there in the first place.

BILL LEVY NEEDED TO DRIVE WATER EFFICIENCY



Shopping list: funding and incentives needed

RWG backs a water efficiency levy for business customers, after research reveals at least £22m/year of funding is needed to drive water use down.

The Retailer Wholesaler Group's Water Efficiency Subgroup (WEG) has issued its recommendations for changes to the regulatory framework to bolster water efficiency in the business market, following the findings of a research report commissioned from Economic Insight.

The group largely endorsed Economic Insight's conclusion (see box) that a water efficiency levy (which would be applied to customer bills in the same way as environmental levies in the energy sector) is the most attractive option, "in that it would act not only to directly raise the funding [estimated at £22m-£35m a year] but have the secondary impact of directly raising customer awareness by virtue of its application on bills, something not achieved by more traditional methods".

The group said this resource could be accessible to wholesalers, retailers, customers and third party intermediaries. It noted that a more detailed mechanism for the imposition, control and distribution of this funding will be required.

"There is currently insufficient value in the market to enable delivery. To overcome this lack of demand and value in the market, market participants require funding and incentives amounting to at least £22m per annum.

ECONOMIC INSIGHT ANALYSIS

Wholesalers should be funded and incentivised to deliver water efficiency savings in the business market in the short term. That's according to a report by Economic Insight, commissioned by the Retailer Wholesaler Groups's Water Efficiency Subgroup, funded via MOSL's Market Improvement Fund.

Economic Insight found customers' willingness to pay for water efficiency is below the efficient cost to supply these services. "Therefore, there is currently insufficient value in the market to enable delivery. To overcome this lack of demand and value in the market, and deliver water efficiency savings in line with Defra's proposed national water consumption reduction target (9% reduction by 2037), market participants require funding and incentives amounting to at least £22m per annum."

The research considered a number of potential funding and delivery options, as summarised in the table. It recommended a wholesaler-led strategy, funded through a transparent water efficiency levy, applied through an increase in water wholesale costs for all non-household customers. The levy should be ring fenced for this purpose, and wholesalers incentivised to deliver via the price control – such as a price control deliverable or a reward and penalty outcome delivery incentive.

POTENTIAL FUNDING AND DELIVERY OPTIONS

POTENTIAL FUNDING OPTIONS	POTENTIAL DELIVERY OPTIONS
Levy via the wholesale price control	ODI (this could be reputational / penalty only / reward only / reward & penalty)
Levy via the retail exit code (REC)	Price control deliverable (PCD)
Increase in default tariffs via the REC	Performance standard via the MPF (again, this could be reputational / penalty only / reward only / reward & penalty)
MPF	Use it or lose it allowance
Tax credits / allowances	

Wholesaler retailer balance

It further noted: "It must be recognised that any increase to price whether that be through levy or otherwise will increase the burden on the customer and in turn the risk of default. We must ensure that any increase in costs is comprehensively analysed to provide true value to both the NHH market and ultimately the customer on an enduring basis."

While Economic Insight advocated a wholesaler-led strategy with the door left open for a more retailer-led approach in the long term, the WEG said: "The challenge we face will be to find a balance that gives retailers access to the water efficiency funding and opportunities to support their customers to foster growth in this area, and reward those already delivering, but does not prevent wholesalers meeting their water efficiency performance commitments. We are again aligned that retailers must work with wholesalers in the delivery of water efficiency, but must not be allowed to act as a barrier to the delivery of the underlying requirements."

It added: "Decisions made during PR24 in relation to smart metering will be critical to the ability of wholesalers/retailers to deliver against water efficiency targets." TWR

MOSL calls for detail on 9% NHH demand cut target

MOSL has called for clarity from Defra on how the Government's Environment Act water demand reduction target was reached and is intended to be realised. In its response to the Defra consultation on the target, the market operator welcomed the statutory nature of the target but highlighted among the following points:

- "Defra need to provide clear details on the mechanisms to be used and/or commit to making changes to the non household (NHH) market's structural barriers preventing water efficiency from being realised."
- "The proposed NHH target is less ambitious than the equivalent household target and therefore creates a risk that there is not an equal focus for water companies to reduce demand across the system."
- "Managing demand for NHH is not as simple as putting in place set targets across all NHH customers, as these customers are incredibly diverse - with 1% of business customers using around 50% of this water (approximately 1.5 billion litres per day). Asking or expecting industrial users to reduce overall water usage would mean asking them to reduce production, resulting in reduced revenue – a prospect that is not aligned to business or government wider economic growth agendas."

Sagacity to define case for central data cleanse and services

MOSL has engaged data solutions specialist Sagacity to define a central data cleanse and enrichment service for the NHH market, as part of its work to tackle the long standing market friction, poor data quality.

Project Tide (Transformation in Data Enrichment) will explore the potential use cases for the service and define the solution and case for change that will be shared with the market for consultation in Q3 2022/23, as outlined in MOSL's 2022-25 business plan.

MOSL said work is underway to assess the quality of supply point (SPID) data currently available in CMOS. It plans to engage with the market throughout the project and will be consulting with members of the Technology Advisory Group (TAG) and the Digital and Data Committee as work processes.

MOSL and Sagacity will work with a small number of trading parties to validate the initial findings. The consultation, as part of the use case, is due to be published in Q2 2022/23.

- MOSL has also published a Data and Analytics Roadmap, setting out the sequence of activities that will be undertaken to deliver the four themes outlined in the market wide strategy. The market operator said more detailed planning will continue to be driven by its business plan. The first phase of the roadmap is expected to take 12 months to deliver and is largely incorporated into year one of current business plan.

Business Stream slashes carbon emissions by 25% in a year

Business Stream has reported slashing its carbon emissions by a quarter in a year, and has announced plans to go further in the year ahead.

The retailer said it had achieved a 25.3% carbon cut on a 2018-19 baseline through a range of measures including reducing the number of pages in its bills, installing more energy efficient air conditioning units, moving its servers to the cloud, and supporting colleagues to reduce their carbon footprint.

Business Stream has now made a second pledge, to reduce carbon emissions by a further 20% by April 2023.

The organisation's carbon reduction objectives are aligned with the Scottish Public Sector target to be net-zero by 2045. However, the group, led by its parent company Scottish Water, has set a more ambitious target of achieving net zero by 2040.

Encompass looks for licence to facilitate big business self-supply

Encompass Water has applied for a water supply and sewerage licence to provide retail services in the business market – including support services to self-supply customers.

Encompass Water is part of the UPA Energy Group, a utility company trading in the energy and water markets for over 25 years. It already provides a billing validation service for existing customers and considers there is a large degree of overlap with the functions of a water retailer.

According to the Ofwat consultation on the licence application, the company intends to offer a self-supply option to large customers, whereby customers use the existing Encompass software platform to interface with MOSL systems. In addition, retail services will be offered to smaller water users.

Castle calls for improvements for customers with sub meters

Castle Water's chief executive John Reynolds has called on Ofwat, MOSL, CCW and the Strategic Panel to reform market arrangements for business customers with sub meters.

In a letter, Reynolds flagged up the problems facing customers who have sub meters or private meter networks. The list included:

- Arrangements for submitting sub-meter readings to CMOS (by wholesalers).
- The absence of a process for customers or retailers to provide these reads to wholesalers.
- The resulting lack of sub meter readings in CMOS and a "complex and illogical" provision where reads are absent, which is to use Industry Level Estimates rather than the more common Yearly Volume Estimates. This results in very high estimated usage for sub meters.
- "Since the non-household customer receives a bill based on their own meter usage minus sub-meter usage, the ILE results in an unusually high and incorrect deduction, and systemically under-estimated overall charges."
- Knock on effects for billing, and the risk of catch up bills for customers running to thousands of pounds.

Reynolds noted: "Castle Water works proactively with wholesalers including Thames Water, South East Water and Affinity Water to resolve individual issues, but this is intensive and not an acceptable alternative to a proper settlement mechanism."

WICS to suspend licence applications

The Water Industry Commission for Scotland has proposed suspending the acceptance of new applications for any NHH retail licence, including applications already in.

This is to allow time for the new Market Health Check system to be put in place. The MHC process is intended to allow licensed providers to demonstrate that they operate within the letter and spirit of the licence. It is due to be in place within six months

INDUSTRY COMMENT

CAN'T PAY, WON'T PAY, GONE BUST, NOT HERE…

Simon Bennett considers how retailers might best manage tough times ahead collecting payment from customers.

The current national energy crisis has been described as an "existential threat" to small and medium-sized enterprises (SMEs) by the Federation of Small Businesses with roughly two-thirds spending 20% of their business costs on energy. This has knock on effects for payment performance across both the business energy and business water retail markets – quite simply, it's getting harder for SMEs to pay their bills.

Perfect storm

There is a risk that a perfect storm lies ahead for business water retailers regarding obtaining payment from customers as various drivers are impacting the sector:

- *Crowding out – Energy bills are at an all-time high. Not only is this a drain on the cash reserves of any SME business, but it will also drive increased water bills over the medium term, as water wholesalers look to recover lost margin to the extent that this is allowable through price. There is not enough gross margin headroom in the retail market for this to be absorbed by water retailers, so this will ultimately make its way to customers.*
- *Reduced vacant premise volumes – Vacant premises have always provided a natural counterbalance to bad debt. The Retailer Wholesaler Group (RWG) and MOSL have been driving innovation in the market by pushing for Vacant Incentive Schemes and publishing trading party performance statistics. This has led to the emergence of data driven vacancy solutions, which are bringing customers into charge who have either forgotten to engage with (or deliberately avoided) their water retailer. These customers will have a lower propensity to pay on average than customers who engage, and in some cases will have been committing soft fraud to avoid paying their water bill.*
- *Vacant charging – Some water wholesalers already charge for consumption on vacant properties, effectively creating a gross margin deficit for retailers who do not have customers to pass charges onto. As the industry looks to maximise gross margin, this will likely flow through into unknown occupier billing and bad debt.*
- *Inflation – SMEs are having to battle the highest inflation rate in 25 years and have just been hit by the hike in employers' national insurance contributions, which increased by 1.25 percentage points in April.*

Three tier customer management

Water retailers will likely be increasing the bad debt provision for the next couple of years and will be looking for support and innovative products to help battle against these pressures. A three-tier approach to customers is fruitful:

- *Registered companies are easy to keep track of via Companies House and, when integrated into customer relations management (CRM), debt management or data services software, Companies House can provide real time alerts when businesses are in trouble. This may not do much to recover outstanding arrears, but crucially it allows water retailers to avoid the build up of additional debt. Research shows that acting swiftly when a registered company changes status from "Active" to "Active proposal to strike off" can reduce the ultimate value of a write off for a water retailer by 50%.*

Registered companies are also simple matches for credit reference agencies, who can provide a variety of information on directors, including flags to highlight directors who are linked to phoenix companies. These customers can then be monitored from first bill and follow an escalated collections cycle.

- *Sole traders – Any non-registered SME is effectively an individual or partnership with a trading name. Getting a non-ltd legal entity wrong is often a key barrier to effective collections. The individual sole trader or partnership are the legal entity and should be captured in full and credit assessed during onboarding, in case collections enforcement is required.*
- *Site address – The number one reason for non-payment reported by debt collection agencies and field agents is that the customer is no longer trading from the supply premises. Customers can move in, move out, re-name themselves and change entity, all without notifying their water retailer. This leads to time periods where consumption has occurred, but where the occupier was incorrect or not known, creating bad debt exposure.*

Implementing a site address check for all customers as part of onboarding and collections can help to minimise the amount of time where bills are not going to the correct customer, which in turn reduces bad debt risk. Where data cannot confirm the customer's details, classic documentation requests can help provide the required confirmation (e.g. business rates documentation).

Data and innovation

Utility companies have always used data to identify changes to their customer bases but making use of the data can sometimes be tricky or limited by resource constraints.

Imagine a restaurant in debt, who isn't responding to collections reminders. Google could be used to inform you of changes to their trading hours, telling you that they are now open in the daytime as well as the evening. Also imagine that, instead of someone having to sit and enter the property details into Google to find this out, the information automatically hitting your CRM system as Google is updated, prompting an outbound collections call in working hours.

The integration of reference data into CRM systems and workflows can be a hugely powerful tool, and the number of APIs available these days open some exciting possibilities.

As the next couple of years unfold, water retailers who proactively monitor their customers and act swiftly to respond to changing customer circumstances, will be best placed to minimise their bad debt charge, and may be best placed to provide customer support to try and help those in the most financial stress. TWR

Quite simply, it's getting harder for SMEs to pay their bills.

By Simon Bennett, a water industry consultant who has been supporting MOSL's Strategic Metering Review.

Second round of Market Improvement Funding awarded

Eight bids received a total of £740,000 of funding in the second round of awards from the Market Improvement Fund. There were 13 bids in all, seeking a total of £1.4m.

The successful projects were:

RWG Wholesale Tariff Simplification Development

Applicant: Business Stream on behalf of the RWG
Sponsor: Thames Water
Following an industry-wide consultation to seek feedback on ideas to simplify wholesale tariffs, the RWG Tariff Simplification Sub-Group will be working with a consultant to explore and refine a number of options, where more technical expertise is required. These include simplifying and aligning volumetric tariff bands across wholesale regions; simplifying and aligning the bands for fixed meter charges; and aligning water and waste tariff bands.

Automated Water Efficiency Audits

Applicant and Sponsor: Wave Utilities
This project will use Internet of Things (IoT) technology (water event metering) across a pilot of 250 customers, creating a low-cost way of decreasing average consumption in small commercial premises. It does this by providing the customer with consumption insight per outlet and creating business cases for them by using point of consumption data in real-time.

The primary output of the project is a blueprint for understanding how smaller customers could engage in water efficiency measures and will enable MOSL members to use the best practice learnings to create new commercial propositions.

REDUCED – Raising Efforts to Drive User Consumption Efficaciously Down

Applicant: Isle Utilities
Sponsor: Wave Utilities
The REDUCED project will create a searchable online portal, giving retailers access to emerging technologies that will address customer pain-points, and verified technology developers access to retailers for trial opportunities. The portal will serve as a collaborative tool, enabling users to develop new skills and behaviours, further driving competition and the water efficiency profile of the NHH market.

Meter Condition Assessment

Applicant and Sponsor: Wave Utilities
Delivery Partner: Occutrace
This project will investigate 2,000 varied supply points with zero-consuming meters (suspected to be broken) across all wholesalers to establish their state and provide a source of evidential data that outlines the extent to which manually read meters are contributing to the lack of accurate consumption data in the market.

Project 'Discovery' – NHH customer segmentation and consumption benchmarking

Applicant and sponsor: Anglian Water Services
Delivery partner: Artesia Consulting
Project 'Discovery' aims to better understand the potential contribution of the non-household water market to the wider demand challenges facing the industry and inform water resource management planning. It will look at testing the value of customer segmentation and consumption benchmarking in delivering demand reduction, which will result in the development of a national consumption benchmarking model that can be applied across the industry.

NAPS Data Quality Cleanse

Applicant: IDenteq
Sponsor: MOSL
IDenteq will target New and Partial supply points (NAPS), in an exercise to drive significant improvement to the quality of market data. The project will analyse NAPS to confirm which properties are genuine business connections, which are domestic and should be de-registered, and which connections have completed and should now be tradable in the market. Reports will be freely available to trading parties to help them cleanse any errors, improve overall data quality and create a template for trading parties to manage their own enduring processes to enable the data quality improvements to be maintained.

Consumption Awareness and Benchmarking.

Applicant: Yorkshire Water
Sponsor: MOSL
Delivery Partner: Leeds Institute for Data Analytics
This project aims to address the ongoing issue of how to make the best use of trading parties' differing sets of granular consumption data for non-household customers by finding a way to actively share this data with the market operator. It will utilise granular trading party consumption data already collected via smart metering and data logging activity to create methodologies to assist the market and explore ways to accurately forecast NHH demand.

Business voids research to inform optimum market outcomes

Applicants and Sponsors: Yorkshire Water and Business Stream
Delivery Partner: Economic Insight
Yorkshire Water and Business Stream will lead a comprehensive review of reform options to lessen the number of premises that are incorrectly considered to be "void" properties. This project will seek to provide trading parties, MOSL and Ofwat with insight which will support decision making (including PR24 plans), ultimately leading to optimal delivery of customer outcomes including fair bills.

MOSL publishes 2021/22 annual report

MOSL reported in its *Annual Report and Financial Statements* total operating and capital expenditure in 2021/22 was £11,056k - £359k (3.1%) lower than the budget set out in the 2021-24 Business Plan. £424k of Market Operator (MO) Charges will be redistributed back to members, driven by spending less than budget and from the income collected for additional services.

Four of MOSL's nine specified improvement programmes were fully delivered by the end of March 2022. A further four were above 90% completion and the final one over 80% complete. MOSL explained that in part that was due to resources being reprioritised to the Bilateral Transactions Programme. Trading parties will be asked to formally adopt the annual report at a general meeting on 20 July 2022.

Pearls of wisdom: Water Plus is running a trial involving the creation of 20 oyster nurseries to investigate nature-based approaches to habitat restoration, water filtration and carbon capture, as well as raising awareness among local school children of water and environmental issues.