South West Water

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3 November 2022

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Dear colleagues

RE: CONSULTATION ON CHARGING INNOVATION TO SUPPORT AFFORDABILITY AND STATUTORY CONSULTATION ON A CHANGE TO CHARGING SCHEME RULES

Thank you for the opportunity to respond to the consultation on charging innovation to support affordability. This is a joint response from South West Water and Bristol Water, reflecting the forthcoming licence transfer.

We are cognisant that through PR24 and beyond most companies will be required to put forward major enhancement programmes to meet new statutory obligations, and the impact this could have on affordability at a time when there is a national affordability crisis stemming from increasing energy bills and high inflation.

The potential national social tariff is required to support customers against this backdrop, but further proposals will be needed to ensure affordable bills for all. A national, standard, level of protection will be needed to enable charging innovation. Even with this existing social tariffs will need to be retained, at least for a transitional period, alongside the national social tariff so as not to create new affordability challenges and to allow time for scale up of alternative charging arrangements to support affordability. Both Bristol Water and South West Water have the ability to target individual customers who are in water poverty to ensure widespread coverage of social tariffs, and we do not wish to see any reduction in our ability to meet customers' individual needs, whilst reducing the existing "postcode lottery" to social tariffs that hampers more wider and more progressive tariffs as an alternative.

Having experienced a nation-wide drought this year and which may continue into next year, we believe that it is vital that the regulatory framework evolves to support progressive charging, breaking the link between cost and pricing of water and creating the link between value and

pricing, while ensuring appropriate support for those least able to afford their bills. Tariff trials into alternative charging arrangements may play some part in this, but our experience from the South West Water 2011 research and an extensive Rising Block Tariff Trial suggested it neither reduced consumption, nor improved affordability or was perceived as fairer. We have recently undertaken some additional customer research into what customers believe may be more progressive charging, which we summarise as part of the detail of our response.

As we suggested -in our PR24 draft methodology response, progressive charging may need to go beyond the current framework of cost incentives towards a value framework that more explicitly reflects the ability to pay. What we think may be more progressive are tariffs where there is some degree of consumer choice involved. For some customer segments, the equivalent of green tariffs where a more progressive charging structure is applied in return for water efficiency devices, or for garden watering where a smart water butt allows time of use charging with a discount for local storage of surface water run offs into dry periods may be attractive. For others who require greater social protection in their charges, the social provision of such services that others are able to pay for, whilst protecting affordability through tariffs, will be required.

Without this type of thinking, water bills will remain regressive and will not provide pricing signals to drive the change in water and wastewater use to minimise long-term costs to the water industry. There is a value in reflecting the uncertainty of future investment needs here, rather than the strict cost structures that we can observe from the past or speculate for the future in Long Run Incremental Costs. We are very supportive of changes to tariffs to ensure bills are progressive, support vulnerable customers, and drive the right behaviours to the benefit of all. This needs to recognise what discrimination between customers is due and where this needs reshaping and requires innovation and experimentation. As we set out in our PR24 response, this may require greater use of competitive markets to make this happen at scale and to reshape regulation so it is welcomed and is perceived as fair for consumers.

Our recent customer research shows that for the South West in particular, it is important for both fairness and affordability that increased demand driven by new housing and in particular second home / AirBnB style tourist accommodation pays for the on-going maintenance of additional capacity. Compulsory and smart metering has a role to play, but there is a strong desire to amend charge structures for particular communities to help support the social tariffs (and to allocate water/wastewater costs fairly) that arise. For these communities, progressive charging requires alternatives to RV charges and goes beyond household rising blocks, to something targeted at property types. Time of use and premium charges may be part of this – but it may vary by community. Trials to explore this however will need to be at scale in order to understand the impact. Past trials (such as into Rising Block Tariffs) were hampered by a requirement at the time that consumers could not disbenefit from their participation, or that it had to be voluntary, which severely limited the amount that could be learned. And there seems little point in Ofwat expecting tariff trials without the tools from Government such as universal compulsory metering to support it.

The regulatory framework currently appears to limit the ability of companies to smooth out revenue changes, unless it is at the expense of the company through complex RFI incentive calculations, even where they voluntarily wish to do so. Such flexibility existed up to PR19, and will be required up to and after PR24. We think a more progressive and flexible approach to revenue controls and charging is also required. We are currently exploring the potential for this separately with Ofwat in response to the cost of living crisis.

In the immediate future we welcome the clarification proposed by Ofwat in the Charging Scheme Rules. We do not believe there was any definitive existing barrier from the charging scheme rules

as such, because a tariff trial could historically be justified as due discrimination under the licence. We have some concerns that including the general principles in the Charges Scheme rules, without any statement that there can be trade offs between the principles, may have the opposite effect to that intended. Fairness and affordability in particular are judgements that without scenarios or concrete examples will require judgement, one that companies should expose within its charging considerations and part of assurance statements. We suggest Ofwat makes an explicit statement to recognise there are trade offs between the principles.

Alternatively, Ofwat could change the wording to say that the rules "should consider" rather than "should reflect" the principles. This change better reflects the intention that companies consider these factors, rather than unrealistically assuming that companies can always reflect fairness and affordability, or environmental protection etc at all times. Charging rules on their own may not be sufficient to build the consensus and trust necessary to allow for innovation in tariffs. Ofwat could go further and promote a fast track, public value focused "RAPID for tariff trials" concept that would underpin tariff innovation and experimentation in the water sector.

One other factor to consider is whether C-MeX, D-MeX and B-Mex may act as barriers to change. With respect to changes in tariffs customers tend to be loss-averse and tariff trials, if they are to be meaningful, cannot learn without understanding positive and negative customer reactions. We would suggest that customers on tariff trials or tariff trial issues should be excluded from customer satisfaction surveys, with alternative protections applied, if we truly want to enable change.

Our responses to the specific consultation questions are provided in the pages in Appendix 1. Our response includes our latest customer research on progressive charging and data analysis on how progressive existing tariff arrangements are.

We hope you find our comments helpful. Please contact me if you would like a further discussion; I would welcome the opportunity to explore our responses and analysis in more detail.

Yours faithfully

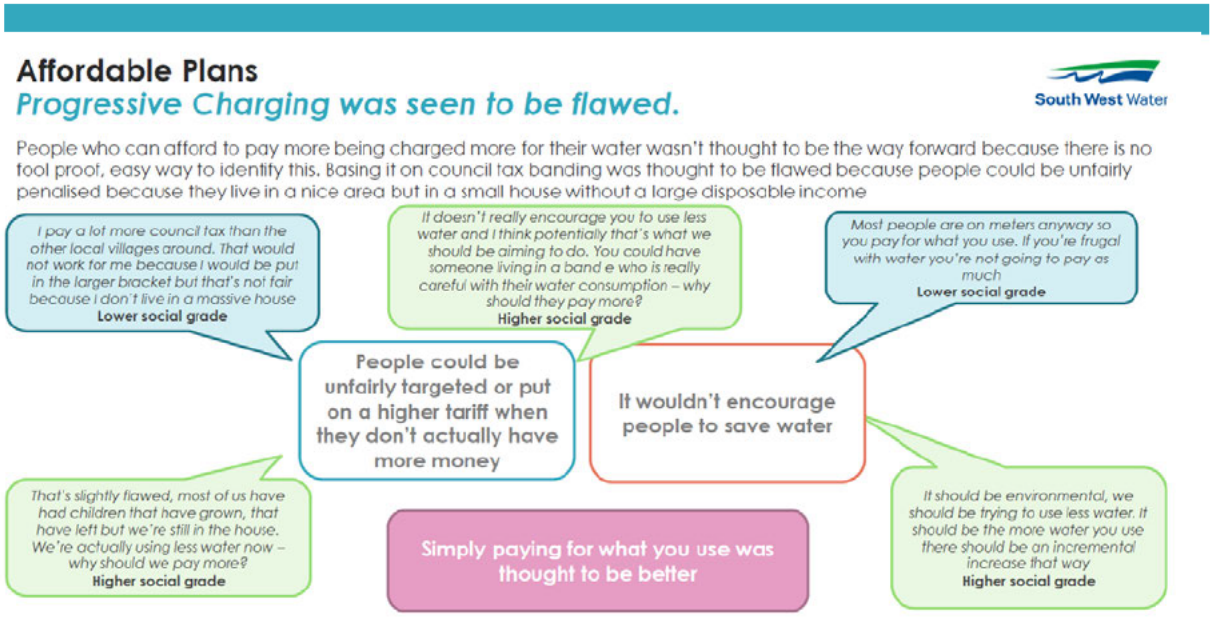
Iain McGuffog
Director of Strategy & Regulation
D: [redacted]
E: [redacted]

APPENDIX – RESPONSE TO CONSULTATION QUESTIONS

Q1 Do you agree that companies should be looking at how they can introduce charging innovation to support affordability, as well as supporting environmental goals?

We agree that charging innovation is needed to help drive societal change to meet environmental goals, and also ensure that those who struggle to pay their bills are provided with appropriate support. However, we do not believe that this is distinct from social tariffs, whether they be company tariffs or national social tariffs, as these two aims may not be aligned in all cases.

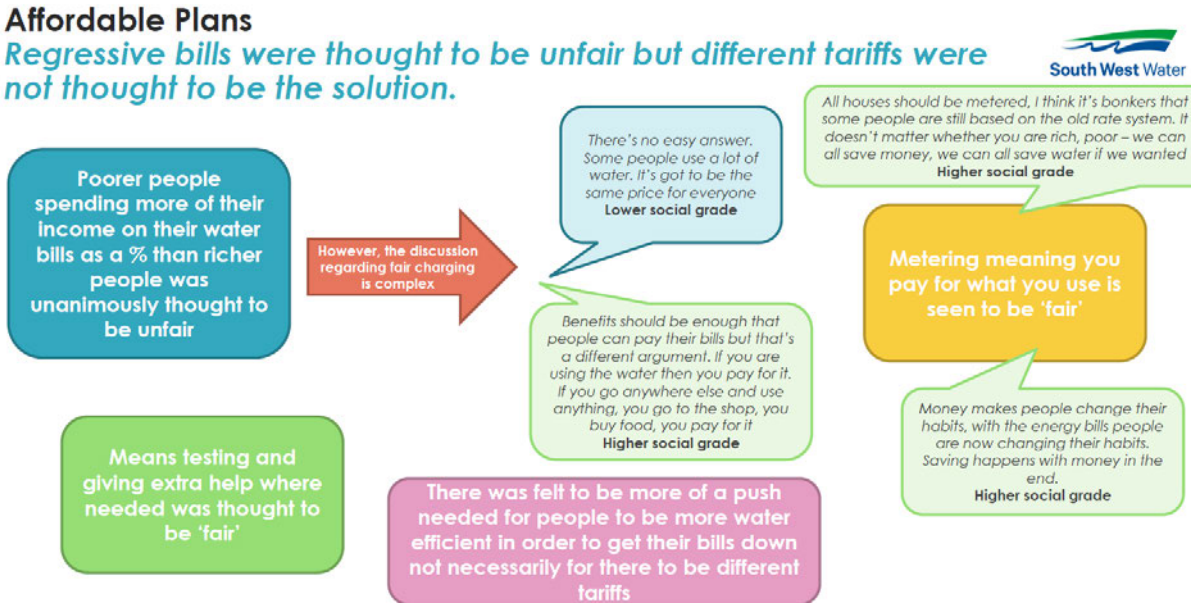
Our most recent customer research has specifically focused on progressive charging and suggests that customers are cautious about changes to charging structures, with most believing that simply paying for what you use is the fairest approach for household customers. However, there was seen to be benefit in seasonal tariffs for the tourist industry provided this could be balanced with ensuring no negative impact on the regional economy for which tourism is a significant benefit. In reality, we need to take a different approach to progressive charging for the future.



The starting position for most customers is that more progressive charging was not thought to be a good idea if it was based on Rising Block Tariffs, or on flawed assumptions such as Council Tax Bands – this would not necessarily equate to people being able to pay more. Everyone paying the same was thought to be fairer with means testing to give extra support to customers who might need it. More encouragement to save water which in turn would save money was also thought to be needed.

Customers are open to the idea of seasonal tariffs and potentially targeting tourists who the capacity is provided for ("tourist tax"), but don't feel that customers who live full time in the region should be subjected to a seasonal tariff – customer currently expect to pay the same rate all year round. Equally any seasonal uplift would just need to be at a level that wasn't detrimental or harmful to the tourist industry.

For the South West in particular, it is important for both fairness and affordability that increased demand driven by new housing and in particular second home / AirBnB style tourist accommodation pays for the on-going maintenance of additional capacity. But there is a difficult balance to targeting individual people against the current unacceptability to customers from progressive charging or seasonal tariffs as a whole. Compulsory and smart metering has a role to play, but there is a strong desire to amend charge structures for communities to help support the social tariffs (and to allocate water/wastewater costs fairly) that arise. For these communities progressive charging requires alternative to RV charges and goes beyond household rising blocks, to something targeted at property types. Time of use and premium charges may be part of this – but it may vary by community. Trials to explore this however will need to be at scale in order to understand the impact. Past trials (such as into Rising Block Tariffs) were hampered by a requirement to get CCW's support at the time that consumers could not disbenefit from their participation, or that it had to be voluntary, which severely limited the amount that could be learned.



As we suggested in our PR24 draft methodology response, progressive charging may need to go beyond the current framework of cost incentives towards a value framework that more explicitly reflects the ability to pay. What we think may be more progressive, given consumer reluctance to accept changing tariffs to encourage environmental / water saving behaviour because of the difficulties in developing a fair design, are tariffs where there is some degree of consumer choice involved. For some customer segments, the equivalent of green tariffs where a more progressive charging structure is applied in return for water efficiency devices, or for garden watering where a smart water butt allows time of use charging with a discount for local storage of surface water run offs into dry periods may be attractive. For others who require greater social protection in their charges, the social provision of such services that others are able to pay for, whilst protecting affordability through tariffs, will be required.

Without this type of thinking, water bills will remain regressive and will not provide pricing signals to drive the change in water and wastewater use to minimise long-term costs to the water industry. There is a value in reflecting the uncertainty of future investment needs here, rather than the strict cost structures that we can observe from the past or speculate for the future in Long Run Incremental Costs. We are very supportive of changes to tariffs to ensure bills are progressive, support vulnerable customers, and drive the right behaviours to the benefit of all. This needs to

recognise what discrimination between customers is due needs reshaping and requires innovation and experimentation. As we set out in our PR24 response, this may require greater use of competitive markets to make this happen at scale and to reshape regulation so it is welcomed and is perceived as fair for consumers.

In order to conduct some charging trials, including those suggested in the consultation, a number of enablers will need to be in place, such as smart metering and improved data around patterns of consumption for individual households. There may be limited benefit in Ofwat expecting tariff trials without the tools from Government such as enabling universal compulsory smart metering to support it.

In this context, we have sought support for our Accelerated Delivery Plans which will enable us to start our planned smart meter programme immediately with 15,000 smart meters installed by summer 2023 in Cornwall and Bristol. This rollout could support high quality trials in two distinct areas allowing us to understand the impacts in urban and rural areas, and across a diverse customer base.

Past trials suggested that generally higher tariffs summer over winter would worsen affordability for large families, because it has been difficult to distinguish between discretionary and constant high water use. Smart metering provides more potential to discriminate between these situations, but the challenge of knowing household size and cost to bill, customer trust and acceptability to this information remains.

It should also be noted that opportunities from smart meters are not universal across industries. The energy sector benefits from universal metering, where smart meters benefit from mains electric supply and generally good access in terms of signal. By contrast, water meters are often installed below ground in chambers which presents power and signal challenges. For example, in the water industry increasing read frequency has significant impacts on battery life and associated costs. Our Accelerated Delivery Plans for Smarter Healthier Homes will help us to better understand these issues and how best smart meters can support charging innovation.

During the current cost of living crisis, with rising housing costs, we believe our social tariffs are adaptable to support increased numbers of eligible customers. For example, eligibility for the SWW WaterCare tariff is based on bill to income ratio, which is based on equivalised household income after housing costs, therefore increased costs of mortgage and rent payments will be captured within the methodology. We currently have five bandings of bill reduction which could also be flexed to adapt to the increased numbers of customers who may need support. Similarly, Bristol Water’s Assist Tariff is based on the customer’s ability to pay, and as part of this tariff, customers supported will receive holistic independent debt advice from organisations such as Step Change, Citizens Advice (CAB), Financial Wellness Group or Money Advice Service. There are six bandings within Assist and customers will be able to see up to 90% bill reduction.

At PR19, South West Water saw a good level of willingness to pay for our social tariff cross-subsidy, and while there is currently sufficient headroom, it is not inconceivable that the cost of living crisis may mean we reach that cross-subsidy level earlier than expected, we would envisage that should implementing progressive charging trials to create a link between the value of water and amount charged this could allow for redistribution to support the social tariff cross-subsidy. In contrast, the Bristol cross-subsidy is currently sufficient and the reach of social tariffs is effective, albeit with water poverty at 0.6% this is above the 0% stretching target that we set ourselves.

The separate question of the national social tariff introduction creates additional uncertainty, as there will be different impacts for South West and Bristol as a result of its implementation. For example, South West's customers will see a decrease in average bills whereas Bristol Water's customers will see an increase as both companies are respectively net recipients and net contributors to the SST scheme. Once the approach is agreed then the charging support package can be revisited.

We are pleased to note that this consultation also envisages charging trials for non-household customers as there may be more opportunity for some NHH customer types to respond to price signals to drive consumption behaviours and patterns as we see in energy markets. We do note however that there is little time between this consultation and the publishing of wholesale charges, and this may limit scope for innovation for 2023/24 charges. Whilst we are keen to develop tariff trials, as we set out above, we think broader thinking over a longer-time period is required.

Q2 Do you have any comments on our regulatory framework for protecting customers, in the context of charging innovations?

We note Ofwat's support for reputational incentives within the regulatory framework and how this has supported improvements in support for customers. We agree that reputational incentives are important to drive forward innovation and note also that the common performance commitment on companies' priority services register was in essence the PC proposed by SWW at PR19 which Ofwat rolled out to all companies. We are therefore concerned that some of this opportunity for innovation will be lost with the removal of reputational performance commitments from the PR24 framework as we believe this is a retrograde step that limits the scope for companies to trial approaches that may in the future be applied to the sector as a whole or become financial incentives when a level of maturity has been reached.

We would suggest that charging trials could have a downward pressure on C-MeX scores for customers that disbenefit and this interaction between pilots and customer satisfaction will need careful consideration given the potential financial penalties that could ensue. We suggest that customers on tariff trials should have separate customer satisfaction incentive applied to avoid disincentives for meaningful trials, which cannot identify learning without negative as well as positive customer reaction.

There is also a cost issue to resolve, and we would ask for clarity around how the costs of new trials would be treated. New tariffs inevitably come with a higher cost to serve than existing tariffs, at least during a trial and unless adopted at scale. If regulation will not adapt to enable this, then in our view we should transition to a competitive market designed specifically to do so at pace.

Q3 Do you have any comments on our proposed principles for good practice charging trials?

On the whole we agree with Ofwat's proposed principles for good practice principles for charging trials. However, the key challenge will be in whether customers have a choice to participate in trials. Any trial is likely to create winners and losers so voluntary sign-up may not be advantageous for well-designed trials, however previous experience suggests that "winners" may not notice the difference and "losers" are likely to have reduced customers satisfaction.

Additionally, customer support may be difficult to achieve when trials will have winners and losers. Companies may be able to get broad acceptance across the whole customer base, but those on the trial who may have higher charges than normal in the short-term may be less accepting. We

cannot have meaningful trials unless we try things that disbenefit some customers during the trial, and benefit others. Or alternatively we enable markets that are designed to facilitate this innovation.

The period available for customer engagement ahead of implementing trials will be limited if trials need to be ready for rollout by 1 April 2023, this time is further reduced if pilot tariffs need to be included in charging schemes. To ensure the principles of careful design and planning are followed (and to implement changes to billing systems), there may need to be flexibility about the timing of the introduction of tariff trials in which case the charging rules may need additional change over and above that proposed. There should be a general exception for prior approval of charges schemes for tariff trials – approval for these can be with Ofwat / CCW on an ad hoc basis. Ofwat could consider a “RAPID for tariff trials” – creating a fast track regulatory approach to allow trials to develop and the learning points to be shared.

We agree that there needs to be support available for affordability, vulnerability and to enable customers to reduce leakage and discretionary consumption. South West Water and Bristol Water have embedded WaterCare advisors and Vulnerability Heroes in the community to raise awareness of the support available for customers in vulnerable circumstances and those struggling to pay their bills. South West also offers home audits for water efficiency. The Smarter Healthier Homes initiative in our Accelerated Delivery Plans provides similar support, with expansion of our free leak repair policy, and installation of water saving flow regulators alongside smart meters, which can aid customers in reducing demand by 5-10%.

We also agree that companies should share the learnings of their trials – what worked and what didn’t. We don’t believe that collaboration on design of trials is entirely necessary as this would promote homogeneity of approach that could stifle innovation and prevent companies being responsive to the specific needs of their local communities. There are benefits in having variances in approach to maximise learning across a range of what works for a wide range of customers and regions. Further we think there is value in repetition of similar trials which will allow a review findings across a multitude of variables – approaches that are ineffective or detrimental in one area might not be the same elsewhere or for different customer groups. Ofwat can facilitate innovation, rather than homogeneity through a “RAPID for tariff trials” approach.

Q4 Do you have any comments on Ofwat's role in supporting good practice charging trials?

We agree that Ofwat has an important role in supporting charging trials, particularly in supporting communication to customers and providing legitimacy to pilots, ensuring customers are aware that there is regulatory oversight of any charging trials will increase customer trust.

We also agree that Ofwat should facilitate shared learnings from trial and pilots whether done through workshops, or through anonymised reporting where there are competition concerns.

There are also benefits from having CCW on board to support the legitimacy and validity of trials and their independent role as the voice for consumers will again increase trust in any pilots.

We would suggest that for approved trials it would be advantageous for companies to issue multi-branded communications to customers, i.e., company, Ofwat and CCW. As mentioned above a “RAPID for tariff trials” concept may be of benefit to this.

Q5 Do you have any comments on the discussion regarding our charging rules and related regulatory compliance?

The principles proposed appear to cover all charges, although we note that the CCW affordability review and existing charges will not necessarily have been driven by these rules and without recognising that there are trade-offs between them may not be helpful in practice. Therefore, it will be important that including them in the Charges Scheme rules recognises these are factors that companies should consider. Setting out how this is achieved is then useful as Ofwat recognised balancing different objectives and principles is the basis on which the charging rules have been set out.

There is also a question of fairness and affordability – some of these are judgements about the overall level of charges, rather than how revenue is recovered through charges in a way that balances fairness and affordability objectives. This may therefore need clarification within the principles.

We agree that it will be useful to include the general statement that there are no potential barriers in the rules to undertaking trials of new charging arrangements. It may require some qualification against Ofwat's proposed rule 13. While the consistent principles clause does not prevent a tariff trial (presumably this should be caveated that tariff trials should also further the general charging principles), consistent approaches could do, even after a trial ended.

We would suggest that "Consistent principles must be applied" could be an improvement over "Consistent principles and approaches must be applied" more generally - if "principles" are defined, but "approaches" are not, there would be benefit from more clarity. We also suggest Ofwat makes an explicit statement to recognise there are trade offs between the principles.

Alternatively, Ofwat could change the wording to say that the rules "should consider" rather than "should reflect" the principles. This change better reflects the intention that companies consider these factors, rather than unrealistically assuming that companies can always reflect fairness and affordability, or environmental protection etc at all times.

We agree with Ofwat's interpretation that differences in charges are allowed to reflect benefits to wider society and the environment associated with water efficiency, including through charges to retailers (and through discounting infrastructure charges, for instance, as a further example).

We agree that Boards should consider tariff trials as a potentially significant change in charges and be transparent in the supporting information that they publish on Rule A2.

Additional comments

The consultation does not include questions relating to section three, and therefore we provide our comments on that section here.

In our experience we wonder whether the view that licence conditions and charging rules have prevented tariff trials is the real reason for lack of innovation. We think it is more likely that there is a general lack of cost structure, logic or customer appetite for new tariffs, and companies are merely reflecting this lack of customer appetite. Regulatory incentives to focus on customer needs merely reinforce this point.

We welcome Ofwat's suggested approaches to charging innovation provided, however we seek assurance that these are not the only types of tariff that are likely to be approved for trials as this

may limit innovation and the range of pilots proposed. This is because these tariffs themselves may not prove to be worthwhile, and our customer research highlighted above identifies why this is the case.

We provide initial thoughts on the suggested tariffs below.

Rising block tariffs – As part of a previous programme of trials SWW trialled a rising block tariff (RBT) between April 2009 and March 2011 with the aim of investigating how affordability and sustainability of future water resources would be affected be a different tariff model. Results from the trial showed that:

- Smaller households decreased usage but larger households did not, suggesting that either they are already making savings in consumption and therefore have limited discretionary use
- Overall usage increased over the trial suggesting the tariff did not have continued effect on consumption – however we would note that this trial did not utilise smart meters and was not conducted during a period of drought or a cost of living crises during which customers' awareness of water efficiency is likely to be heightened
- 70% of customers did not believe that the RBT affected their water usage.

It is interesting to note that our recent customer research shows little prospect of a different outcome. Unless we rethink the service that is being offered, and discriminate / tailor it appropriately, we fear that RBT trials will do little other than to dissuade others from future tariff trials, as has been the case in the past. On points of practicality of operating this tariff we noted that for a RBT based on occupancy to succeed and to be fair, a reliable method for obtaining occupancy numbers is required. Further the requirements to read meters at the same time every quarter for customers across the region requires smart metering investment. Ultimately at the time of the trial we did not find evidence that RBT was a long-term sustainable solution for affordability or protecting water resources.

Premium charges – applying premium charges at times of water stress would require the setting of triggers for when such charges would apply, presumably based on reservoir levels or rainfall statistics. Such measures could form an effective part of a company's drought plan however this would need careful consideration and communication to customers to avoid the perception that this is a substitute for investment in resilient water resources. Further, triggers would need to be well-evidenced to ensure the effect is not too little, too late. Consideration would also need to be given to the unintended consequences such as the burden of water restrictions falling unfairly on those who cannot afford the premium rate. At drought periods it is right to rely on calls to protect water resources and the environment, and the consequences being additional cost and action by the water company, rather than on consumers. There is a risk that higher / seasonal tariffs follow the classic cases of introducing payments for blood donation reducing donations, or childcare late pick up fees validating such behaviour as a transaction, rather than achieving the goal.

Time of use / seasonal tariffs – seasonal tariffs could effectively be used as a pseudo tourist tax if applied to relevant NHH sectors within our regions, something that HH customers have indicated they would support. Enabling measures such as smart meters would be required alongside engagement with NHH retailers to effectively implement such a tariff. In reality though the economic and social impact is not as simple as HH and NHH customers, and progressive charging needs to have a strong social and community contract behind it for fairness to be perceived. We need to trial at scale in order to test this further.

Smart tariffs & restricted meter tariffs – these types of tariff work well to shift demand patterns in the energy sector. For water the impact of intra-day demand patterns is less frequent but could provide incentive during periods of very high demand where companies might want to shift consumption to reduce pressure on pumping assets. This might be more suitable for those NHH customers who have more flexibility on consumption. The Flexible Local Water Supplies innovation fund project led by Bristol Water includes the potential for Castle Water to explore the market appetite for such arrangements.

SWD reductions – this could be considered alongside the rollout of water butts but potentially would be better delivered at scale, for example in association with social housing providers where we could support retrofitting of rainwater harvesting or SuDs, or for NHH customers who are more able to realise the benefits of such retrofitting. This could be an example of a mix of social service provision with community or customer choice of tariff options. Again, this is something we would like to explore as part of progressive charging development which goes beyond the thinking Ofwat set out in this consultation.

To support our response we asked Scott Reid from ICS Consulting to review our data and the current approaches to water charging, as part of our project to explore what types of charges may be more progressive and support affordability for the future.

This work in support of our consultation response was framed around three questions:

- Are we progressing or regressing?
- Can alternative tariff structures make a difference? And if so, differences to what and to what extent?
- What should be an appropriate regulatory response?

We summarise the latest analysis we have from ICS Consulting below:

Are we progressing or regressing in water charging?

To answer this question, we have examined how household bills in the SWW area looked in 2010 (at the time of the modelling work for the Walker Review)[1] relative to household incomes and how that compares to more recent data from 2020-21 and 2021-22 on household bills and incomes (from South West Water own annual affordability tracking data).

This comparison is shown with the charts below for metered and unmetered charges. The charts show the degree of association between annual water and sewerage bills and net household income (equivalised before housing costs).[2] For the 2020-22 data annual bills are expressed <u>before</u> the benefit of the £50 Government Contribution (the GC is fixed across all households and

[1] The Walker Review data comes from modelling work undertaken for South West Water in 2010. This data was in turn used in the UKWIR (2009) Future Charging Methods study based on Family Resources Survey data.

[2] The bill and income data are shown on a log scale which facilitates interpretation of this association in terms of a log linear regression coefficient. The coefficient on income (X) represents the sensitivity or elasticity of bills with respect to income. A progressive charging structure would be associated with a positive coefficient (bills increase with incomes, all other factors given) and a negative coefficient would be indicative of a regressive charging structure. This relationship between bill and income also is conditional on household size, meaning the regression lines control for the influence of household size on bills.

is therefore implicitly progressive – it provides a larger standard of living benefit to lower income households).

Figure 1: Metered Charges - Progression or Regression?

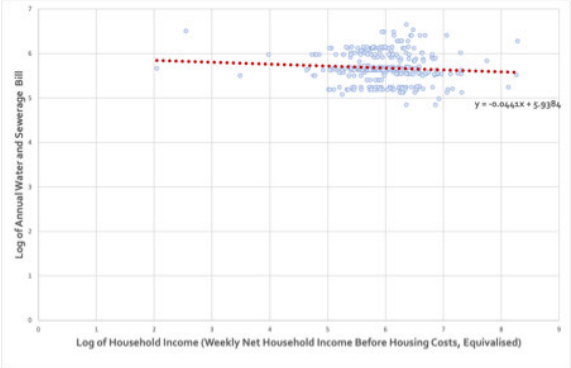
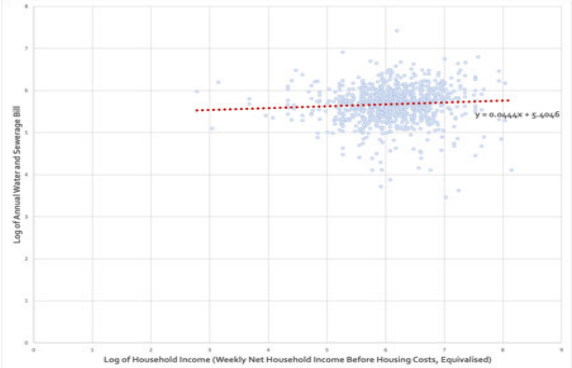
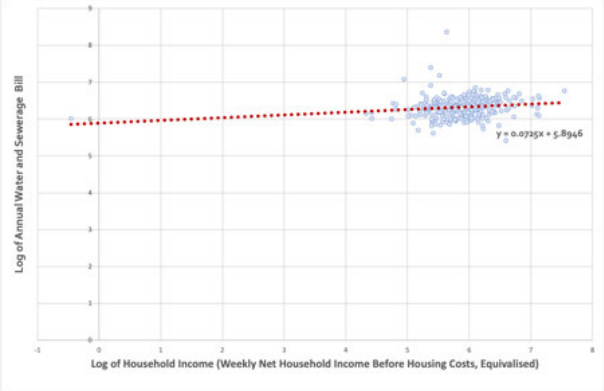
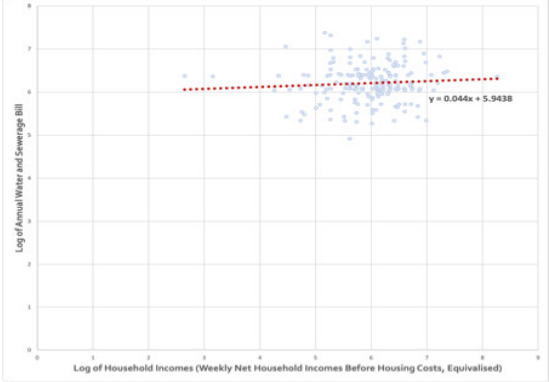
2010	**2020-22**
	
N = 370, weighted to total metered households, 2009-10	N = 1017, weighted to total metered households, 2021-22

Figure 2: Unmetered Charges - Progression or Regression?

2010	**2020-22**
	
N = 290, weighted to total unmetered households, 2009-10	N = 205, weighted to total unmetered households, 2021-22

The scatter plots above are suggestive of two noteworthy trends:

- Back in 2010 it could be argued that metered bills and hence tariffs were marginally regressive (a very slight negative association between bill levels and incomes), whilst today they appear to have shifted toward progressive (positive association between bill levels and incomes), albeit the association is not a strong one.
- Unmetered bills in 2010 were more notably progressive, but contrary to metered bills appear to have seen regression with a weaker positive association observed by 2021.

What might explain these shifts? We think two factors – not unique to SWW, but certainly important in the SWW area appear to be:

- The continuing growth in the metered charging base has been strongly influenced by (free) optional metering in the South West. Introduced as far back as 1999, the free meter option has driven the growth in metering and the unwinding of the unmeasured – measured cross-subsidy. The key point here is unwinding. Policies such as the tariff differential have encouraged a dynamic where high bill unmeasured households could save money by switching to lower measured bills. This has driven down consumption, although it leaves the remaining unmeasured customers as those with higher consumption. A consequence of this choice was the removal of cross-subsidies and this removal had been regressive rather than progressive from an affordability point of view. This dynamic was at its strongest in the 2000-05 and 2005-10 periods in the South West and hence would have contributed to the picture we observe for metered tariffs at the time of the Walker Review (2010). This dynamic is still present in the South West, but now weaker as the optional metering base approached saturation levels (unlike other companies). In addition, the progressive impact of social tariffs was felt earliest in the South West (who were one of the early adopters in 2012 of company social tariffs through schemes like WaterCare). This impact is captured in the later 2020-22 data.
- At the same time, SWW like many other companies have been encouraged to move remaining unmeasured households from the old basis of rateable values to assessed volumes (a proxy for metered volume, usually in terms of number of household occupants). SWW now have a non metered charging base that is around 40% assessed unmeasured households versus 60% RV unmeasured households. This has been another type of less obvious switching in the charging base. Transferring households from RV tariffs with high RV modifiers (fixed charges) to assessed volume tariffs with much lower (metered) fixed charges moves cost recovery from lower RV properties to higher occupancy properties. This less obvious unwinding of cross subsidy has seen unmeasured charges moves from the more progressive RV basis to the less progressive (proxy) volume basis.

Can alternative tariff structures help?

The evidence presented above has motivated two areas of investigation and we present here some emerging findings:

First, for metered charges can this slight shift to a structure that we label weakly progressive be further reinforced by alternative metered tariff structures? Or put another way, if the objective is to make metered tariffs more progressive what alternative structures are best able to achieve this?

Secondly, for unmetered charges can this evidence of a move from progressive unmeasured charges (mostly RV) to regressive unmetered charges (a mix of RV and assessed volume) be

reversed in any way? Or put another way, if the objective is to restore a more progressive structure for unmetered tariffs what alternative structures are best able to achieve this?

We have considered these questions with a primary focus on metered charges – SWW is now about 85% metered. We have used the same 2020-22 affordability survey data for the purposes of our analysis. The modelling of this data assumes the following:

- We have modelled separately metered and unmetered charges. This ensures no rebalancing between metered and unmetered bills to remain consistent with the current measured-unmeasured tariff balance.
- We also model separately fixed and variable (volume in the case of metered) charges.
- Households who currently receive bill discounts through for example the WaterCare tariffs are assumed to receive the same level of discount under any alternative tariff structure.
- We have modelled bills to be revenue neutral, that is the overall levels of revenue recovery are assumed to be the same as with current metered and unmetered tariffs. This allows us to examine the redistributive potential of alternative tariffs within the same overall level of revenue recovery. This is the first desired outcome for tariff innovation – re-distributive impacts – highlighted by Ofwat in its consultation paper.

It is also possible within our modelling to examine the further impacts of behavioural responses to new alternative tariffs and how this might impact revenue recovery. For example, making assumptions about the demand response of metered households to alternative pricing structures. These fuller behavioural impacts are the subject of our on-going work and this will inform the second desired outcome for tariff innovation highlighted by Ofwat – environmental / reduction in demand.

Our modelling has focused on the rising block and time of use charging structures highlighted in the Ofwat consultation paper. Rising block structures attempt to target and differentiate essential vs. discretionary usage, while time of use charges attempt to target different temporal use patterns (e.g. seasonal) to incentivise demand restraint during peak summer periods.

The pre-requisite for differential targeting of usage to achieve the desired outcome of a progressive redistributive impact is that lower income households will have a greater propensity than higher income households to benefit from the lower prices targeted at essential/off-peak usage and / or a lower propensity to bear the higher prices targeted at discretionary/peak usage.

Our emerging findings – summarised in the table below – start to identify the candidate alternative tariffs with the potential to meet this objective.

Table 1: Assessment of alternative tariffs - emerging findings

Charging Method	Tariff Alternative	Is tariff more Progressive[1]?	Change in Unaffordable Bills[2]	Change in Average Bill to Income[3]	Do poorest households (bottom 30% of incomes) benefit?
Metered	1. Walker Review Rising Block Tariff	✓✓	↑	↑	✗✗
	2. Rising Block with Free Allowance up to 30m3	✓✓	↑	↑	✗✗
	3. As 2 with property based fixed charges	✓✓✓✓✓✓	↑	=	✗
	4. As 2. with per person allowances for first block	✓✓	↓↓	↓↓	✓✓✓✓✓✓
	5. As 4. with property based fixed charges	✓✓✓✓	↓↓	↓↓	✓✓✓✓✓✓
	6. Seasonal – Summer Demand / Winter Demand (2:1)	✓✓	↓	↓	✓✓
	7. Seasonal – Peak Period Excess Demand / Base Demand (5:1)	✓✓	↓↓	↓↓	✓✓
	8. As 7. with property based fixed charges	✓✓✓✓	↓↓	↓↓	✓✓✓✓
Not Metered	1. Property based fixed charges	✓✓✓✓	=	↓	✓✓✓✓✓✓

Notes:

1. This is measured in term of the positive association (income coefficient) between bills and income: < 2x increase = 1 tick; 2-4x increase = 2 ticks; >4x increase = 3 ticks
2. Unaffordable bills – Change (higher or lower) in number of households paying >5% of after housing costs net income (equivalised)
3. Average bill to net income (after housing costs, equivalised) – based on if higher or lower
4. Aggregate change in revenue recovery for bottom 30% income households (x = higher, tick = lower; 3 ticks = >5% 2 ticks = 2-5%, 1 tick = <2%
5. All tariff alternatives are assessed against the current linear tariff structures (2021-22 charges)

Metered tariff alternatives

Alternatives 1 to 3 would be considered traditional rising block structures (including option 1 based on the original Walker Review example). The notable point here is that even with a degree of improvement in how progressive the bill distribution is, these options actually decrease the affordability of bills compared to current tariffs and increase the recovery burden for the lowest income households.

The rising block options that include a per capita allowance for each household member perform much better compared to the fixed block structures. The structure is more progressive, whilst also improving affordability overall and benefiting the lowest income households. This suggests they are better at targeting a lower recovery from low income metered households.

A further refinement we have introduced with these options is to consider them in combination with differentiated fixed charges based on property type that increase with property size (for example alternative 3 and 5). Property type (detached / semi-detached or terraced / flat or maisonette) is itself associated with income status and it is therefore not surprising that this addition reinforces the positive redistributive impacts. Property based fixed charges would not be new to the water industry – for example there are in evidence for metered sewerage services at Severn Trent Water where they act as a proxy for area based charges for surface water drainage demand.

This is an example where charges (in this case fixed) can be aligned to scale of demand, cost of service (network capacity) and household income. A rationale for similar differentiation of metered water fixed charges could lie with a recognition that property type (size) is also a driver of water supply capacity. As noted in our recent customer research, they appear less likely to be welcomed or seen as fair by customers.

Alternatives 6 to 8 provide time of use structures based on seasonal usage. Alternative 6 was modelled as a winter / summer tariff with peak summer usage charged at 2x the off-peak winter usage. The summer period was defined as the 4 months May to August. Alternative 7 (and 8) was modelled as a base / excess demand tariffs with the peak summer excess over the non-summer base demand charged at 5x the base non-summer usage. Again, the summer period was defined as the 4 months May to August. Both of these alternatives provide a positive redistributive and affordability impact, with the base/excess alternative performing slightly better. The benefits of the base/excess alternative are further enhanced when combined with a differentiation of fixed charges based on property type (alternative 8).

Unmetered tariff alternatives

As we noted above, the evidence suggests that unmetered charges in SWW are now more weakly progressive and this could be attributed to the increase in the adoption of assessed volume charging relative to property based RV charging. We have replicated with unmetered alterative 1 a similar property differentiation of the current fixed charges for assessed volume and RV households. As could be anticipated this alternative provides a resuscitation of a more progressive shape compared to the current unmetered charges. There is a smaller impact on the overall affordability of unmetered charges indicating that the unmetered tariff structure on its own provides no silver bullet for improving the affordability of the currently high unmetered bills experienced in SWW. The average bill to income ratio for unmetered households remains above the 5% water poverty threshold.

Conclusions

Our conclusions from these emerging findings are:

- Rising block options will only be re-distributive when they are designed with an element of per person rather than per household allowances. Our modelling shows that structures based solely on per household allowances will be regressive.
- Time of use (seasonal) alternatives appear to offer more re-distributive potential than the rising block options.
- The structure of metered fixed as well as volume charges will have an important influence on this re-distributive potential. The basis for the differentiation of fixed

charges would need to be developed. For example, are they reflective of differentials in capacity costs or do they re-introduce cross subsidies that could be deemed worthwhile and acceptable – a truly progressive form of charging.

- The customer research suggests that what is progressive may not be the same as what is seen as fair.

What is an appropriate regulatory response?

Any changes to water charging will need to be rooted in an understanding of the regulatory requirements for charging. For example, from the Condition E requirements around undue preference and discrimination to the supplementary codifying of wholesale charging rules.

Our view has always been there is more scope for flex and less rigidity in the application of these requirements and rules than has sometimes been assumed (by regulators and companies). The case for a more flexible approach to charging rules and regulation derives from two important considerations.

First, the economic concept of *subsidy -free* prices provides a way to frame what is considered undue discrimination or preference. The concept of subsidy-free prices defines a range for prices and within this range is, as the label suggests, where prices are deemed to be free of subsidy. A subsidy free price could be interpreted as a cost-reflective price.

This test features in Competition Act reviews of, for example, predatory pricing, but has featured less in the regulatory view of what is deemed undue. Ofwat's historical approach prior to 2015 was to emphasise parity tests (e.g. unmeasured/measured differential) which comes with the potential risk of being precisely wrong rather than broadly right when it comes to determining cost-reflective charging. However, Ofwat's charging rules leaves this to companies to own and define based on a set of principles, but there is no examples of dispute between regulator on companies in interpretation that has tested the boundaries of this – both companies and regulator have either been getting this broadly right, or else have relied on the status quo. This rightly is the question Ofwat are testing in this consultation.

Average cost based charges will always depend to an extent on methods of (joint) cost allocation and therefore the interpretation of what is cost-reflective needs flexibility not precision and this is provided by recognising subsidy-free prices as the acceptable price range.

Second, it is not always the case that a subsidy – a price for a good or service that deviates from the cost of production – is socially inefficient. There are numerous examples to cite where price discrimination is consistent with socially efficient outcomes – the Ofwat consultation paper cites the example of peak pricing on public transport. This is a classic example of discriminatory Ramsey style pricing that can be viewed as socially efficient. The key insight offered by approaches like Ramsey pricing is that price differentials can be understood in terms of the demand or value side. The cost of serving a train customer at 8am compared to 2pm is little different – the track is the same and potentially even the same seat in the same carriage. What differs is the value placed on the ability to provide this transit service at 8am compared to 2pm and this value is reflected in the shape of the demand curves and price elasticities for peak and off-peak travel. This asserts that the judge of what is an efficient price is not solely whether it is cost-reflective but also whether it is value reflective. As affordability and wider public value is something that customers, society and regulators expect of the water sector, this could give us a wide margin of appreciation for charging

policy. Customer and stakeholder wants and needs from the water sector may be sufficient boundaries, and tariffs become a flexible tool as long as we focus on this value.

The prospect this presents is that some forms of price discrimination can be encouraged rather than hampered and still retain consistency with regulatory principles and requirements. The upside is to allow some charging approaches that embeds some form of cost subsidy but generates a wider net benefit (possibly in the form of public value, e.g. more affordable water bills.)

Our modelling brings the importance of these principles firmly into the practicalities of designing alternative tariffs to achieve the desired outcomes of more progressive charges and affordable bills alongside better incentives for demand restraint.

Our modelling to date – summarised above with Table 1 – has showed that to make a difference in terms of making water charges more progressive we may well need price differentials that would go beyond what is typically considered cost reflective.

For example, with rising block alternatives 4 and 5 the free first block allowance (a very clear subsidy that benefits affordability) requires (for the same revenue recovery) charging a combined unit price for the "discretionary" block (3) of £18 per m^3. The current combined metered unit rate in SWW for water and sewerage is about £5 per m^3.

A further example is our modelled base/excess demand tariff. The revenue neutral "winter" rate is £4.80 per m^3 (5% below the current unit rate), while the "summer" excess rate is close to £24/m^3 (375% above the current unit rate). This type of price differential will require careful testing, explanation and presentation to both customers and stakeholders, but it is clear that at these levels (both below and above current rates) these would not be solely cost based price differentials.

Our view is that it is possible to reconcile these price differentials with the notions of what is undue or not undue in terms of Condition E (for example), but this requires a willingness to embrace the notion that pricing is just as much about value as it is cost. This could be the price that is worth paying for tariff innovation in the water industry.

There are two alternatives – we could wait for a strong desire to act from Government, potentially devolving some of the decisions (as in Council tax arrangements for second home owners) to local areas. Or alternatively we could allow for customer choice to drive more variety in tariff design, perhaps as part of the regulatory framework for greater service offering choice for household consumers in water services. Either way a degree of consensus will be required to build the trust necessary to take society with us, hence our suggestion of a "RAPID for tariff trials" which could fast track a public value and local consultation process to accelerate experimentation.