

APRIL 2022



# OPTIONS FOR PROMOTING WATER EFFICIENCY IN THE NHH WATER MARKET

FINAL REPORT

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# EXECUTIVE SUMMARY

# INTRODUCTION AND SCOPE OF WORK

- When the non-household (NHH) water retail market opened in April 2017, one of the desired outcomes of competition was greater water efficiency (WE), through the promotion of competitive value-added services offered by retailers.
- However, despite the fact that most retailers do offer 'value-added' efficiency services to NHH customers, take up of these services has generally been low, achieving estimated efficiency savings of only 0.3% of consumption in 2019-20 across the customer base of the three largest retailers.\*
- In light of this, the Retailer-Wholesaler Group Water Efficiency Subgroup (RWG WESG) was established; and asked by the Environment Agency (EA) and Ofwat to develop an 'action plan' investigating (and making recommendations) as to what options might help address this. Within the scope of the RWG WESG's work is to consider what barriers might be impeding WE savings; and to make suggestions as to how these could be addressed.
- With this in mind, Economic Insight has been commissioned by the RWG WESG, supported by the MOSL Market Improvement Fund through Thames Water, to:
  - identify and make recommendations on addressing barriers to WE delivery for customers, retailers and wholesalers; and
  - assess current and potential future mechanisms / incentives (including financial) that would enable greater volume of WE activity and water savings across the UK NHH market.
- In undertaking this work, we have sought to be pragmatic; while considering the full breadth of possible options, we have recognised what actions are *possible* for Ofwat and the industry to take **now**.
- We have therefore **focused on developing 'in-market' options**, primarily aimed at relieving barriers to the supply (and effectiveness) of WE measures, which could be delivered in the short- to medium-term. However, we also recognise the crucial importance of longer-term options designed to boost demand for WE from customers for sustainable water delivery in the future.
- This pack sets out the findings of our work.

*\*'State of the market 2019-20: review of the third year of the business retail water market', Ofwat (August 2020), p.16.*


## SUMMARY OF OUR KEY FINDINGS: THE KEY BARRIERS TO WATER EFFICIENCY AND OUR RECOMMENDATIONS TO ACHIEVE WATER CONSUMPTION REDUCTION

- **Customers’ willingness to pay (WTP) for WE 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** (and, by Thames Water’s estimate, could be as high as ~£31m per annum).
- **Achieving WE in the NHH water retail market can either be wholesaler- or retailer-led.** The appropriate approach (and the balance between them) hinges on whether customers’ WTP for water efficiency may feasibly increase in the long-term.
  - ▶ **A wholesaler-led approach is appropriate if the expectation is that customers’ WTP for WE will remain below the efficient cost of delivering these services.** This is because the market itself will not provide an incentive for retailers to offer WE services to customers, and without intervention, the current lack of WE will continue. Therefore, competition in the retail market will be unable to ensure that WE is delivered, and non-market driven incentives will be required, both in the short- and long-term.
  - ▶ **A retailer-led (or, competitive market-led)\* approach is appropriate if the expectation is that customers’ WTP for WE services could increase over time.** This is because the competitive NHH water retail market could then facilitate an increasing incentive for retailers to offer WE services to customers in the future through competition in the supply of WE services. If one believes this could happen in the future, it will be important ensure that any proposal does not undermine competition in the NHH water retail market (while also providing funding to enable delivery of WE in the shorter-term – if targets are to be met).
- **To ensure WE delivery in line with targets in the short-term, we recommend that a predominantly wholesaler-led approach is taken** that is carefully designed to avoid precluding retailers from competing on WE – particularly over the longer-term.
  - ▶ To raise the funding required, we recommend that a WE levy, which is visible on customer bills, is applied through an increase in water wholesale costs for all NHH customers.
  - ▶ To deliver the WE solutions, we recommend that this fund is ring-fenced for delivery of WE and that incentives are placed on wholesalers via the price control, such as a price control deliverable (PCD) or a reward and penalty outcome delivery incentive (ODI).
- **In the long-term, one could shift to a more retailer-led approach (noting again, that there is a balance to be struck).** To achieve this, it will be important to inform customers about the necessity of WE for society / the environment, increasing their WTP for these services. At the same time, one needs to ensure that retailers are able to develop the WE area of their business. We therefore recommend that the market performance framework (MPF) is used to ring-fence funding for retailers to conduct WE activity (over and above the activities delivered by wholesalers).

*\*The competitive market could include others such as third party intermediaries (TPIs).*



## STRUCTURE OF THIS DOCUMENT

- The remainder of this document is structured as follows:
    - **Section 2: Why is the take up of WE so low?** In this section we discuss the reasons why we are currently observing low take-up of the WE services offered to NHH customers.
    - **Section 3: What is required to overcome this problem?** Having set out the nature of the problem, we discuss what is required in the short-term to facilitate an increase in WE delivery, in order to meet the government’s proposed national water consumption reduction target.
    - **Section 4: What approaches can be used to raise the funding required and deliver WE savings?** In this section, we set out two broad approaches that can be used to raise the funding that the industry requires to deliver WE savings, and convert this funding into WE savings.
    - **Section 5: Detailed assessment of funding options.** In this section, we assess the options that can be used to raise the funding required in greater detail.
    - **Section 6: Detailed assessment of delivery options.** Similarly to the previous section, we assess the options that can be used to deliver the WE savings in greater detail.
    - **Section 7: Our recommendations.** Finally, we set out our recommendations.
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# WHY IS THE TAKE-UP OF WATER EFFICIENCY SO LOW?

## WHILE RETAILERS ARE FREE TO SUPPLY VALUE-ADDED SERVICES, SUCH AS WATER EFFICIENCY SERVICES, CUSTOMERS' WILLINGNESS TO PAY FOR WATER EFFICIENCY APPEARS TO BE BELOW THE EFFICIENT COST TO SUPPLY THESE SERVICES.

- **Operating in a competitive market, retailers are free to supply the value-added services that customers demand.** Therefore, if customers did demand WE services, the market would deliver these (i.e. we would be seeing higher WE savings already) since:
  - Customers who demand WE would switch to retailers offering WE services; and be willing to compensate retailers for the (efficient) cost to supply these services.
  - Retailers would therefore be incentivised to provide these services to gain a competitive advantage.
- Whilst we understand that some retailers do currently provide WE services, and some customers (particularly self-suppliers) have reported significant WE savings, customer take-up is generally low. For instance, Ofwat's 'State of the market 2019-20' report states that provision of these services by the three largest retailers achieved estimated efficiency savings of only 0.3% of consumption across their whole customer base. **This indicates that the problem in this market is that customers' WTP for WE is below the efficient (private) cost to supply.**
- **This lack of WTP for WE may arise for a number of reasons, such as:**
  - **There is a gap between the private and social value of water,** resulting in WE savings being undervalued by customers. This may arise if: (i) the market price of water that customers actually pay is too low, since it does not necessarily reflect the wider societal costs; or if (ii) customers simply lack awareness of this wider societal value (in addition to not having to pay for it). The gap between the private and social value of water may differ for different customer groups. For instance, there is evidence that the NHH tariff structure results in those with higher consumption facing a lower private value of water than those with lower consumption,\* exacerbating the gap between the private and social value of water for this group of customers.
  - **There is a lack of information,** regarding issues such as the relevant costs and benefits of WE, as well as around the individual's consumption and scope to reduce it.
  - **The costs of WE to the customer are too high.** Such costs could include monetary, time and opportunity costs, as well as the cost of behaviour change to reduce water consumption.

*\*Please refer to SES Business Water's summary of Default retail water prices, which provides evidence that, as monthly £/m3 charges fall, the consumption band increases. Available here: <https://www.sesbusinesswater.co.uk/retail-pricing-0>*



## DUE TO THIS LACK OF WILLINGNESS TO PAY FOR WATER EFFICIENCY, THERE IS CURRENTLY INSUFFICIENT VALUE IN THE MARKET TO ENABLE MARKET PARTICIPANTS TO PROVIDE THE REQUIRED LEVEL OF WATER EFFICIENCY SERVICES THROUGH COMPETITION.

- As a result of this lack of WTP, **the competitive NHH water retail market is not incentivising retailers to deliver WE**, since there is too little value in the market to enable retailers to provide enough of these services (and for those retailers that do offer these services, enough customers simply do not take them up).
- Further, **wholesalers are not directly incentivised under the price control framework** to offer WE services to NHH customers, since:
  - i. The current Per Capita Consumption (PCC) target incentivises water efficiency activity for household customers only. The existence of this HH PCC target means that there may be a high opportunity cost of diverting resources away from HH WE provision towards NHH customers.
  - ii. There is no other 'direct' incentive mechanism in place for wholesalers to provide WE services to NHH customers.
- **Market participants must therefore be provided with solutions that overcome this lack of value in the market.**
- When developing these solutions to boost WE in the NHH market, it is important to remember that **the retail market may be able to deliver these solutions through competition in the future.**
- Therefore, **the long-term goal should be to increase customers' WTP for WE**, such that the market achieves WE independently of any intervention.
- However, achieving customer behavioural change is difficult and takes time, and so **ideally, in the short-term, the solution should at least not weaken competition or preclude the market being able to independently provide WE in the long-term.**



WHAT IS REQUIRED  
TO OVERCOME THIS  
PROBLEM?

# TO OVERCOME THIS PROBLEM OF INSUFFICIENT VALUE AND DELIVER WATER EFFICIENCY SAVINGS IN LINE WITH DEFRA'S PROPOSED NATIONAL TARGET, THE INDUSTRY WILL REQUIRE AT LEAST ~£22M OF FUNDING PER ANNUM.

- In the latest consultation on environmental targets, **Defra has proposed to set a national 9% water consumption reduction target by 2037 in the NHH water sector.**\*
- As of 2019/20, total NHH consumption of water was 2,718MI/day. This implies that, to be in line with Defra's target, **the NHH market must contribute a total of ~245MI/day of savings, against the baseline year, by 2037.**
- To achieve this will require a significant amount of work. According to Ofwat's AMP7 cost assessment, wholesalers asked for £1.3m enhancement expenditure for non-leakage related demand reduction activities to maintain their supply-demand balance (in 2020/21 prices, up from £1.2m\*\* in 2017/18 prices), to fund an average saving of 1MI/day.
- **Based on this 'average cost' of securing each MI saving, delivering the total 245MI/day of savings would require approximately £326m of funding (~£22m per annum over 15 years).**\*\*\*
- **This estimate is likely to be conservative** for the following reasons:
  - Marginal costs may be increasing with NHH PCC reductions, and our numbers are based on existing average costs.
  - WE savings made may not be permanent, and further work is required to maintain these savings in order to offset the savings degradation (to the extent that wholesalers did not account for such degradation in their requested cost allowance.
  - **Thames Water estimates that using demand reduction calculations consistent with Water Resource Management Plan (WRMP) modelling, which needs to cover recognised WE savings degradation, up to around 360 MI/d of demand reduction activity could be required to achieve a 9% reduction in NHH baseline usage. This level of activity could cost up to £31m per annum.**\*\*\*\*
- While this is a reasonable estimation of the total funding required, in practice, **the total amount may also differ for the following reasons:**
  - It is based on the wholesale costs of saving each MI of water. Retailers may face different costs to achieve the same level of WE savings (especially if the activities they can undertake might be different).
  - It is not limited to the cost of delivering WE savings for NHH customers, and includes the cost of delivering WE for HH customers. The cost profiles for both types of customers may be different.

*\*'Consultation on environmental targets', Department for Environment Food & Rural Affairs (16 March 2022).*

*\*\*'Supply demand balance enhancement feeder model', Ofwat (2019) Available here: [https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM\\_E\\_WW\\_SDB\\_FD.xlsx](https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx)*

*\*\*\*Figures presented may not appear consistent as a result of rounding.*

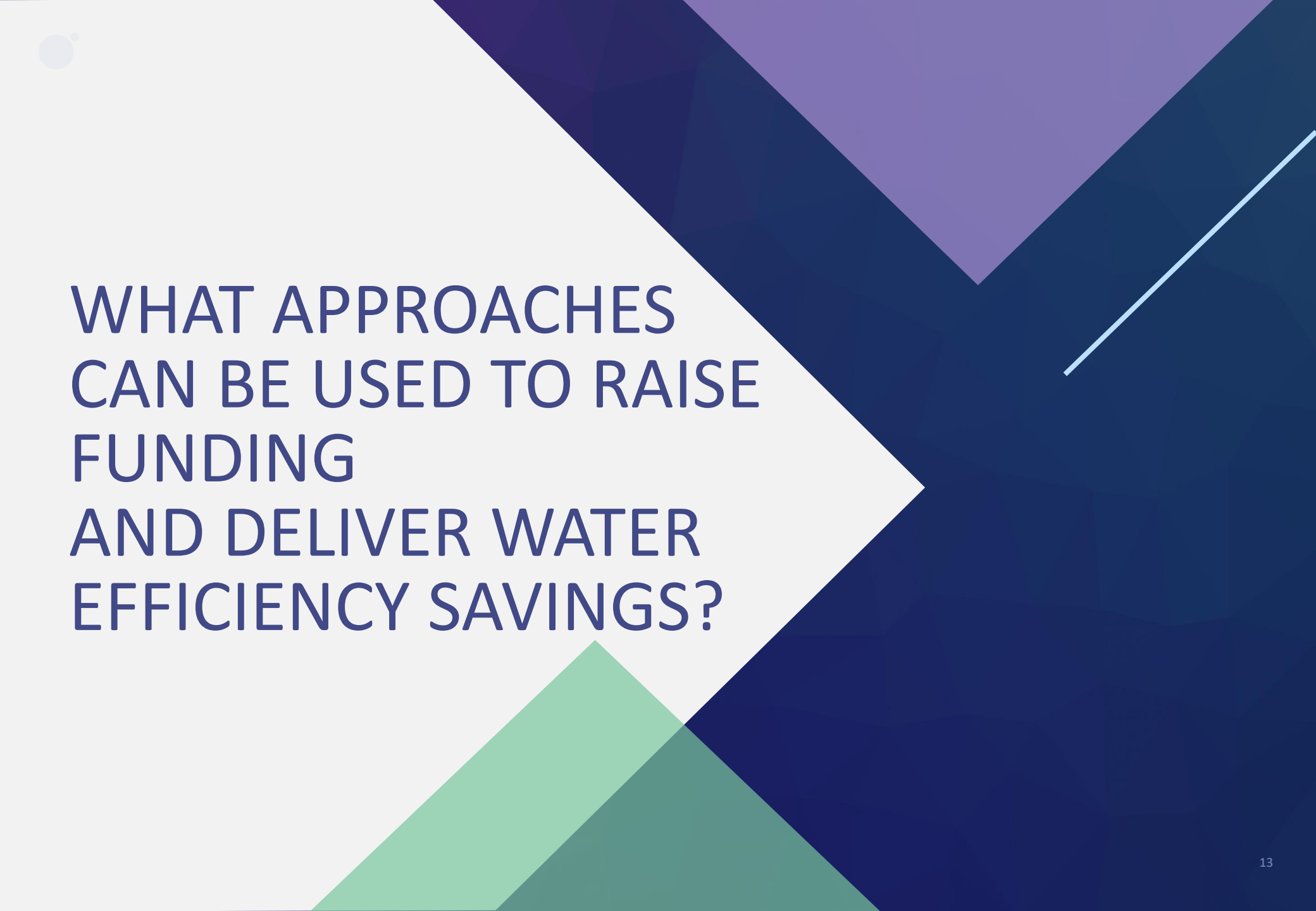
*\*\*\*\*There may be some differences between wholesalers in whether these additional costs are already included in their estimates.*

## ULTIMATELY, THE FUNDING REQUIRED FOR WATER EFFICIENCY MAY NEED TO COME FROM BOTH CUSTOMERS AND WIDER SOCIETY.

- There are three broad groups from which funding may come from. These are: (i) customers; (ii) wider society; and (iii) market participants (through efficiency savings). There are reasons both for and against these groups providing the funding, which are set out in the table below.

	Customers	Society	Market participants
Reasons <u>should</u> be sourced by this group	Customers are responsible for their own level of water consumption, and therefore have the ability to act to reduce this consumption.	The social value of WE savings is larger than the private value to each NHH customer, and it is therefore appropriate that society funds this gap. In addition, there is a need to provide water resource capacity for future population and development growth; as well as a need to maintain an improvement in the level of quality and health within the natural environment.	
Reasons <u>should not</u> be sourced by this group	Benefits to society (as a whole) of WE are larger than the private value of water, and therefore it should not just be up to current customers to pay for WE gains.	As above, individual customers are responsible for their own level of water consumption, and therefore have the ability to act to reduce this consumption. As individual customers are able to make changes to their own consumption, wider society should not be held solely responsible for funding WE.	Competition incentivises retailers to offer the value-added services that are demanded by customers, and therefore if there was greater scope for retailers to supply WE services (to meet a higher level of demand) they would do so. Further, given the limited margins made by retailers in this competitive market, there is limited scope for retailers to achieve the additional efficiency gains that would be sufficient to fund WE. In addition, wholesalers are incentivised to operate as efficiently as possible via the price control, so there is limited scope for further gains alone to be used to fund the scale of WE required.

- Given the above, we consider that, **in the long-term, both customers and society may need to fund WE savings.** However, **in the short- to medium-term, and until a government target for WE exists, customers would need to fund WE savings.**



WHAT APPROACHES  
CAN BE USED TO RAISE  
FUNDING  
AND DELIVER WATER  
EFFICIENCY SAVINGS?

PRECISELY HOW THIS FUNDING IS RAISED AND USED TO DELIVER WATER EFFICIENCY DEPENDS UPON WHETHER CUSTOMERS' WILLINGNESS TO PAY FOR WATER EFFICIENCY COULD INCREASE IN THE LONG-TERM. IF IT MAY RISE, IT IS IMPORTANT THAT THE APPROACH DOES NOT UNDERMINE COMPETITION IN THE NON-HOUSEHOLD RETAIL MARKET.

- The most appropriate approach to be used to achieve greater WE in the NHH water retail market is therefore contingent upon the likelihood of the following two scenarios:

1

**CUSTOMERS' WILLINGNESS TO PAY FOR WATER EFFICIENCY WILL REMAIN BELOW THE EFFICIENT COST OF DELIVERING THESE SERVICES**

- Should customer WTP remain below the efficient cost of delivering WE services, the competitive market itself will not provide an incentive for retailers to offer WE services to customers, as there will remain insufficient value for retailers to implement WE solutions.
- Therefore, without intervention, the current lack of WE that we observe will continue over the longer-term.
- In this scenario, competition in the retail market will be unable to ensure that WE is delivered, and non-market driven incentives will be required, both in the short- and long-term.

2

**CUSTOMERS' WTP FOR WATER EFFICIENCY SERVICES WILL INCREASE OVER TIME**

- Should customer WTP for WE begin to rise (and provided that customers are engaged in the NHH water retail market), customers will seek to purchase from a retailer that is able to offer them the value-add WE services, and will be willing to pay more for these services.
- Retailers will therefore be incentivised to compete on WE services, and increase their offer of these services to customers. The additional WTP of customers will provide retailers with the additional value required to be able to offer these services.
- In this scenario, it will be of primary importance that competition in the NHH water retail market is not undermined.

It is difficult to predict which scenario is most likely to occur. It is therefore important that any solution is flexible to this uncertainty. There are also methods that can be employed to increase the WTP for WE services, and therefore increase the likelihood of scenario 2. These methods are discussed in Annex A.

THERE ARE TWO LOGICAL REGULATORY APPROACHES THAT FOLLOW FROM EACH OF THESE POTENTIAL SCENARIOS: A (A) WHOLESALER-LED; OR (B) RETAILER-LED APPROACH. GIVEN THE INHERENT UNCERTAINTY AROUND EACH POTENTIAL FUTURE SCENARIO, IT IS IMPORTANT TO STRIKE A BALANCE BETWEEN THESE APPROACHES.

A

#### WHOLESALER-LED APPROACH

- If one considers scenario 1 to be most likely, and customer WTP for WE is expected to remain below the efficient cost of delivering WE services, a wholesaler-led approach is appropriate.
- This is because the competitive market is unlikely to be able to facilitate sufficient WE delivery (i.e. in line with Defra's proposed targets) by retailers in both the short- and the long-term.
- Further, the kinds of intervention that can boost WE now (to meet Defra's national consumption reduction target) are the physical interventions that wholesalers are best placed to deliver (especially if their scope and experience allows them to deliver large-scale area-based solutions).

B

#### RETAILER-LED APPROACH

- If one considers scenario 2 to be most likely, and customer WTP for WE is expected to rise in line with the efficient cost of delivering WE services, a retailer- (or, more specifically, competition-) led approach is appropriate.
- This is because the competitive market is likely to be able to provide retailers with the value they need to compete on offering WE services to customers, over the longer-term.
- Therefore, it would be important to begin developing retailers' WE business in the near-term, allowing them to gain the experience and expertise required to meet customer demand for WE when it begins to rise.

Importantly, these approaches are not necessarily mutually exclusive. A combination of these approaches can be employed, and this combination can be flexed over time.

## WITHIN A WHOLESALER- OR RETAILER-LED APPROACH, THERE ARE CHOICES REGARDING HOW TO: (A) RAISE THE FUNDS REQUIRED; AND (B) INCENTIVISE DELIVERY OF THE DESIRED LEVEL OF WATER EFFICIENCY SAVINGS USING THESE FUNDS.

- Within either a retailer- or wholesaler-led approach, mechanisms must be put in place to raise the funding required by the industry; and to direct this funding to market participants so that they are able, and incentivised, to deliver WE solutions.
- There are choices to be made regarding which particular funding and delivery mechanisms to use within these broader approaches.
- In the next sections, we assess the following potential funding and delivery options against a set of criteria, in order to determine the most appropriate options to choose under each approach.

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	





# DETAILED ASSESSMENT OF FUNDING OPTIONS

## WE USE A NUMBER OF CRITERIA TO ASSESS THE SUITABILITY OF POTENTIAL FUNDING OPTIONS. THESE INCLUDE: (i) WHETHER THE OPTION IS CAPABLE OF RAISING THE SCALE OF REQUIRED FUNDS; (ii) WHETHER IT DOES SO EQUITABLY; AND (iii) HOW COMPATIBLE THE OPTION IS WITH THE CURRENT REGULATORY FRAMEWORK.

- Bearing in mind the aforementioned considerations of who is best placed to fund WE activity (please see slide 12), we have used the following additional criteria to assess possible funding options under each approach:
  - whether the option is able to raise the scale of the funds required;
  - whether the option raises the fund equitably;
  - how simple the option is to implement;
  - how quickly the required funds can be raised; and
  - how compatible the option is with the existing regulatory framework.
- Options are assessed relative to each other in the tables to the right and overleaf.
  - green indicates that the option ranks favourably against the criterion compared to other options;
  - yellow indicates that the option is neutral against the criterion compared to other options; and
  - red indicates that the option ranks poorly against the criterion compared to other options.

OPTION	WATER EFFICIENCY LEVY VIA THE WHOLESALE PRICE CONTROL
DESCRIPTION	Funding is raised through an increase in the wholesale charges of water for all customers in the NHH market, via a levy.
SOURCE OF FUNDS	Customers – appropriate in the short- and long-term.
OWNER OF FUNDS	Wholesalers – consistent with a wholesaler-led approach.
ABILITY TO COVER FUNDING NEEDED	Assuming the cost of funding required for WE is at least ~£22m pa, this would: <ul style="list-style-type: none"> <li>• result in an increase of NHH customer bills of approx. 0.9% (based on the estimated NHH bills of £2.5bn in 2018-19)*; and</li> <li>• represent 0.5%** of wholesaler water base costs.</li> </ul>
EQUITABLE	All NHH customers contribute to the cost of WE savings.
SIMPLICITY	Requires changes to be made within the wholesale price control (which is already underway).
TIMESCALES	This can only be implemented at PR24 at the earliest since PR19 is already underway.
COMPATIBILITY WITH EXISTING FRAMEWORK	Yes, can be incorporated into the wholesale price control.
OTHER CONSIDERATIONS	This method of funding would be relatively inflexible during the set 5-year price control period.

\*'State of the market report 2018-19.' Ofwat (2019); p. 49.

\*\* Calculated using total water expenditure for 2021, sourced here : '[Service Delivery Report 2020-21](#)', Ofwat (November 2021), page 26.

WE CONSIDER THAT FUNDS SHOULD NOT BE RAISED BY INCREASING DEFAULT TARIFFS VIA THE RETAIL EXIT CODE, AS IT IS INEQUITABLE AND THE LEVEL OF FUNDING THAT WOULD BE RAISED VIA THIS METHOD IS UNCERTAIN. HOWEVER, A LEVY APPLIED VIA THE RETAIL PRICE CONTROL WOULD ADDRESS THESE CONCERNS.

OPTION	WATER EFFICIENCY LEVY VIA THE RETAIL PRICE CONTROL	INCREASE IN DEFAULT TARIFFS VIA THE REC
DESCRIPTION	Funding is raised through an increase in prices for all NHH customers via a levy added to customers' bills (in the same way as for the wholesale levy), replicating the CO <sup>2</sup> reduction levy used within energy sector.	Funding is raised through a bill increase for NHH customers on default tariffs.
SOURCE OF FUNDS	Customers – appropriate in the short- and long-term.	Customers – appropriate in the short- and long-term.
OWNER OF FUNDS	Retailers – consistent with a retailer-led approach.	Retailers – consistent with a retailer-led approach.
ABILITY TO COVER FUNDING NEEDED	Similar impact on customer bills as wholesale price control option (i.e. approx. 0.9% rise). <ul style="list-style-type: none"> <li>This represents 12.2% - 15.5% of retailer margins.</li> </ul>	Assuming the cost of funding required for WE is approx. £22m pa, using default tariffs alone to source this funding would require an increase in these tariffs of approx. 2.0%.* However, the ability of this mechanism to raise the required funding is contingent on customers valuing WE. Should they not, retailers may offer alternative tariffs without this additional charge for WE that customers switch to, resulting in lower funding being raised.
EQUITABLE	All NHH customers contribute to the cost of WE savings.	Only customers on default tariffs would pay for WE.
SIMPLICITY	Requires changes to be made through the retail licences.	Requires changes to be made within the REC (which is currently underway).
TIMESCALES	These changes can be implemented more quickly than changes to the wholesale price control.	These changes can be implemented more quickly than changes to the wholesale price control (changes expected in 2023).
COMPATIBILITY WITH EXISTING FRAMEWORK	Involves changes that can be made within the existing REC framework / licence conditions.	Involves changes that can be made within the existing REC framework.
OTHER CONSIDERATIONS	More flexible in how the fund can be allocated as it is not constrained by price control mechanisms.	

\* Retailer gross margins are estimated between 5.60% – 7.12% of total retailer revenue over 2017/18 to 2019/20 (of £2.5bn), please see our earlier report '[Non-Household Water Retail Market Study](#)' Economic Insight (April 2021) p.312.

\*\* Calculating using the estimated £2.5bn value of the NHH water retail market (please see: '[State of the market report 2018-19.](#)' Ofwat (2019); p. 49.), with 42.8% of revenue raised through default tariffs (please see: '[Business retail market: 2021-22 review of the Retail Exit Code – a consultation](#)', page 12.)

THE MPF IS INCAPABLE OF RAISING THE TOTAL FUNDS REQUIRED, BUT COULD BE USED AS A SUPPLEMENTARY SOURCE OF FUNDING. IN THE LONGER-TERM, TAX CREDITS / ALLOWANCES COULD EFFECTIVELY RAISE FUNDS FROM WIDER SOCIETY, BUT IN THE SHORT-TERM THIS WOULD BE DIFFICULT TO IMPLEMENT.

OPTION	MPF	TAX CREDITS / ALLOWANCES
DESCRIPTION	Funding is raised from market participants if they underperform on other performance targets.	Funding raised through a reduction paid in taxes by retailers or wholesalers (for investing in/providing WE).
SOURCE OF FUNDS	Market participants – suitable to be used for short-term contribution.	Wider society – suitable for the long-term.
OWNER OF FUNDS	Flexible – consistent with both a wholesaler- or retailer-led approach.	Central government – consistent with both a wholesaler- or retailer-led approach.
ABILITY TO COVER FUNDING NEEDED	The current MPF fund is far too small (performance charges levied on companies in 2019-20 amounted to £4m*) and uncertain (good performance would leave a WE funding deficit) to be the primary source of funding for WE. The ~£22m pa funding required is 5.4 times the current size of the MPF fund.	The size of funding raised may not be sufficient, particularly as some retailers are loss making (and therefore, the tax paid is limited). For wholesalers, the incentive can only be as large as the tax share of their pre-tax operating profits. An alternative that would overcome these would be a government grant.
EQUITABLE	All funds are collected through underperformance against MPF standards, which can be considered equitable assuming that the achievement of targets is equally attainable for all firms.	The same terms can be applied to all companies.
SIMPLICITY	Need to ensure revenue neutrality which may in practice be difficult to achieve.	Complex to determine which activities would receive a tax credit.
TIMESCALES	There could be a significant lag period between when penalty is issued, and how the funds are divided between wholesalers / retailers for delivery. This would impede the ability of market participants to plan WE work.	Passing of new legislation (that would be required to establish tax credits) could take time.
COMPATIBILITY WITH EXISTING FRAMEWORK	Involves changes that can be made within the current MPF framework (which is currently underway).	New legislation would be needed to establish tax credits.
OTHER CONSIDERATIONS	No impact on customer bills.	No impact on customer bills.
	This option may further reduce retailer margins. It potentially creates disincentives, and sends the wrong message, as WE funding is gained only by poor performance against other standards.	Tax money might be reduced for other important initiatives (e.g. climate change, education).

\*Annual Report and Financial Statements for the Year Ended 31 March 2021', MOSL p.29

BASED ON OUR ASSESSMENT, WE CONSIDER THAT THE MOST APPROPRIATE FUNDING MECHANISM IN THE SHORT-TERM, UNDER EITHER A WHOLESALER- OR RETAILER-LED APPROACH, IS A WATER EFFICIENCY LEVY. THE MPF COULD BE USED TO SUPPLEMENT THIS.


- The table below summarises our view of the potential funding mechanisms that could be used under Approach A and / or B in the short-term. We consider that a levy, applied either under the wholesaler-led (A) or retailer-led (B) approach, is the most appropriate source of funding. The MPF could be used as a supplementary source of funding. We would not recommend the use of the REC, and while tax credits / allowances raise the funds required equitably and from wider society, this option would take time to implement.
- Our key rationale for favouring these options is summarised in the table below.

APPROACH	MECHANISM	RATIONALE
(A) WHOLESALER-LED	<b>WE levy</b> Funding is raised through a levy, applied through an increase in wholesale water costs for all NHH customers.	<ul style="list-style-type: none"> <li>• <b>Able to raise the total funding required.</b> Assuming the cost of funding required is ~£22m pa, this would result in an increase in customer bills of 0.9% (based on total NHH revenues raised in 2019/20).</li> <li>• <b>Equitable.</b> All NHH customers contribute to the cost of WE savings.</li> </ul>
(B) RETAILER-LED	<b>WE levy</b> As above, funding is raised through a levy, which is applied on the retailer side at the end of customer bills.	<ul style="list-style-type: none"> <li>• <b>Able to raise the total funding required.</b> Assuming the cost of funding required is ~£22m pa, this too would result in an increase in customer bills of 0.9%.</li> <li>• <b>Equitable.</b> All NHH customers contribute to the cost of WE savings.</li> </ul>
(A) or (B)	<b>MPF</b> Funding is raised from market participants if they underperform on market / operational performance standards.	<ul style="list-style-type: none"> <li>• <b>Can be used as a supplementary source of funding.</b> The current MPF fund is too small (performance charges levied on companies in 2019-20 amounted to £4m*) and uncertain to be the primary source of funding for WE, however it can be used to generate additional funds.</li> <li>• <b>May send the wrong message.</b> Funding is effectively raised from poor performance in other areas, sending the message that WE should not be considered part of the core business.</li> </ul>

\*'Annual Report and Financial Statements for the Year Ended 31 March 2021', MOSL p.29

The slide features a dark blue background with several overlapping geometric shapes. A large white triangle points from the top-left towards the center. A purple triangle points downwards from the top-right. A light blue line runs diagonally from the top-right towards the center. At the bottom, there are two overlapping green triangles pointing upwards.

# DETAILED ASSESSMENT OF DELIVERY OPTIONS



## WE ALSO USE A NUMBER OF CRITERIA TO ASSESS THE SUITABILITY OF POTENTIAL DELIVERY OPTIONS. THESE INCLUDE: (i) THE STRENGTH OF THE INCENTIVE CREATED BY THE OPTION; (ii) THE LEVEL OF RISK POSED TO THE PARTY RESPONSIBLE; AND (iii) HOW COMPATIBLE THE OPTION IS WITH THE CURRENT REGULATORY FRAMEWORK.

- It is implicit in the approach one chooses, that wholesalers will be responsible for delivering WE savings under approach A, and retailers under approach B. Within each approach, there are a number of choices to be made around precisely how to incentivize wholesalers / retailers to deliver the required WE savings.
- In the following slides, we consider the various options that could be used to incentivise wholesaler and retailer delivery of water efficiency savings. The criteria used to assess the options are the following:
  - i. the strength of incentive generated by the option;
  - ii. whether the option interferes with retail market competition;
  - iii. the level of risk posed by the option to relevant market participants;
  - iv. the compatibility of the option with existing regulatory framework; and
  - v. how quickly the option could be implemented.
- Options are assessed relative to each other in the tables overleaf.
  - green indicates that the option ranks favourably against the criterion compared to other options;
  - yellow indicates that the option is neutral against the criterion compared to other options; and
  - red indicates that the option ranks poorly against the criterion compared to other options.

## UNDER A WHOLESALER-LED APPROACH, DELIVERY CAN BE INCENTIVISED THROUGH THE WHOLESALE PRICE CONTROL VIA AN OUTCOME DELIVERY INCENTIVE WHICH INCLUDES BOTH A REWARD AND PENALTY, OR PRICE CONTROL DELIVERABLE.

	REPUTATIONAL ODI	REWARD ONLY ODI	PENALTY ONLY ODI	REWARD & PENALTY ODI	PCD
STRENGTH OF INCENTIVE	<b>Low:</b> Compared to financial incentives. However, specific targets can be set and incorporated into the company WRMPs, with firms expected to achieve this performance.	<b>Medium:</b> Financial incentives are typically stronger than reputational. But, due to firms not being subject to any penalty, those firms which are unlikely to outperform (and receive rewards) will have a lower incentive to improve their performance. Targets will be written into company WRMPs.	<b>Medium:</b> Financial incentives are typically stronger than reputational. But, due to firms being subject to no reward, firms will face a low incentive to outperform once they have met their target. Targets will be written into company WRMPs.	<b>High:</b> Financial incentives are typically stronger than reputational. Lower performing firms will be incentivised to meet targets and avoid penalties. Higher performing firms will be incentivised to go above and beyond targets, to reap rewards. Targets will be written into company WRMPs.	<b>High:</b> Could work in a similar way to the PCDs set by Ofgem, depending on how Ofwat decides to implement them. In the RIIO-2 price control, a PCD specifies the output to be delivered, and the price control allowance that will be provided to deliver it. Should it not be delivered, the cost allowance is subject to a downward adjustment, providing a high incentive for firms to deliver the output.
EFFECT ON COMPETITION	<b>Potentially negative</b> effect on the retail market since wholesalers may bypass retailers completely. However, wholesalers are not precluded from collaborating with retailers to achieve WE.				
LEVEL OF RISK	<b>Low:</b> As no financial penalties are included there is no capital at risk.	<b>Low:</b> Given the ~£22m pa of funding, this would put less than 1% of wholesale gross margins at risk.		<b>Low:</b> Only the cost associated with delivery of the PCD is at risk.	
COMPATIBILITY WITH EXISTING FRAMEWORK	<b>Yes:</b> NHH WE delivery could be embedded within the WRMP as demand reduction targets and linked to performance commitments, in line with the proposed methodology for PR24.				<b>Yes:</b> This feature is already under consideration by Ofwat (albeit not necessarily for WE).
TIME SCALE	<b>Medium-term:</b> The earliest this can be implemented is PR24.				
OTHER	Delivery can be efficiently targeted at particularly water constrained areas within a wholesaler's water resource zones (WRZs). Wholesalers are cost-effective at delivering physical WE solutions (such as fixing leaks), as they benefit from prior delivery experience and economies of scale.				



UNDER A RETAILER-LED APPROACH, DELIVERY CAN BE INCENTIVISED THROUGH A PERFORMANCE STANDARD OR UNIVERSAL DISTRIBUTION OF THE FUNDS TO ALL RETAILERS, RINGFENCED SPECIFICALLY FOR WATER EFFICIENCY. WE CONSIDER UNIVERSAL DISTRIBUTION TO BE APPROPRIATE.

	REPUTATIONAL PERFORMANCE STANDARD WITHIN THE MPF	REWARD ONLY PERFORMANCE STANDARD WITHIN THE MPF	PENALTY ONLY PERFORMANCE STANDARD WITHIN THE MPF	REWARD & PENALTY PERFORMANCE STANDARD WITHIN THE MPF	USE IT OR LOSE IT ALLOWANCE
STRENGTH OF INCENTIVE	<b>Low:</b> Compared to financial incentives. Strength increases with increasing WTP. However, set targets may increase certainty around the level of delivery.	<b>Medium:</b> Financial incentives are typically stronger than reputational. Due to firms not being subject to any penalty, those firms unlikely to outperform (and receive rewards) will have a lower incentive to improve their performance. Set targets may increase certainty around the level of delivery.	<b>Medium:</b> Financial incentives are typically stronger than reputational. Due to firms being subject to no reward, firms will face a low incentive to outperform once they have met their target. Set targets may increase certainty around the level of delivery.	<b>High:</b> Financial incentives are typically stronger than reputational. Lower performing firms will be incentivised to meet targets and avoid penalties. Higher performing firms will be incentivised to go above and beyond targets, to reap rewards. Set targets may increase certainty around the level of delivery.	<b>Medium:</b> Firms likely to use the money if provided, in order to avoid losing it (if designed similarly to a wholesaler use it or lose it allowance). Strength of incentive to use money efficiently increases with increasing WTP. A lack of targets may make the level of delivery uncertain.
EFFECT ON COMPETITION	<b>Negative:</b> Imposing further standards on retailers – and particularly standards with associated rewards and / or penalties, interferes in the competitive market and moves the retail market more towards a price control framework.				<b>None:</b> Does not interfere in competitive retail market.
LEVEL OF RISK	<b>Low:</b> As no financial penalties are included there is no capital at risk.		<b>High:</b> Depending upon the scale of penalties, the already limited retailer margins could be further squeezed.		<b>Low:</b> Margins are not put at risk.
COMPATIBILITY WITH EXISTING FRAMEWORK	<b>Yes:</b> Additional performance standard can be added through the MPF, which is currently under review.				<b>Yes.</b>
TIME SCALE	<b>Short-term:</b> Can be implemented more quickly than wholesaler options.				
OTHER	Could crowd out delivery of other performance standards. This would be a labour-intensive and admin heavy process.				

UNDER EITHER A WHOLESALER- OR RETAILER-LED APPROACH, DELIVERY COULD BE INCENTIVISED THROUGH A BIDDABLE POT FOR WATER EFFICIENCY, FOR WHICH MARKET PARTICIPANTS COULD COMPETE FOR FUNDING BY PUTTING FORWARD PROPOSALS THAT MEET SET CRITERIA.

	BIDDABLE POT FOR WE: RELEVANT PARTIES COMPETE FOR FUNDING BY PUTTING FORWARD WATER EFFICIENCY BUSINESS CASES / PROPOSALS THAT MEET CRITERIA.
GUARANTEED DELIVERY	No: The level of WE savings that may be achieved as a result of a biddable pot is inherently uncertain.
STRENGTH OF INCENTIVE	<b>Medium:</b> Without a target to meet, wholesalers may not bid for funding. Without strong customer demand for WE, retailers may not bid for funding.
EFFECT ON COMPETITION	<b>Potentially negative</b> effect on the retail market as wholesalers may bid for funding and could use this to bypass retailers completely. However, wholesalers are not precluded from collaborating with retailers to achieve WE. Retailers are able to compete with wholesalers for funding.
LEVEL OF RISK	<b>Low:</b> Financial penalties are not attached to this option.
COMPATIBILITY WITH EXISTING FRAMEWORK	<b>Yes:</b> Compatible with current regulatory framework for both retailers and wholesalers. A third party may need to be involved in order to manage the biddable pot. This is outside of MOSL's remit, and therefore may require an industry-group or Ofwat to manage this delivery mechanism.
TIME SCALE	<b>Medium-term:</b> Dependent upon the source of funding to be used, and would take time to put in place a third party to manage the biddable pot.
OTHER	High admin burden (previous wholesaler schemes suggest that a lot of information is needed to evaluate funding applications), and a third party may be required to manage this biddable pot.


WE CONSIDER THAT THE MOST APPROPRIATE DELIVERY MECHANISM IS EITHER VIA THE WHOLESALE PRICE CONTROL UNDER APPROACH A, OR THROUGH UNIVERSAL DISTRIBUTION OF FUNDS TO RETAILERS UNDER APPROACH B. WE CONSIDER THAT FUNDS RAISED VIA THE MPF COULD BE DISTRIBUTED VIA A BIDDABLE POT. .

• The table below summarises our view of the appropriate delivery mechanisms that could be used under approach A and / or B.

APPROACH	MECHANISM	RATIONALE
(A) WHOLESALER-LED	<p><b>Wholesale price control WE incentives</b>                      Guaranteed delivery via the wholesale price control (via a PCD or reward &amp; penalty ODI).</p>	<ul style="list-style-type: none"> <li>• <b>Certainty over delivery of WE savings.</b> By integrating NHH WE into the price control, savings can be incorporated into the company WRMPs, providing certainty over WE delivery.</li> <li>• <b>Delivery can be targeted</b> at WRZs which are particularly in need of water demand reduction.</li> <li>• <b>Cost-effective at delivering physical WE solutions</b> (such as fixing leaks), as benefit from prior delivery experience and economies of scale.</li> <li>• PCDs and reward and penalty ODIs have <b>strong incentive properties</b>.</li> <li>• <b>May have a negative affect on competition</b> in the retail market since wholesalers may bypass retailers completely. However, the extent of this concern might be limited, as wholesalers and retailers may specialise in different areas – wholesalers may focus on physical interventions while retailers may promote behavioural change. In addition, wholesalers are not precluded from collaborating with retailers to achieve WE under this approach.</li> </ul>
(B) RETAILER-LED	<p><b>Universal distribution of funds to retailers</b>                      The funding raised is ring-fenced and apportioned between retailers for WE purposes only.</p>	<ul style="list-style-type: none"> <li>• Retailers maintain ownership of the relationship with customers, and as a result this mechanism <b>does not compromise competition in the NHH water retail market</b>. This mechanism also does not preclude retailers from calling upon wholesalers to assist in the delivery of WE.</li> <li>• The <b>level of savings that will be achieved by this approach is uncertain</b>: unlike the wholesaler-led approach, where savings can be incorporated into the company WRMPs which increases the certainty around the level of savings to be delivered, there are no guarantees around the level WE that will be achieved by this approach. A target or obligation <u>could</u> be applied, but doing so may affect retail competition.</li> <li>• <b>Retailers have limited expertise</b> in the delivery of physical WE solutions, which may imply higher costs of delivering the same level of water efficiency (which already represent 12.2% - 15.5% of retailer margins), and will also be less able to target particular WRZs like wholesalers.</li> </ul>
(A) or (B)	<p><b>MPF biddable pot</b>                      The portion of funds raised via the MPF can be ring-fenced as a biddable pot.</p>	<ul style="list-style-type: none"> <li>• <b>Could be used in combination with either of the above options.</b></li> <li>• <b>Bids for WE solutions targeted at water constrained areas can be prioritised.</b></li> <li>• <b>The level of WE delivered via this mechanism will be uncertain</b> since the available funds are contingent on market participants failing to achieve other service targets.</li> </ul>



# RECOMMENDATIONS



OUR RECOMMENDATION IS TO EMPLOY A WHOLESALER-LED APPROACH, WHICH IS REQUIRED TO ACHIEVE THE WATER EFFICIENCY TARGET AT LEAST IN THE SHORT-TERM, BUT TAKING STEPS TO ENCOURAGE CUSTOMER BEHAVIOUR CHANGE, SO ONE COULD MOVE TO A RETAILER-LED APPROACH IN THE LONG-TERM.

- In the short-term, since customers are not *currently* willing to pay for WE, **we would recommend employing a wholesaler-led approach to achieve the WE target.**
  - Currently, wholesalers are best placed to undertake some of the physical interventions (for instance, fixing meters, etc.) that can be employed to meet the WE target, both because we understand that they own some of the physical assets (such as the meters) and they have the experience of undertaking similar activities in the HH water sector.
  - However, it is important for the success of the NHH water retail market that this approach does not undermine competition in the retail market, and therefore it should be designed to avoid precluding retailers from competing on water efficiency (now or in the future).
- Nevertheless, **one could take steps now to increase customers' WTP in the future, which may make it possible to deliver WE through a retailer-led approach.**
  - However, such change in customer attitudes and behaviour is inherently difficult and will take time, and therefore cannot be solely relied upon to achieve the WE target in the short-term.
- In the following two slides, we set out the key features of this recommended approach.

## WE RECOMMEND THAT FUNDING IS RING-FENCED FOR WATER EFFICIENCY, AND IS GENERATED VIA A LEVY IN THE WHOLESALE PRICE CONTROL THAT IS VISIBLE ON CUSTOMERS' WATER BILLS.


- In terms of funding, we recommend that ring-fenced funding for WE is generated through a WE levy in the wholesale price control, through a charge that is visible on the wholesale part of customers' water bill. We would recommend that:
  - The funding generated through this levy is ring-fenced for delivery towards the WE target.
  - The charge is visible to customers since this could help in encouraging long-term customer behaviour change.
- We recognise that some customers may be put off by this charge on their bills because either: they do not care about WE and do not want to be forced to pay for it; they may not feel like they are receiving anything in return for the charge; or they would seemingly be “paying more for consuming less”. However, this is a step towards encouraging long-term customer behaviour change to achieve WE, and such reactions from customers could be managed by providing clear messaging on: (a) the immediate need to tackle WE; and / or (b) explanation of what activities are being undertaken in their wholesale region to tackle WE.
- Furthermore, this may encourage another dimension of competition between retailers. In particular, retailers could be encouraged to compete for “getting the customer the most” for the additional charge on their water bills, through their relationships with wholesalers. For instance, if retailer X has a better working relationship with the wholesaler in a customer's region than retailer Y, then retailer X may be able to win over the customer from retailer Y by ensuring that the customer's taps are fixed within a month (rather than, say, a year by retailer Y).\* In order to allow retailers to develop these working relationships with the wholesalers, at least until such competition can materialise, we would recommend using the MPF funds collected from market participants to fund retail activity related to WE (over and above the WE activities undertaken by wholesalers). For instance, retailers might consider using this fund to develop a framework for engagement with wholesalers on WE, which could assist in ironing out the differences in engagement between different wholesale regions.
- In practice, the industry may consider applying the WE levy as a standard charge on all customer bills, or vary the charge for: (a) different wholesale areas (for instance, higher in water constrained regions); or (b) different customer types (for instance, higher for larger customers). At face value, we consider that there some benefit in considering (a), but not (b) because this would cut across the long-term goal of encouraging customer behaviour change across society. Furthermore, any such proposal for variation may run the risk of making the charges more complicated for customers, where we understand that there is a push from the industry to simplify charging structures.

*\*For clarity, competition law prohibits wholesalers from giving preferential treatment to associated retailers over other retailers. Therefore, this mechanism relies on retailers competing on delivering WE to customers (through wholesalers). For example, retailer X might offer WE savings as part of its competitive offering (by proactively engaging with the wholesaler), while retailer Y might differentiate itself in an alternative way.*

## WE RECOMMEND THAT WATER EFFICIENCY IS DELIVERED USING PRICE CONTROL DELIVERABLES AND/OR OUTCOME DELIVERY INCENTIVES IN THE WHOLESALE PRICE CONTROL FRAMEWORK.

- In terms of delivery, we recommend using PCDs and / or reward and penalty ODIs in the wholesale price control framework to deliver against the above funding. In practice:
  - The metric for the PCD and / or ODI target should allow the industry to track progress against the national target (for instance, in MI/day). There may be further benefit, particularly since wholesalers would be responsible for delivering WE for both NHH and HH customers, for this metric to be consistent between the NHH and HH markets.
  - The delivery towards this PCD and / or ODI should be left to individual wholesalers.
- Nevertheless, to take steps to move towards a retailer-led approach in the future, one may want to additionally incentivise: (a) collaborating with retailers and / or other TPIs; and (b) undertaking activities focused on encouraging long-term customer behaviour change.
  - The collaboration between wholesalers and retailers could be achieved by the industry working together to develop solutions that would encourage collaboration between wholesalers and retailers in achieving WE. This could include developing a framework for engagement between them which aims to, on the one hand, iron out some of the differences in engagement between different wholesale regions and/or different retailers, but on the other hand, maintain flexibility in terms of the willingness of engagement by individual retailers.
  - Long-term customer behaviour change is likely to need a concerted effort from the industry as well as public bodies in highlighting the urgent need for water efficiency. This is consistent with the results of RWG customer survey which highlighted that *“Water retailers (55%), national government (51%), local government (44%), and regulators (40%) were most trusted to communicate the urgency of the water resource situation in the country.”*\* Annex B provides examples of these campaigns in other countries.

\**Non-household customer water efficiency survey results*, RWG p.8



# ANNEX A: MOVING FROM APPROACH A TO B

OPTIONS TO INCREASE CUSTOMER  
WILLINGNESS TO PAY FOR WATER  
EFFICIENCY



## IN ORDER TO MOVE FROM APPROACH A (WHOLESALE-LED), TO APPROACH B (RETAIL-COMPETITION LED), WILLINGNESS TO PAY FOR WATER EFFICIENCY SERVICES MUST RISE TO MEET THE EFFICIENT COST OF SUPPLYING THESE SERVICES.

- As discussed on slides 8-9, take-up of WE services by NHH customers is currently low. This indicates that the problem in this market is that customers' WTP for WE is below the efficient (private) cost to supply. The potential reasons for this are set out in the table to the right.
- In the short-term, market participants must therefore be provided with solutions that overcome this lack of value in the market, and as such, we suggest a wholesaler-led approach (approach A). However, as discussed, this approach must allow for the potential that competition in the retail market may be able to deliver these solutions in the future.
- Therefore, the long-term goal should be to increase customers' WTP for WE, such that it is equal to the efficient cost to supply WE services. This would allow the competitive retail market to achieve WE, so that we can move from Approach A to Approach B (retail-competition led).
- We have considered a number of high-level options that could be implemented in order to achieve this rise in WTP. These options are set out in the following slides, and are informed by our literature review (please see Annex B).

KEY REASONS FOR INSUFFICIENT WTP FOR WE	SUB-REASONS
THERE IS A GAP BETWEEN THE PRIVATE AND SOCIAL VALUE OF WATER.	The market price of water that customers actually pay is too low because it excludes wider societal costs.
	Customers lack an awareness of the wider societal costs (in addition to not having to pay for it).
LACK OF INFORMATION AROUND THE INDIVIDUAL'S OWN WATER CONSUMPTION.	
THE COSTS OF WE TO THE INDIVIDUAL ARE TOO HIGH.	Monetary cost of investing in WE is too high.
	Time cost of researching WE options is too high.
	Cost of behaviour change is too high – it requires continuous effort rather than making a one-off self-contained change.
	Opportunity cost of WE investment vs other potential investments is too high. In addition, customers' water bills may be too small a proportion of overall outgoings, so money would be better spent on efficiency gains elsewhere.
	Other hidden costs (i.e. business disruption).

# OPTIONS TO INCREASE NON-HOUSEHOLD CUSTOMER WILLINGNESS TO PAY FOR WATER EFFICIENCY SERVICES (1)

KEY REASON FOR INSUFFICIENT WTP	OPTION	DESCRIPTION	WHO DELIVERS?	HOW DOES IT IMPROVE WATER EFFICIENCY?	UNINTENDED COSTS	UNINTENDED BENEFIT	COMPATIBLE WITH EXISTING REGULATORY FRAMEWORK?
THERE IS A GAP BETWEEN THE PRIVATE AND SOCIAL VALUE OF WATER.  (Market price too low)	<b>Tax on water consumption</b>	Consumption tax on water, payable by NHH customers	Central government	Increases the price of water to reflect its scarcity	Would have to be carefully designed so as not to negatively affect customers on an industry-wide basis	Money raised as a result of the tax could be used to fund other WE measures	Yes
	<b>Feebate system</b>	This system is implemented in France in relation to vehicle emissions, and would involve fees being paid by those NHH customers lacking in WE, and rebates paid to those with greater WE	Central government	Increases the price of water to reflect its scarcity, while also providing positive financial incentives for those implementing WE measures	Would have to be carefully designed so as not to negatively affect customers on an industry-wide basis	Revenue neutral	Yes
	<b>Alteration of default tariffs</b>	Increase the default tariffs for NHH customers in line with the scarcity value of water	Regulator	Increases the price of water to reflect its scarcity	Would have to be carefully designed to accurately reflect the scarcity value of water	May provide wider margins for retailers to improve value-add and WE services	Yes – alteration within existing framework
	<b>Create a market for water using entitlements / allowances</b>	Similarly to the energy cap and trade scheme, consumption limits on water could be set for NHH customers (split by industry), and water entitlements could be traded between customers	Central government & regulator	The NHH market will set the price of water in line with its scarcity value	Complex to implement given the existing regulatory framework	Would avoid having to estimate the price that accurately reflects the scarcity value of water	No – would require significant change to existing regulatory framework

## OPTIONS TO INCREASE NON-HOUSEHOLD CUSTOMER WILLINGNESS TO PAY FOR WATER EFFICIENCY SERVICES (2)

KEY REASON FOR INSUFFICIENT WTP	OPTION	DESCRIPTION	WHO DELIVERS?	HOW DOES IT IMPROVE WATER EFFICIENCY?	UNINTENDED COSTS	UNINTENDED BENEFIT	COMPATIBLE WITH EXISTING REGULATORY FRAMEWORK?
<p>THERE IS A GAP BETWEEN THE PRIVATE AND SOCIAL VALUE OF WATER.</p> <p>(Market price is too low)</p>	<p><b>Allowances at wholesaler level increased</b></p>	<p>Increase revenue allowances for wholesalers, which will flow through to customer prices</p>	<p>Regulator</p>	<p>Increases the price of water to reflect its scarcity</p>	<p>May result in wholesalers receiving undue 'windfall gains'</p> <p>Therefore, it could be specified that additional revenue is to be used to fund certain other WE activity</p>	<p>Could result in additional funding for other WE activities</p>	<p>Yes – alteration within existing framework</p>
<p>THERE IS A GAP BETWEEN THE PRIVATE AND SOCIAL VALUE OF WATER.</p> <p>(Customers lack awareness of social value)</p>	<p><b>Awareness campaign regarding the social cost of using water</b></p>	<p>Launch a campaign to address the social costs involved when using water</p> <p>Use one or a set of different advertising measures (e.g. billboards, TV, e-mails, online adverts, trade magazines)</p>	<p>Central government / regulator</p>	<p>Provides information to customers on social cost of using water and signals that the market price does not include these social costs</p>	<p>Might divert away from efforts to combat climate change (i.e. energy savings)</p> <p>Customer may still not engage without further incentives</p>	<p>Increases awareness of social value of water</p>	<p>Yes</p>
	<p><b>Stronger duty on retailers to promote WE</b></p>	<p>Duty on retailers to promote WE that goes beyond the current statutory duty, and perhaps includes targets</p>	<p>Central government / regulator</p>	<p>Promotes awareness of the importance of WE via retailers</p>	<p>Imposing stronger duty may unduly 'interfere' in the retail market</p>	<p>Increases awareness of social value of water</p>	<p>Yes</p>

## OPTIONS TO INCREASE NON-HOUSEHOLD CUSTOMER WILLINGNESS TO PAY FOR WATER EFFICIENCY SERVICES (3)

KEY REASON FOR INSUFFICIENT WTP	OPTION	DESCRIPTION	WHO DELIVERS?	HOW DOES IT IMPROVE WATER EFFICIENCY?	UNINTENDED COSTS	UNINTENDED BENEFIT	COMPATIBLE WITH EXISTING REGULATORY FRAMEWORK?
LACK OF INFORMATION AROUND THE INDIVIDUAL'S OWN CONSUMPTION.	<b>Improve smart-meter roll-out</b>	Mandatory target for wholesalers to install smart meters and to repair smart meters through the price control	Wholesalers	Provides information to NHH customers on their own water consumption	<p>May divert wholesaler attention away from other targets depending on its incentive properties</p> <p>Customers may not use the smart-meter without further incentives</p>	More detailed data on water consumption is necessary for effectiveness of a variety of other options presented	Yes - Ofwat can add incentives through existing framework (e.g. ODIs)
	<b>Stronger incentive on retailers to promote WE</b>	Retailers incentivised to provide greater information to customers about their own WE (e.g. benchmarking businesses against each other; setting up a 'water minimisation club'; information on saving water in general)	Retailers  MOSL or other parties that can monitor retailers sending out WE information	Provides information to customers on their water consumption	<p>May require strengthening of statutory duty on retailers, or financial incentive</p> <p>Possibly not enough funding available to keep the mechanism in the medium- to long-term</p> <p>Imposing stronger duty may unduly 'interfere' in the retail market</p> <p>Customer may still not engage without further incentives</p>	Improves awareness of NHH customers own consumption and scope to become more efficient	Yes - MPF fund can be used to fund, and MOSL already has 'legal' responsibility to monitor market

# OPTIONS TO INCREASE NON-HOUSEHOLD CUSTOMER WILLINGNESS TO PAY FOR WATER EFFICIENCY SERVICES (4)

KEY REASON FOR INSUFFICIENT WTP	OPTION	DESCRIPTION	WHO DELIVERS?	HOW DOES IT IMPROVE WATER EFFICIENCY?	UNINTENDED COSTS	UNINTENDED BENEFIT	COMPATIBLE WITH EXISTING REGULATORY FRAMEWORK?
LACK OF INFORMATION AROUND THE INDIVIDUAL'S OWN CONSUMPTION.	<b>Improving information on WE of buildings and devices</b>	Revive / improve WE labelling for devices and buildings (e.g. make labelling mandatory; using rating scale similar to EPC)	Central government / regulator (e.g. Waterwise)	Provides information to NHH customers on their own water consumption	Might divert away from efforts to combat climate change (i.e. energy savings)  Customer may still not engage without further incentives	Reduces time costs of researching WE opportunities  Increases awareness of WE	Yes - there are already agencies in place that administer WE labelling; aligns with UK climate change agenda
	<b>Mandatory minimum WE standards on NHH customers</b>	Introduce / strengthen mandatory minimum standards of WE for offices, factories, and devices	Central government / regulator (e.g. Waterwise, CCWater)	Provides statutory incentive for NHH customers to engage in WE	Might divert efforts away from more effective ways to combat climate change (i.e. energy savings)	Increases awareness of WE	Yes - there are already certain minimum standards for WE in place which would need to be amended
	<b>Publish relative WE performance of NHH customers</b>	Could be published online, or WE industry averages could be included on customer bills to provide a benchmark	Multiple options	Provides customers with context on where they stand regarding WE – how are they performing relative to their competitors / the industry average	May not provide a strong enough incentive to induce change	Also provides reputational incentive	Yes

## OPTIONS TO INCREASE NON-HOUSEHOLD CUSTOMER WILLINGNESS TO PAY FOR WATER EFFICIENCY SERVICES (5)

KEY REASON FOR INSUFFICIENT WTP	OPTION	DESCRIPTION	WHO DELIVERS?	HOW DOES IT IMPROVE WATER EFFICIENCY?	UNINTENDED COSTS	UNINTENDED BENEFIT	COMPATIBLE WITH EXISTING REGULATORY FRAMEWORK?
THE COSTS OF WE TO THE INDIVIDUAL ARE TOO HIGH.	<b>Grants</b>	Lump-sum payment to NHH customers	Multiple options – central government or via market participants	Reduces costs of WE investment and reduces payback period	Crowd out WE activities that do not require investment e.g. behavioural changes	Increase awareness of WE	Yes - funding could be provided to wholesalers via price control mechanism or central government could separately provide funding
	<b>Loan facility</b>	Low-interest loans to NHH customers to finance WE investments	Multiple options – central government or via market participants	Enables access to (cheaper) external finance	Crowd out WE activities that do not require investment e.g. behavioural changes	Increase awareness of WE	Yes - central government could provide funding for loans separate to reg. framework  Alternatively, private providers could be supported to provide finance e.g. Green Investment Group* for energy
	<b>Information provision regarding WE opportunities</b>	Publish a list of water efficiency investments incl. detail on expected costs / savings	Multiple options	Reduce uncertainty of WE investments  Reduce search costs for WE opportunities	May reduce demand for innovative but ‘unpublished’ technologies	Increase awareness of WE	Yes – can be provided by central government / water companies / independent bodies

\* Please see: <https://www.greeninvestmentgroup.com/en/what-we-do/development.html>

# OPTIONS TO INCREASE NON-HOUSEHOLD CUSTOMER WILLINGNESS TO PAY FOR WATER EFFICIENCY SERVICES (6)

KEY REASON FOR INSUFFICIENT WTP	OPTION	DESCRIPTION	WHO DELIVERS?	HOW DOES IT IMPROVE WATER EFFICIENCY?	UNINTENDED COSTS	UNINTENDED BENEFIT	COMPATIBLE WITH EXISTING REGULATORY FRAMEWORK?
THE COSTS OF WE TO THE INDIVIDUAL IS TOO HIGH.	<b>Tax credits / deductions for NHH customers</b>	Reduce taxes paid by businesses investing in WE technologies	Central government	Reduces cost of WE investment	May reduce demand for innovative but 'unpublished' technologies  Crowd out WE activities that do not require investment e.g. behavioural changes	Increase awareness of WE	Previous scheme existed in form of ' <a href="#">enhanced capital allowances</a> ' on certain water efficient plant and machinery
	<b>Improved WE incentive schemes for NHH customers</b>	Payment for upfront costs of investment and compensation for each unit of water saved (with sufficiently strong financial incentives)	Wholesalers / retailers	Reduces cost of WE investment	Crowd out WE investments that don't meet criteria	Increase awareness of WE  Financial incentive to save water	Could build on existing wholesaler-led schemes
	<b>Behavioural nudges</b>	E.g. sending WE opportunities as part of bills or making water efficient technologies the default	Combination of government, regulator and market participants	Reduce the costs of engaging in WE	Consumers may react negatively to perceived lower choice / autonomy	Increase awareness of WE	Yes



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