Exploring public attitudes towards smart water metering

Demonstrating the need for greater information and communication on smart water metering

November 2021

waterwise | arqiva

Introduction

Smart water metering is one of the most effective measures that can be taken to help secure the UK's future water resources.

Data from smart water meters already fitted shows they can help significantly reduce water consumption; reduce leakage; help us reach net zero and enable us to leave more water in the environment.

Waterwise is the UK's leading water efficiency NGO and was commissioned to undertake a social research project exploring the public's perceptions of smart water metering. Bringing the voice of the customer to this important debate, this research aims to help inform industry stakeholder and policy makers across the UK.

This paper offers a summary of the key research findings. The full report is available for download at **www.waterwise.org.uk/knowledge-base/public-attitudestowards-smart-meters/**.

This research was commissioned by Arqiva and undertaken by Waterwise. It brings together insights from a literature review of published material, primary data from a survey of 1,026 residents in the UK, and findings from two focus groups.

Key findings

The findings demonstrate an encouraging level of public receptivity towards smart water metering when people are aware of its benefits.

- Smart technology was increasingly viewed as 'the new normal' across the age ranges surveyed.
- The information generated by water meters helps customers better understand water use, and makes it easier for water companies to engage with consumers.
- Metered residents were more aware of the water scarcity challenge and more focused on saving water.
- Over a third of smart water meter users surveyed reported having reduced water consumption since their device was installed.
- Unmetered residents were less aware of water scarcity than those with meters, and felt more disconnected to their own water usage and their water bills.
- The vast majority (87%) of unmetered survey respondents said they would investigate getting a smart water meter if they knew it would save them money and be free to install.
- The most common barrier to uptake is the concern that household water bills could rise.
- 34% of unmetered residents did not have a water meter because they just had not gotten round to getting one or were waiting for it to be offered by their water company. 14% did not want a water meter due to concerns about disruption during the installation process.
- The ranking of the Top 5 perceived benefits:
  1. More accurate bills (43%)
  2. Tracking and control over usage (41%)
  3. Environmental benefits – usage and carbon footprint reduction (38%)
  4. Fairness i.e. paying for what you use (36%)
  5. Alert to leaks (35%)

What is a smart water meter?

Smart water meters are water meters that can be read remotely without having to directly access the meter installation for a manual reading. They can use automated meter reading (AMR), where the meter can be read on walk past, drive by or advanced metering infrastructure (AMI), where data can be read remotely through a fixed or mobile communications network. The latter AMI meter type offers the greatest potential for demand savings due to the availability of high resolution, visible usage data.

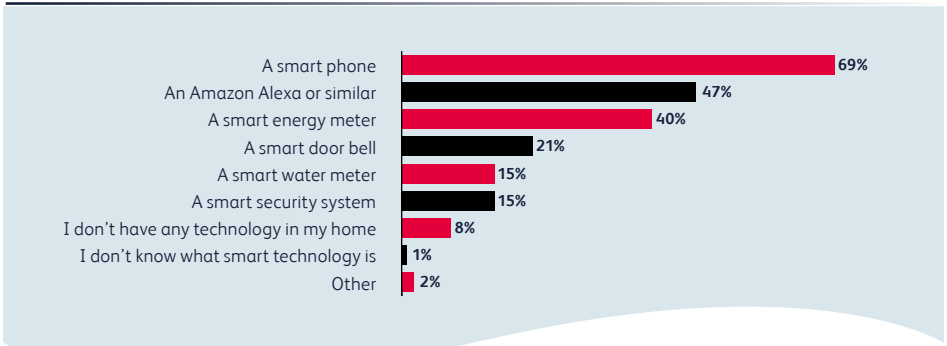
90%
of residents surveyed had smart technology in their homes.

1. Smart tech is trending

From smart gas and electricity meters through to a new generation of in-home digital assistants, the range of smart technologies in UK homes is growing.

Smart water meters are becoming an accepted part of this increasing trend. Smart technology was found to be increasingly viewed as 'the new normal' across the age ranges surveyed, with residents valuing the convenience, control and readily available insights and information they can source from smart devices.

> **[Smart technology] does make you change your ways and become more innovative in your approach... You can have real savings and change habits.**
>
> **Focus group participant**



2. Adoption and understanding

Low awareness, positive interest

Focus group research identified low levels of awareness about smart water meters, with 8 of the 11 participants having limited knowledge. Upon being made aware of the capabilities of a smart water meter, either through information awareness or lived experiences, participants notably recognised its benefits including greater billing accuracy, reducing bills, and having better control over usage.

While focus group participants were generally positive about the concept of smart water metering and would accept a smart water meter if offered, they would not proactively request one. They would typically wait for a meter to be offered (or for it to be required).

Smart water meter users were also more than twice as likely to recommend meters to others than not. This demonstrates that with ownership comes an increased appreciation of the benefits of the device.

Uncovering misconceptions

Some common misconceptions about smart water metering emerged from this research, specifically around having to pay for a meter installation, potential disruption during installation, the meter consuming a lot of energy, and data protection breaches. Such incorrect perceptions can be addressed through education campaigns.

Over 87% of survey respondents said that they would investigate getting a smart water meter if it would lead to a reduction in their bills and be fitted at no charge.

> **Your [One's] primary purpose when it comes to utilities is to save money.**
>
> Focus group participant

37% of residents with smart water meters reported these had helped them to reduce their water consumption.

> The smart water meter is good because our water bills before were high and since we've had the smart water meter..., they [the water bills] have actually gone down... It has made me think about every drop of water.
>
> Focus group participant

21% of unmetered residents surveyed reported that they were aware that we need to be saving water, but were not thinking about it day-to-day.

3. Identifying differences

Just under two-thirds of the 1,026 survey respondents lived in a household with a water meter, with 8% of all respondents reporting that their household was on a smart water meter. Focus group participants were evenly split between metered and unmetered households.

Unmetered residents were found to be less aware of the water scarcity challenge than metered residents, and generally felt more disconnected from both their own water usage and water bill. This contrasts with other utilities and services such as energy – where they were seen to have much more hands-on experience.

Unmetered residents were also less focused on saving water than metered residents. This was not surprising given that they pay for water at a flat rate based on household size. Therefore, they neither incur a financial penalty nor gain any benefit from taking action.

Our current finding about the unmetered's willingness to act to save water is in line with findings from the Consumer Council for Water's (CCW) 2021 study which showed that unmetered customers are less likely to say they would fit water saving devices (22%) compared to metered customers (83%).

Analysis of responses from focus group and survey respondents, along with the study of wider research, strongly suggests that installed water meters motivate water saving behaviours.

4. Recognising the benefits of ‘smartness’

In order of magnitude, the three biggest benefits that residents attributed to smart water metering were bill accuracy, having better engagement with and control over usage, and environmental advantages.

Survey participants recognised the environmental merits of having a smart water meter, for example in relation to reducing their water consumption for the benefit of their local environment or to reduce carbon emissions.

A jointly authored Waterwise and Arqiva report on the environmental benefits of smart water found that smart water meters could reduce UK Greenhouse Gases (GHG) emissions by up to 0.5%. Published in early 2021, the report is freely available for download here.

This category of benefits emerged as the third highest ranked benefit in our survey behind having a more accurate bill and being able to control usage/bills.

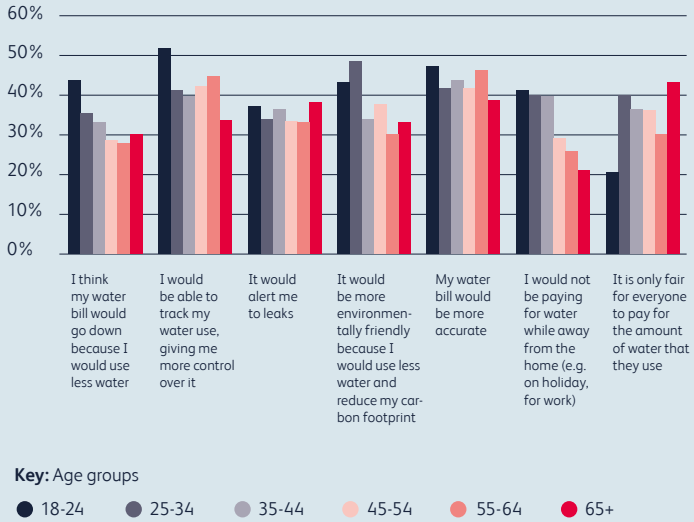
Fairness emerged as the fourth highest ranked benefit of metering, with 36% of survey participants expressing the view that everyone pays for water based on their actual usage. See chart (right).

The ability of smart water meters to help detect household water leaks was also identified as an important advantage for residents. 35% of respondents perceiving this as a benefit. This emerged as the fifth highest ranked benefit in our survey behind the environmental merits of smart water metering.

Key benefits in ranked order

- Bill accuracy
- Tracking and control over usage
- Environmental benefits – usage and carbon footprint reduction
- Fairness in terms of paying for what you use
- Alert to leakage

Recognised benefits of smart water metering across age groups



The equity issue

Fairness emerged as a benefit of metering cited by some residents and stakeholders.

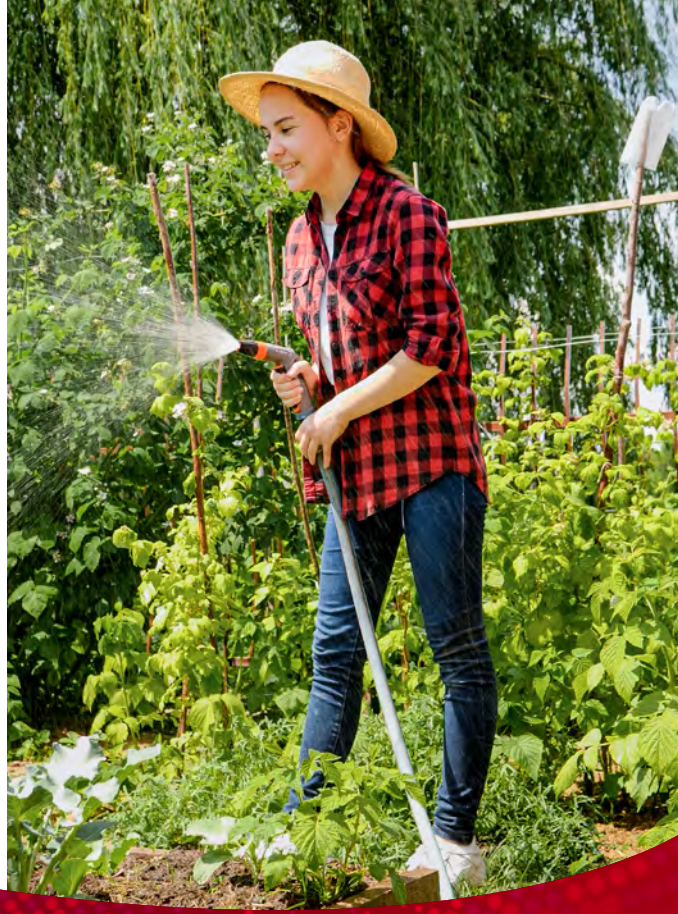
36% of survey participants expressed the view that everyone should pay for water, based on their actual usage.

Waterwise believes that metering is the fairest way of charging for water, providing that residents that struggle to pay are supported.

This stance is in line with the CCW’s position[1] that “metering is the fairest basis for water services charging”.

This subject of fairness may become increasingly important in England and Wales as meter penetration increases with a reducing minority being charged a flat rate irrespective of usage.

In a 2019 survey of 1,000 people in Wales[2] respondents who had a water meter were asked whether they thought all households should be required to have a water meter. 70% said yes and only 8% disagreed. Fairness, with people paying for what they use, was identified as one of the top five benefits from smart water metering in our survey.



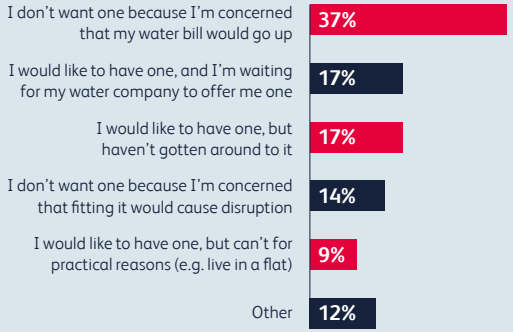
1. https://www.ccwater.org.uk/priorities/your-priorities/working-to-support-customers/compulsory-metering/

2. https://gov.wales/public-attitudes-water-efficiency-wales

5. Barriers to uptake

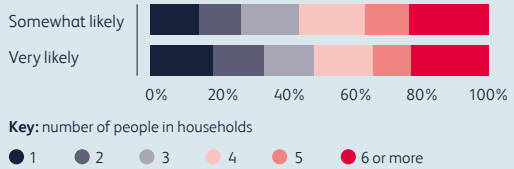
The most common barrier to uptake identified both in this research and in the wider literature is residents' concern that their water bill will go up. Our survey found 37% of respondents were concerned about this possibility. However, this barrier is generally faced by other smart metering technologies such as energy and is not exclusive to smart water metering.

Barriers to uptake

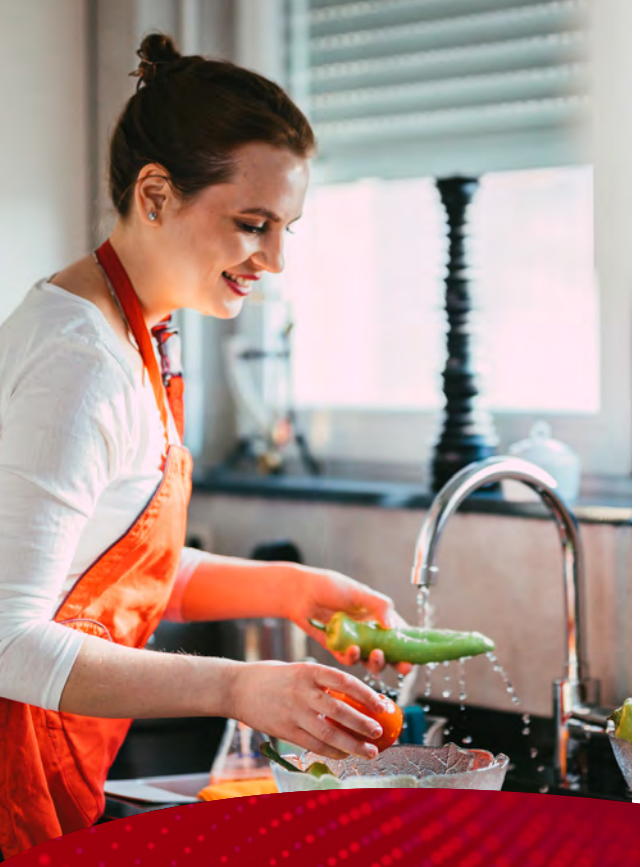


Property also emerged as the main predictor of objection to smart water metering. A combined 48% of participants living in households of 6 or more people were 'somewhat likely' or 'very likely' to reject the offer of a free smart water meter. A surprising number of people in 1 or 2 person households expressed a concern over the size of bills – even though these groups would be very unlikely to face an increase. This supports the importance of information and clear communication to dispel myths around smart water metering.

Objection to smart water



Despite these concerns, 80% of unmetered survey respondents would still investigate getting a smart water meter if they knew it would save them money and be free to install.



6. Recommendations

- When communicating with the public about smart water metering, **segmenting audiences** according to what they might view as the biggest benefit or the strongest motivator for uptake and **tailoring messages will be more effective** than a generalised 'broadcast' style communication.
- When rolling out meters, it will be important to **engage with residents about underlying factors such as water behaviours** and normative usage practices that shape their water demand.
- Providing households with information about smart water metering and being clear about actions to take to get a smart water meter can help to increase awareness and address misconceptions about the device. If successful, increased public awareness could lead to people 'buying-in' to the objective of taking up a smart water meter to save water or at the very least, gain individual benefits. This can be beneficial for a mandatory rollout programme.
- Having **access to facts, figures, and tools** that are specific and relevant to residents can also support their decision making. These can include case studies from comparable households or the use of the CCW calculator, as well as the **use of trial periods** that enable households to test the impact of a smart meter on a shadow bill.
- To increase public receptivity to smart water meters, qualifying **households will benefit from being provided with clear information about the cost implication** and process of installing a smart water meter. Also, unqualifying households will benefit from being informed about the reason why they cannot have a water meter installed and the next line of action to be taken to achieve water efficiency.
- Residents concerned with their water bill increasing following installation can **benefit from face-to-face engagement**. And in addition to using incentives to motivate uptake, proxies such as landlords can be engaged and liaised with to increase smart water metering in households with occupants who do not feel responsible for their water.

About the authors

Waterwise was founded in 2005 and is the leading authority on water efficiency in the UK. It is an independent, not-for-profit organisation and its vision is that water will be used wisely, every day, everywhere.

Waterwise works in a range of areas including: influencing and shaping policy and legislation; driving strategic and practical ambition in the water sector; designing and delivering research; media, campaigns and promotion; running demonstration projects; promoting water efficient technology; helping businesses be more water efficient; facilitating partnerships; brokering new solutions; and training water efficiency practitioners.

Discover more www.waterwise.org.uk

Arqiva is a communications infrastructure and media services company, operating at the heart of the broadcast and utilities industries in the UK.

Arqiva builds and monitors the digital infrastructure which facilitates the operation of smart water networks, through its dedicated and secure radio network. In addition, Arqiva has a growing portfolio of complementary services designed to support both water companies and consumers to manage water use and minimise leakage and also address issues across the network from clean water generation through distribution to waste water and sewage.

Discover more www.arqiva.com

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