

Arqiva Submission: Priorities for the Senedd Climate Change, Environment, and Infrastructure Committee

1. Arqiva is a communications infrastructure and media services company that is the only large-scale provider of smart water metering infrastructure in the UK. We work with some of the largest water companies across the UK, including Anglian Water, Thames Water, Northumbrian and Yorkshire Water, to futureproof transformation across their businesses through the provision of solutions that identify leaks, abnormalities and consumption levels, and provide actionable data and insights to both water companies and their customers that power decision-making.
2. Arqiva welcomes the opportunity to inform the new Senedd Climate Change, Environment, and Infrastructure Committee's priorities and focus for the upcoming parliamentary term. Looking ahead, both society and industry face a myriad of challenges due to climate change and future fluctuations in water demand and supplies. The actions that the water sector together with the Welsh Government and the regulators take in the next five years will be critical in protecting our natural environment for decades to come.
3. The effects of climate change are making rainfall less reliable which, together with an increasing population and unresolved leakages in both water and wastewater services, is placing ever-increasing pressure on water resources. Without urgent action to address the sustainability of our water supply, the UK faces severe water shortages in the coming decades and parts of the UK will run out of water in the next 20 years.
4. This pressure point is becoming increasingly immediate. Recent findings from the Climate Change Committee (CCC) have argued that actions taken to help bolster the nation's resilience and adaptation to the effects of climate change have "failed to keep pace" with growing climate related risks.¹ However, the CCC emphasises that "further reductions in water use by households would make them less vulnerable to water shortages" in future.²
5. In order to successfully mitigate and adapt to the effects of climate change, it is incumbent on the Welsh Government, the regulators and the private sector to work together to ensure the resilience of our natural resources and support the public in making environmentally conscious decisions. This is an area where the water sector has already shown strong leadership, however a holistic government-led approach is now needed that utilises the strengths of every aspect of the water industry and encourages a partnership approach.

The importance of water in addressing the climate emergency

6. Arqiva believes that the most profound and urgent risk facing the water sector, and society at large, is the climate emergency. The water sector's ability to reduce its strain on Wales' natural resources will have a fundamental impact upon the country's efforts to prevent the deterioration of the environment.

¹ [Climate Change Committee](#), Independent Assessment of UK Climate Risk, June 2021

² [UK Climate Risk](#), Water Briefing – Findings from the third UK Climate Change Risk Assessment (CCRA3) Evidence Report 2021, June 2021

7. Climate change should be viewed as an opportunity to fundamentally re-evaluate the water industry's role in supporting environmental efforts, and to reassess how the Welsh Government can encourage a partnership approach and enable new and collaborative ways of working within the sector. If we are to meet this challenge successfully, it is critical that every aspect of the industry, together with government, regulators, and consumers, play their part both individually and as a collective.
8. The water sector has already shown strong leadership in the fight against climate change, committing to a target of net zero by 2030 for its operational emissions. However, given that approximately 6 per cent of the UK's total greenhouse gas emissions each year (circa 27 MtCO₂e³) comes from activities relating to the production and use of water, it is clear that further measures to reduce the amount of water we consume as a society, and protect the existing water supply, are urgently required.
9. Enabling innovation and new technologies that drive efficiencies will be vital in these efforts. By way of example, Arqiva's smart water infrastructure drives connectivity across the network and equips water companies with the data, control and solutions they need to significantly reduce wastewater leakage and support customers to manage personal water use through technologies such as advanced metering infrastructure (AMI) smart water meters.
10. However, government leadership is required if we are to harness the full potential of the water industry in meeting Wales' environmental objectives. The Welsh Government and regulators have a vitally important role to play in delivering a holistic policy and regulatory framework that drives change over the long-term and within every aspect of the sector; from the management of wastewater and sewage, to incentivising the water companies to support their customers to actively manage their water usage.

The role of smart water networks in meeting environmental objectives

11. Arqiva strongly believes that smart water networks have a vitally important role to play in realising environmental and water efficiency benefits. The connectivity that smart water infrastructure delivers enables water companies to actively manage their network and take action to reduce leakage and implement technological solutions that support environmentally conscious decision-making. However, the implementation of these networks is not uniform across the UK or between nations.
12. In order to achieve the water industry's environmental objectives at the fastest possible pace there needs to be a meaningful acceleration in the nationwide rollout of smart water networks and metering, fully supported and enabled by the policy and regulatory frameworks which drive the development of the water sector. We therefore urge the Welsh Government to review its current position on smart water metering and put in place a framework that enables and incentivises the water industry to conduct a national roll out of smart water meter networks.
13. The real-time (or near real-time) data provided by Advanced Metering Infrastructure (AMI) smart water meters (in contrast to automatic meter reading (AMR) meters which deliver data much more infrequently), provides a much more accurate and up-to-date measurement of water usage across the distribution chain. This allows the industry to identify leaks more quickly and with greater efficiency, reducing water consumption,

³ [Water UK & Artesia](#), Pathways to long-term PCC reduction, 2019

waste and overall costs. Indeed, in the UK today, over 2.9 billion litres of water put in the public supply is lost to leakage every day.⁴

14. Arqiva's own analysis shows that smart water metering can also directly contribute to Wales's ambitions to meet net zero economy-wide by 2050. Based on evidence compiled in conjunction with Waterwise on the impact of smart meters that have already been fitted, we estimate that if just one million smart water meters are fitted in the UK each year for the next 15 years, then by the mid-2030s, savings of at least one billion litres of water a day (1,000 Mld) could be made and the UK's current total annual greenhouse gas emissions could be reduced by up to 0.5 per cent (2.1MtCO₂e).⁵
15. To use an example from England, in April 2021 Thames Water celebrated the installation of half a million smart meters in its region. The company claimed that as of that date, smart meters had helped to detect over 28,000 leaks on customers' private supply pipes, saving up to 43 million litres of water per day. At the time, Thames Water said that "customer side leaks account for around a quarter of Thames Water's total leakage and the meter data was cited as playing a large part in the company meeting its leakage reduction target in 2019/20." This example alone presents a significant indicator of the positive impact the technology could have if adopted in Wales.⁶
16. Metering water is also seen by customers as the fairest way of charging for water. This is evidenced and supported by many of the water companies own research. It is vitally important that vulnerable customers are protected, but we should not shy away from what the end customers see as an equitable method for managing a vital resource.
17. The value of smart metering has been recognised by several national bodies including Ofwat, the National Infrastructure Commission, the Consumer Council for Water and the Environment Agency, as well as by the water companies themselves. The Climate Change Committee (CCC) has stressed the need for water efficiency measures to be included in Wales' efforts to build energy efficient and low-carbon homes and buildings⁷, and highlighted the importance of enhanced water metering in reducing future water deficits within its recently published UK Climate Change Risk Assessment (CCRA3).⁸

Conclusion

18. The actions that the Welsh Government, regulators and the water industry take over the period of the next Senedd term will be critical in meeting Wales' net zero ambitions and ensuring our water supply is protected for decades to come. Arqiva is urging the Welsh Government to prioritise the development and implementation of a new Water Strategy, and believes that mandating the nationwide rollout of smart water meters must be part of a holistic policy-led solution that recognises the importance of connectivity across the water network in delivering environmentally conscious solutions.
19. Therefore, we would strongly welcome the Senedd Climate Change, Environment, and Infrastructure Committee's focus on this vitally important area of environmental policy and would be delighted to contribute to the Committee's work going forward.

⁴ Water UK, England and Wales, Apr 2019 - Mar 2020

⁵ [Arqiva](#), Smart water metering and the climate emergency, April 2021

⁶ [Thames Water](#), Thames Water hits half a million smart meter milestone, 2021

⁷ [Climate Change Committee](#), Advice Report: The path to a Net Zero Wales, December 2020

⁸ [Climate Change Committee](#), UK Climate Risk: Water Briefing, June 2021

About Arqiva

20. Arqiva is a communications infrastructure and media services company, operating at the heart of the broadcast and wireless communications industry in Wales and across the UK. It is at the forefront of network solutions and services in an increasingly digital world. Arqiva is the only large-scale provider of smart water infrastructure across the UK. It has contracts with some of the UK's largest water companies, including Anglian Water, Thames Water and Yorkshire Water.
21. Arqiva builds and monitors the digital infrastructure which facilitates the operation of smart water networks, through its 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.
22. Arqiva's radio network is private and operates at low frequency, meaning it can penetrate through walls in ways that mobile networks cannot. The benefits of smart meters rely on the ability to connect with them and receive data reliably over time. This is often a challenge as water meters are often located in places that some communications technologies find hard to reach (such as underground). Arqiva's private, low-frequency radio network guarantees reliable coverage to meters in hard-to-reach locations and avoids the susceptibility and interference of sharing spectrum with other users and applications. As a Critical National Infrastructure provider, our broad system of connectivity solutions and managed services provides a base to serve the growing needs of the water sector over time. We are actively investing to enable us to support the sector and look forward to playing our part in addressing the challenges identified by Ofwat in this consultation.
23. Arqiva is owned by a consortium of infrastructure investors and is headquartered in Hampshire, with a network of sites across all nations of the UK.