



Your local supply, on tap

Our water meters and AMR technology

All you need to know about household meters



What is a water meter?

A water meter is a device that measures the volume of water you consume. It is fitted to your supply pipe and measures the volume of water passing through in cubic metres.*

**Charges Scheme 2016/17.pdf*

A cubic metre equals 1,000 litres of water. 1,000 litres is equivalent to:



AMR technology and how it works

The water meters we're installing at household premises are manufactured by Itron and, as you'd probably expect, comply with all applicable technical standards – including the EU Measuring Instruments Directive.

The meter is an Automatic Meter Reading (AMR) meter and is not a Smart Meter.

The meter measures your water consumption. The numbers on the analogue display click round as the water moves a paddle fitted inside the meter. The AMR transmitter unit fitted to the top of the meter is inactive and transmits the consumption data to a handheld receiver using Radio Frequency (RF) wave energy only when our meter reader walks or drives past your meter. This transmission only takes a few seconds, after which the AMR unit remains inactive until the next meter read is taken.

RF waves are a form of electromagnetic energy and are all around us from natural sources like the sun, movement of the earth's crust and from man-made devices like microwave ovens, mobile phones and other wireless devices.

The meters are the property of Affinity Water Ltd and we take responsibility for their maintenance.

Did you know?

water meters are in common use for properties throughout the UK and right across Europe.



Meter fact

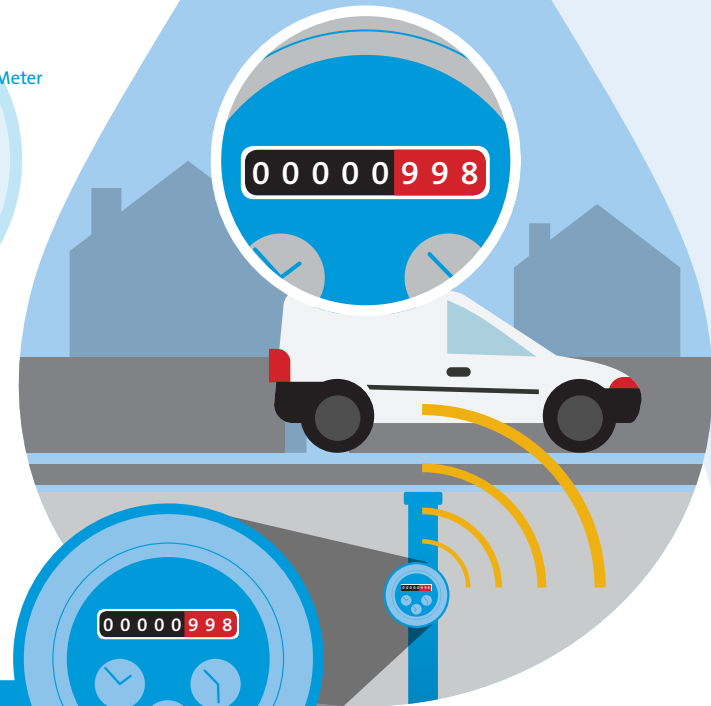
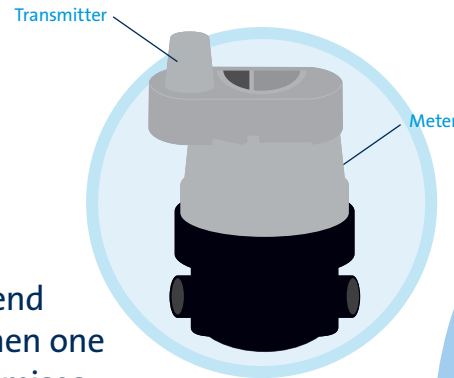
Water meters are an important step in providing information about household water consumption. The more you know about the water you consume, the more water you can save!

How will my water meter be read?

We'll read your water meter remotely using 'drive-by' technology.

How does it work?

- Affinity Water meters feature Automatic Meter Reading (AMR) technology
- A transmitter fitted to the top of the meter will send consumption data to a hand held receiver unit when one of our meter readers walks or drives past your premises
- We won't usually need to open the meter box or lift the meter lid to take a meter reading
- The meter reading provides consumption data relating to the amount of water measured in cubic metres that has passed through the meter
- 'Drive by' technology is simpler and more convenient for you
- If you are on a metered charge we will read your meter every 6 months
- AMR meters can be read without entering your home.



Meters emit an extremely low level radio wave signal, comparable to the signal strength required to unlock your car door¹.

¹Source: Irish Water - Irish Water meters and AMR technology

How will my water consumption data be used?

Once installed, an AMR meter will automatically transmit your water meter reading to a handheld receiver when a meter reader walks or drives past your house. The consumption data we collect can only be gathered by the hand held receivers we use to communicate with our meters. We'll then use consumption data to produce your cost comparison letter or metered charges bill. We'll also use it to let you know if we detect any leaks on the pipework at your premises.

All consumption data collected from your meter will be held securely under the terms of the Data Protection Act and your consumption data will not be sold to any third party organisations. As you'd expect, we take data usage and storage extremely seriously. You can find out more about how we protect your personal data, at www.affinitywater.co.uk/mydata

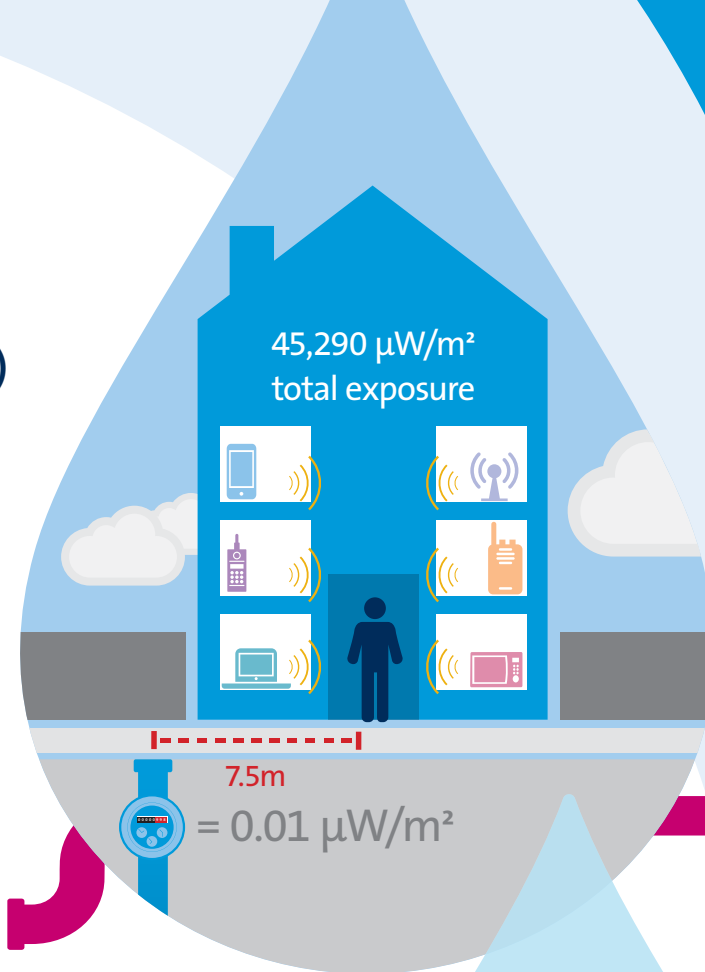


None of your personal data is held on the meter. Only we know which customer is linked to which meter.

Is AMR technology safe?

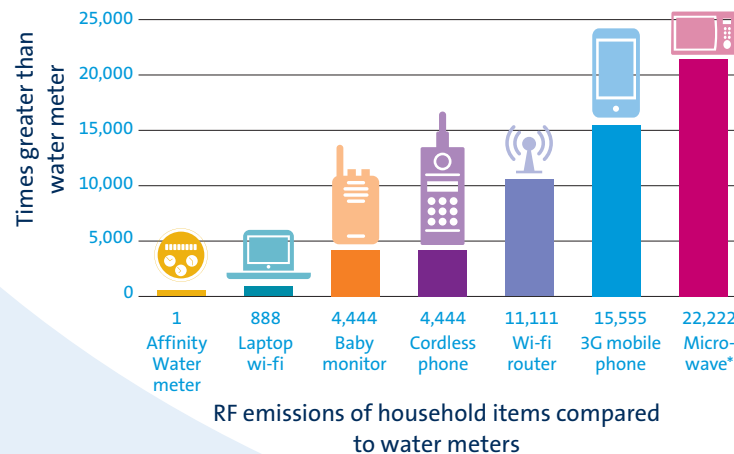
Yes! The AMR units on the meters we install are very safe when measured against international safety limits for radio-frequency (RF) wave energy. They only transmit consumption data (for a maximum of 10 seconds) when our meter readers pass your premises.

- The effect from the RF waves from the AMR unit on the meter is 88,000 times lower than the ICNIRP2 safety limit at a distance of 15cm and 2.2 million times lower at a distance of 1 metre
- AMR units transmit 4,500 times less radio wave energy than a baby monitor.



How your water meter compares to other devices in your home

Every day, we use (and are close to) devices that use RF waves. The chart below shows how much greater the exposure to RF energy is from everyday household items, than from the AMR unit on your water meter.



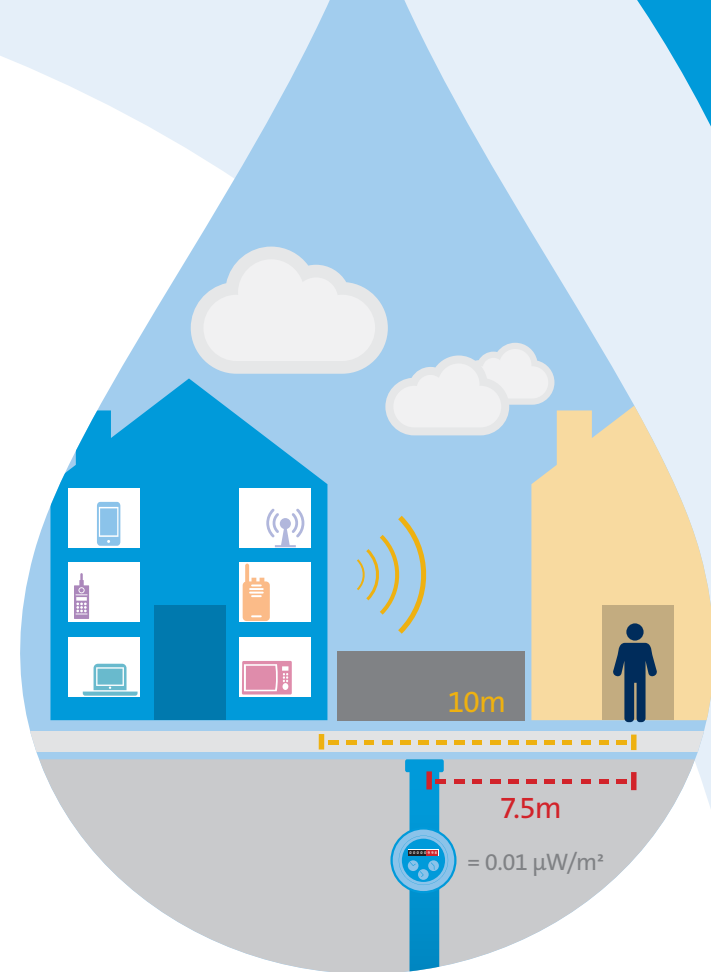
*Maximum allowable leakage from microwave oven
(Source: Irish Water - Irish Water meters and AMR technology)

RF waves are all around us – from natural sources like the sun and man-made devices like mobile phones. They are measured as power density – or, in other words, the rate of energy that flows through a given surface area

How safe are water meters in built up areas?

Water meters are very safe, even in towns or cities that have a lot of buildings*. The power density experienced from RF devices fades away very quickly. For example, power density drops by 100,000 times at just 10 metres away from an RF device. This means that even in a very built up area (for example a housing estate) the exposure from nearby meters is almost nothing.

Even if you don't have a 3G mobile phone, Wi-Fi router, laptop Wi-Fi, cordless phone or baby monitor, you're still exposed to RF waves from any such devices in your neighbour's home. In fact, the RF exposure from your water meter is 50,000 times less than the exposure from a typical collection of wireless devices in your neighbour's home!



Meter fact

The exposure from a water meter is 4.5 million times less than the total exposure from the existing radio wave-emitting devices in a typical home.

*When measured against international safety limits for radio wave energy

What do the World Health Organisation say?

Measurement of Radiofrequency (RF) Emissions from BC Hydro's Itron Smart Meters

Your consumption data and privacy: questions and answers

Q What personal data does the AMR unit on my meter hold?

A Each meter has a unique number which is linked to your water account. None of your personal data is held on the meter. Only we know which customer is linked to which meter. This information is held securely at Affinity Water and is used to produce your metered charges bill.

Q Can you tell when I am at home from my meter?

A No, all we know is how much water has been consumed since the meter was last read.

Q Is it a smart meter?

A No, your meter only records water consumption and transmits this data to a handheld receiver only when our meter reader walks or drives past your meter.

Q What do you use the consumption data for?

A We use the volume of water consumed to calculate your bill. If your consumption indicates that you have a leak, we'll contact you to let you know.

Q What are the rules about how you use my consumption data?

A We hold any consumption data under the terms of the Data Protection Act. To find out more about how we protect your personal data, please visit www.affinitywater.co.uk/mydata

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