



The Pleco smart meter helps users see exactly where they are using the most water, to make it easier to cut back | Photo source <https://www.nudgesystems.com/explore/>

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AN ECO-FRIENDLY 'FITBIT' FOR YOUR WATER METER

 COMPUTING & TECH

An easy to use water meter measure how much water is used by each appliance, to help users conserve water

Spotted: Around a quarter of the planet is already facing water shortages and high water prices. But it's difficult to save water when you don't know how much water you are using. California-based Nudge Systems has now developed a device that can help – the Pleco smart meter watch. The watch attached to a water meter and provides real-time information on how much water is being used.

The system includes a sensor (the “watch”), a transmitter and battery housing (which is hard-wired to the sensor), a display unit and an app. The sensor is attached to the home's existing water meter using a simple strap. The sensor gathers data and passes this to the transmitter, which in turn sends to the display unit. This uses the homes WiFi network to relay the data to the cloud for analysis, and also displays the results – which can also be accessed via the app.

The system analyses water usage to determine total water usage each day, but even more usefully, it can also determine how much water is being used for things like flushing the toilet, running the washing machine, showering, etc. It is also able to detect leaks and alert users to their presence.

According to Daniela Camargo at Nudge Systems, “Most of the water meters in the US use the same working principle of magnetic coupling between the moving part inserted into the water flow and the dial mechanism. We created a system that detects this magnetic field and processes the signal from it, from a single point at the water entry. Our unique proprietary algorithms then process these signals and convert them into usage [information].”

Only 2.5 per cent of the water on earth is freshwater, and as the population grows, saving water and using it efficiently will become more important. Perhaps this is why we are seeing a variety of innovations aimed at water conservation. Ideas we have recently covered include a home [water conservation](#) system that uses the IoT and an energy-saving [water desalination](#) system.

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Takeaway:

The hope is that once users know exactly where their water is going, they will be in a better position to adjust their habits or adopt water-saving technology in the areas that need it most. For example, if users realise that watering the lawn is using a large amount of water, that could encourage them to adopt to drip irrigation. By telling users exactly where they use the most water, the Pleco could be especially useful for people who can't afford to adopt a wide range of new water-saving appliances. Instead, they can replace the most wasteful appliances first.