

CASE STUDY	
Location	Northern Ireland
Period	3 Months
Client	Airtricity
Scheme	NISEP
Units Distributed	25,000 Household
Tonnes CO2 Saved	25,000

Background

Primary product used in this scheme was the Challis Water Widget® which is a shower aerator using the Venturi Effect; this means that when water flows through a pipe the pressure changes depending on the diameter of the pipe, so if you change the diameter you change the pressure. This means that by putting a small hole in a device with a step change in diameter you can suck in air which mixes turbulently with water, resulting in a volumised flow from the shower head which uses less water but has the same pressure and feel as before. The Water Widget® is unique in that it has been designed to be reversible so it fits on both fixed head and hose showers.

Heating water in the home is responsible for about 5% of Northern Ireland's CO2 emissions and showering is the fastest growing use of water. Therefore the widget can address both of these issues very cheaply and our data has shown that fitting rates are very high. In addition as the water Widget Widget® applicable for around three quarters of homes it is an effective way of reaching hard to treat homes where cavity wall or loft insulation cannot be fitted.

The LittleFoot Water Widget® was selected by Airtricity for participation in this project due to its high level of performance combined with low cost and high carbon saving capacity.



Approach

The Water Widget® is designed to be small enough to be distributed en-masse or supplied by direct mail. The Water Widget® was allocated a carbon saving value by OFGEM (the UK Government energy regulator) under the Carbon Emission Reduction Target (CERT) scheme, this enabled the carbon savings to be sold which ensured the product could be given away free to the customer. Distribution was via major shopping centers across Northern Ireland.

In all cases the operation of the Water Widget® and how it should be fitted and used were explained to the customer and Water Widgets® were only given out where they could be used and where the customer had requested one.

In addition surveys of customers were undertaken to ensure that devices were being fitted correctly and were being retained. A database was established which enabled Challis to track installations and to ensure that carbon and water savings from duplicate requests were not counted.

Environmental Benefits

In total around 25,000 devices have been distributed to date. A lot of effort was put into quantifying and monitoring the environmental benefits. The CERT application process which is overseen by OFGEM has allocated a saving of 1.18 tonnes of CO₂ for each Water Widget®. The water savings will vary depending on shower type and length of time spent in the shower but savings of 15 litres per shower should be expected (this is around 10% of an individual's daily water consumption) and relates to about 50 litres per household per day.

The current level of accumulated savings are over 25,000 tonnes of carbon, over the lifetime of the Water Widgets® (around 10 years).

There is an ongoing programme of monitoring and surveys to ensure that customers are fitting, using and retaining the device and that the carbon and water savings are being maintained.



Wider Benefits

The beneficiaries of the scheme are:

- Customers who will see their utility bills reduced, without seeing a reduction in the quality of their shower experience.
- Households will also see how easy it is to do their bit for the environment
- The environment will benefit as the Water Widget® means less water consumption and less CO2 production due to having to produce less hot water
- Retailers will benefit as it provides a funded and very simple way to help customers help the environment and saves them money, whilst generating revenue
- Utilities benefit as energy companies have a cost effective way to meet CO2 targets through CERT, and water companies see a reduction in per capita consumption which reduces water stress
- Challis has benefited through the production of a profitable and popular device and this has led to the creation of new UK jobs for manufacture and distribution.
- The engagement of around 25,000 people in discussion around water and energy saving as part of the distribution process will hopefully lead to greater engagement with the wider environmental agenda, particularly from those people who are not normally receptive to eco-messaging.



Long Term Activity

Hopefully the large numbers of Water Widgets® distributed will lead to market transformation in the shower sector. Prior to the programme the penetration of aerated or water efficient showers in the Northern Ireland was fairly low, now there is a Water Widget® in around 10% of UK households this will hopefully shift attitudes so there is a more positive view of water efficient devices and this will drive future purchasing decisions.

Challis is currently in discussions with a number of other UK retailers including supermarkets about distributing Water Widgets®. At the same time they are looking at the distribution opportunities internationally using VCS voluntary carbon saving schemes to provide free Water Widgets® en-masse.

VCS Voluntary Carbon Scheme

The Verified Carbon Standard (VCS) is one of the leading standards for voluntary carbon offsetting. It provides a credible but simple set of criteria that provides integrity to a voluntary carbon scheme such as ours. The VCS ensures that all project-based voluntary emission reductions are independently verified to meet its criteria – defined as Voluntary Carbon Units (VCUs) - represent real, quantifiable, auditable, additional and permanent project-based emission reductions.

Challis has recently developed and has had approved a VCS Methodology based around our patented Water Widget

Replicability and Legacy

We believe that by providing a water and energy saving device free to household's en-masse via trusted retail channels is a great way to engage people with environmental issues whilst saving them money. It brings the issues of climate change and water stress into the houses of millions of people via their high street shops and supermarkets, meaning that people can take action and save money. Hopefully this project will demonstrate to other organisations the possibility of using mass retail distribution as a route to engage large number of people with environmental issues.

Additional Products Include in the Offer

Water Widget® Cistern Bag:

The Water Widget® Cistern Bag was distributed along with the Water Widgets® to provide a more complete offer and added value to the client as such over 4 million have been distributed to UK homes saving additional water.

The Water Widget® Bag is a durable, low cost, user friendly toilet tank water saver that can be used to tune up water wasting toilets and make them more of a water saving, efficient toilet. The Water Widget® Bag is the least complex and easiest to install toilet tank water saver on the market. The Water Widget is® designed to grip seal and stand up next to the inside of the toilet cistern wall displacing up to 1.2 litres of water per flush. Water is saved because the toilet tank never needs to refill the space occupied by the Water Widget® Bag with water. Many water saving displacement devices actually sit in the bottom of the cistern below the siphon outlet, where the water displacement has no effect whatsoever.



Unlike our competitors our unit stands up in the cistern enabling it to maximise its displacement capability. It saves 1.2 lts to 2.4 lts of water depending upon whether one or more Water Widget® Bags are used. The Water Widget® Bag is lightweight, easy to distribute, cost effective, easy to install, never needs maintenance, water efficient, water saving, and with full fitting instructions printed on it is a great addition to any water conservation effort.



Shower Timer App:

Also available free of charge to customers has been our innovative shower timer App for the i-phone

This state to the art shower timer app can be quickly and easily downloaded to any i-phone and once very basic data, such as current shower flow rate and cost of water, has been entered by the customer the app is ready to go. With the i-phone positioned on a convenient dry surface somewhere in the bathroom its aerospace technology listens for the shower to start, activating the app. When the customer finishes their shower the app hears the shower finish and automatically calculates the amount of water & energy used and actually provides costs involved in that shower.

To encourage shorter showering times the app can be set to alarm when the shower timer is close to optimum time or can indeed be pre set at an ideal showering time.

From a research point of view this app is invaluable as it can store multiple shower timer events over an extended period, the data from which can be downloaded over the internet enabling data from 1,000s of units to be analyzed thus involving 1,000s of your customers in your water conservation projects at little or no cost.

Click Here to View: <https://itunes.apple.com/gb/app/challistimer/id373595701?mt=8>

For Further details please do not hesitate to call Chris Challis on 0044 1628 529024 Thank you in anticipation of your kind consideration