



## Education & Demand Management Strategy 2012-2015

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## 1. Background

On 1 July 2009, three water corporations opened their doors to manage the water and wastewater services of Tasmania.

Owned by local councils in each of the state's three regions, the corporations:

- Provide water and wastewater services to more than 190,000 customers
- Employ more than 700 people
- Have a combined annual revenue of \$220 million
- Are expected to invest in a major capital program valued at more than \$1 billion over the coming decade.

### **Water meters**

One of the more significant aspects of the industry reform and intended capital works program is the introduction of water meters into unmetered properties. Southern Water has the largest task as it is largely unmetered, and a \$30 million project to roll-out around 50,000 residential water meters by 30 June 2012 is underway.

The water meters are essential to impending pricing reform, as they measure water consumption.

In August 2009, the Australian Government announced that it would partially fund the roll out of meters with a \$10 million grant. This grant is being shared between the three corporations, with Southern Water to receive 50%, and Ben Lomond and Cradle Mountain Water 25% each.

A requirement of the funding deed is that the water corporations would develop and implement an education and demand management campaign linked to the introduction of water meters and the new pricing approach which will commence on 1 July 2012.

### **Water consumption**

Tasmania's water consumption averages show a chequerboard of behaviours. In the north and north west, where the majority of properties are metered, consumption on average is lower than in the south, where the majority of properties are not metered. Without meters, it is not possible to accurately estimate household averages, however Southern Water believes average consumption is 343KL per residential connection per year. The average residential consumption in most other parts of south east Australia is 200KL per annum.

In Southern Water's Asset Management Plan, 2011-2040, the water demand graph for the period 1999 to 2011 shows little change in overall consumption. However, with a population growth of 9.26% over the same time and an increase in irrigation customers for surplus water, domestic consumption per capita is assumed to have moderated.

The state's profile also differs from mainland Australia, where significant and widespread drought conditions over the past decade spawned drastic solutions, ranging from draconian water restrictions through to major capital solutions such as the development of desalination plants.

In Tasmania, drought made an appearance in eastern and central Tasmania where there are low population levels. Drinking water supplies in the state's urban areas – Hobart, Launceston, Devonport and Burnie – remained relatively secure. On occasion, the greater Hobart councils opted to introduce low level water restrictions as a means to balance supply and demand and ease system pressure.

There is a clear argument for the need to decrease water consumption, particularly in southern Tasmania.

- With infrastructure in poor condition, Southern Water will need to inject significant funds into upgrades and extensions of plants, pipelines and storages over the coming decade and this cost can be ameliorated by decreased water usage.
- Significant network water losses can be located through property and zonal metering, and addressed.
- Improved consumption data can be used to more accurately design infrastructure.
- Property owners can identify and address property leaks.

To achieve these savings, a reduction in the average level of water consumption per property is required across Southern Tasmania.

The installation of water meters has the following benefits:

- Property owners become aware of how much water they are using and can be informed about appropriate levels of water usage
- Southern Water can analyse water consumption patterns and detect network leakages
- Southern Water or the property owner can analyse data to detect property leakages

This document presents Southern Water's high level strategy which will guide a series of demand management and education campaigns for its customers over the coming years. It identifies different stakeholder groups and the approach and timing for each group. Each year, Water Conservation Education Plans will be developed for identified stakeholders to achieve specified objectives.

As this program of activity is the first major undertaking of this kind in Tasmania's water sector, the campaigns will commence at a basic level of messaging and build in scope and sophistication as customers' knowledge and understanding grows.

This Strategy should be considered in conjunction with Southern Water's overarching Customer & Community Relations Plans.

## 2. Water Metering Project Objectives

Southern Water's stated objectives in rolling out water meters are to:

- Achieve potable water savings of 6,453ML
- Assist the Tasmanian Government to meet its National Water Initiative obligations by supporting a more reliable and robust system of pricing. A two part pricing system will be introduced, incorporating a metered variable water usage charge.
- Introduce a fair and equitable 'user-pays' approach for pricing water to consumers. Provide information that will enable customers to make informed choices on their usage of water and to address household losses.
- Reduce water losses by assisting with leak detection and repair within supply and household systems.
- Foster community acceptance for the introduction of water meters through a community campaign.
- Improve the health of the environment particularly upstream resources, including rivers and other environmental flows, through better management of downstream water supply and usage.
- Benefit the environment through a reduction in the requirement for water pumping and consumption of energy requirement for water treatment and the use of treatment chemicals.
- Defer the need for significant amounts of new augmentation capital works.

### 3. Strategy aims

There are three broad ways in which Southern Water can influence its customers to change behaviour:

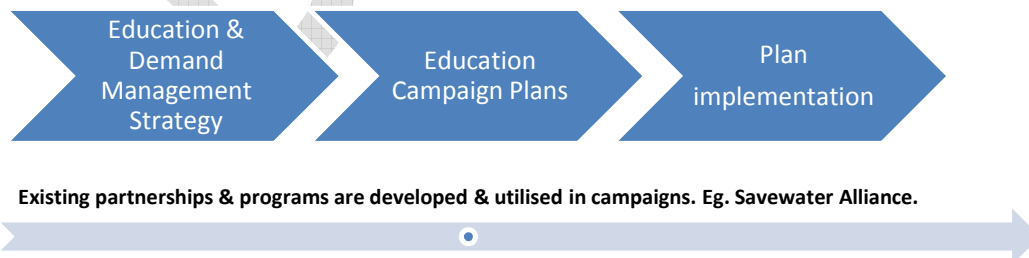
- By using less water through thoughtful consideration and the use of water saving devices or practices.
- By identifying water losses in private infrastructure and taking actions to rectify or minimise them.
- Pricing is another way in which customers can be influenced to alter behaviour, the prices for 2012-15 are covered in the draft Price & Service Plan.

Southern Water's strategies and management initiatives to reduce water losses in its bulk systems is covered in its pressure and leakage management planning documentation.

The aims of this Education & Demand Management Strategy are to:

- Identify broad stakeholder groups to be targeted through water conservation education campaigns in Tasmania
- Evaluate relevant market research findings with regard to water consumption
- Outline the stakeholder engagement processes to develop water conservation campaigns
- Recommend a broad approach which targets each identified stakeholder group
- Develop timeframes, budgets and the resources required to implement annual campaigns.

Detailed campaign information will be contained in Water Conservation Education Plans, which will be developed for each stakeholder group, upon approval of this Strategy.



## 4. Stakeholders

### 4.1 Stakeholder segments

For the purpose of achieving water savings among its customers in 2012-15, this strategy divides its 96,000 residential and commercial customers into two broad stakeholder groups, with sub-groups within these.

They are:

- Residential customers
  - Owner occupier residential customers
  - Low income customers
  - Customers with low literacy levels
  
- Commercial and industrial customers
  - The top 20 users (see appendix A)
  - Large water users (21-50 top users)
  - Water intensive users: hospitality, laundries, aquatic centres
  - Businesses

The lists above are indicative for the purposes of this strategy. When Water Conservation Education Plans are created each year, it would be necessary to understand and target the segments in more detail.

### 4.2 Link to other Southern Water stakeholder programs

In designing campaigns to target stakeholder segments, there may be major benefits gained from linking the conservation campaign messages and resources to other Southern Water programs.

For example, consultative work undertaken with the industrial sector for the development of Southern Water's **Wastewater Source Management Framework**, has revealed that major businesses prefer to communicate with one person at Southern Water for its range of water, wastewater and trade waste-related needs.

If, for example, the commercial and industrial conservation plan recommended targeting the top 20 (largest) water users through a special auditing and planning approach to reduce water and detect leakage, this could be combined with the one to one activities proposed for assisting customers with their trade waste management. This combined approach could help achieve the major objectives within this strategy and the organisation's Liquid Trade Waste Pricing and Management Policy.

Further examples of where the water conservation activity links with other Southern Water programs and includes the potential sharing of resources:

- **Backflow prevention** - communicating with customers who will be required to invest in backflow prevention installations
- **Environmental Management System** – by decreasing water use and particularly losses, risks identified in the Environmental Risk Register can be minimised and mitigated through the Conservation Plans.
- **Price & Service Plan** – as the 2012-13 pricing is implemented, there will be opportunities to explain to customers how conserving water can help bring variable costs down
- **Asset Management Plan** – as Southern Water’s asset management plan is implemented, there will be opportunities to demonstrate to customers that Southern Water is committed to demand management and how it is using zonal metering to work with customers in improved outcomes.

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## 5. Market research

### 5.1 Market research, Southern Water, September 2010

Market research was conducted in August and September 2010 to help develop the communications messages and methodology for the roll out of water meters. It also sought to understand the view of customers with regard to water conservation.

Quantitative research:

- While around 40% of respondents were aware of any changes regarding future water and wastewater charges, only 20% referenced the fact that all households would receive a water meter.
- Support and opposition for two-part pricing was polarised. 24% were strongly supportive and 13% largely supportive, while 22% were strongly opposed.
- In terms of the likelihood changing behaviour by having additional information on the water account:
  - 36% gave a score of 7 (very likely)
  - 11% gave a score of 11%
  - 16% gave a score 5
  - 8% gave a score of 4
  - 8% gave a score 3
  - 4% gave a score of 2
  - 18% gave a score of 1 (very unlikely)
- In addition, the survey also explored household leakages by asking:

Do you have any taps or toilets that are leaking at the moment?

  - 8% said they had a leaking tap or toilet at the moment
  - 26% said they had a leaking pipe over the past five years
  - 35% said they had a leaking tap or toilet over the past five years.
- Women are also more likely than men to support meters and two-part pricing.
- Older couple households are less supportive of meters, two-part pricing and less likely to modify behaviour.
- Renters, non urban respondents and those receiving social security benefits were more supportive of meters, two-part pricing, were less likely to feel inconvenienced and more likely to modify behaviour.

- Households with a combined annual pre-tax income of more than \$150,000 were less supportive of meters and two-part pricing and less likely to modify behaviour.

Qualitative research:

- Two distinct segments emerged:
  - Those at the lower and middle level of the ABS' Index of Economic Resources were more likely to have an interest in arguments around environmental benefits, resource conservations, social equity and public health.
  - Those at the higher end of the scale were less supportive of meters and two-part pricing and more interested in the economic benefits of metering.

## 5.2 Market research, Australians' Water Conservation Behaviours and Attitudes

In 2010, a national study was undertaken by Dolnicar and Hurliman (Australians' Water Conservation Behaviours and Attitudes) to provide empirical data about attitudes to water conservation and actual behaviours among Australians.

The Abstract cites the following conclusion:

*Results from a survey study of 1495 people indicates that Australians generally have very positive attitudes towards water conservation and water saving appliances, however these positive attitudes are not consistently translated into actual behaviour.*

*The main barriers to adoption of water conservation behaviours identified in the study are: the perception of inconvenience and impracticality, as well as costs associated with purchasing water saving appliances.*

*These findings highlight the fact that there is still substantial potential to be harvested in Australia through water conservation measures.*

The study is invaluable in also drawing together the findings of previous studies, identifying key findings:

- *Duncan, 1991, found that the effectiveness of demand management campaigns depends on a number of factors including: climate, consumer willingness to change behaviours, existing levels of water wastage, and the structure and intensity of the campaign.*
- *The largest study of Australians' views on water shortages and conservation (Roseth, 2006) found that the most frequently stated barrier to water conservation was the high expense of purchasing water savings device.*

- A July 2005 study (Clark & Brown, 2006) in Melbourne looking at the factors which influence water conservation found that “the key barriers to a widespread practice of conservation and alternative water usage includes: difficulty of implementation, cost and renter status.”
- In 1989, Nancarrow and Syme found that 80% of respondents favoured a rebate system being introduced whereby conserving water would be financially rewarded.
- In Dolnicar and Hurliman’s 2010 study, they found that “while general support is expressed by Australians, many actually lack crucial information to appreciate the contribution that the use of water efficient appliances makes. Maybe of even more of a concern, 44% of respondents state that water efficient appliances cost too much... “

The study found the following barriers among respondents:

**Table 5: Barriers identified to acquiring water efficient appliances**

Statement	Yes, % (frequency)
If it was impractical	86 (1282)
Quality	82 (1218)
No need for a new appliance	79 (1178)
Cost	76 (1130)
If it was inconvenient	63 (937)
Aesthetics	29 (433)
I use communal appliances / don’t buy my appliances currently	18 (264)

The results from the investigation of barriers indicate that a substantial proportion of Australians perceive a range of factors prevent respondents from purchasing water efficient appliances. Of those, the perception of impracticality, inconvenience and quality can be addressed in at least two ways: (1) by improving the design of these appliances to increase quality or improve usability as desired by the market and (2) by counteracting the perception of impracticality through communication campaigns.

From a public policy maker perspective, actions by manufacturers cannot be directly controlled, although they could be indirectly impacted through rebates on well designed appliances.

Communication campaigns are under direct control of public policy makers. The cost issue could be addressed through rebate systems and financial incentives. For example, many states and / or councils provide rebates for water saving washing machines and rainwater tanks.

Dolnicar and Hurliman make the following conclusions:

- Contrasting the current study with past studies, “there is still a high level of importance placed on water conservation.”
- “Australians have very favourable attitudes to both water conservation and water efficient appliances. However these attitudes are not always translated into action.”
- The proportion of actual adopters does not reflect the attitudinal enthusiasm...” and “...the highest adoption rates are reflective of public policy measures rather than conscious behavioural decisions... which come with a financial burden or inconvenience.”
- The main barriers to adoption of water saving appliances are cost, perceived quality, convenience and practicality.
- The fact that Australians are in favour of water conservation and water efficient appliances but do not quite put their money where their mouth is presents a major opportunity for water management in Australia by highlighting that a range of solutions could be adopted simultaneously.
- While supply sided measures, such as large scale water augmentation projects are required as an emergency solution, the results of this study indicate that there is still significant potential for water conservation.

Australians are open to the idea, but public policy makers may need to provide people with more information to change their attitudes as well as develop incentives which will reduce the financial burden and possibly reduce the perceived inconvenience of adopting water saving alternatives in their everyday behaviours.

This can be achieved through the further development of public policy measures (e.g. financial incentives) as well as social marketing campaigns (e.g. communicating information about the quality of water saving appliances as well as demonstrating how the use of water efficient appliances can be integrated into everyday life without substantial sacrifice in convenience) to encourage the translation of pro-conservation attitudes into actual conservation behaviour.

It should be noted, however, that in some instances the perceived barriers cannot be overcome so easily. For example, people who are renting properties have less opportunity to make changes related to the building, and regulations in some areas prevent rainwater tanks from being located in certain parts of a yard.

### 5.3 CSIRO research partnership

Southern Water's Scientific Services Division is exploring a partnership with CSIRO to undertake research in a range of water industry related fields.

The implementation of water conservation programs in a 'new' market and in a population relatively unaffected by drought or water restrictions provides an exciting research opportunity.

### 5.3 CSIRO Research partnership

While many of Australia's conservation education programs have been triggered by threatened water supply issues, the southern Tasmanian marketplace provides a unique research experience. Is it possible to persuade consumers to conserve water when supply is not at stake?

All previous research indicates behavioural change around water conservation has been difficult and challenging, albeit ultimately achievable with the carrot (incentives) and stick (restrictions and punitive actions) approach.

This Strategy and the Plans that will reflect this strategy's direction, do not include a stick.

Can behavioural change for water conservation be successfully achieved through education and incentive alone?

This strategy provides the specialist communicator with the extraordinary opportunity to test this approach, and the social researcher an opportunity to test and track this.

## 6. Stakeholder Engagement Process

Behavioural change is difficult to achieve at the best of times. It is vital that Southern Water engage with stakeholders to ensure that the plans which are developed have the best chance of succeeding.

The stakeholder engagement process proposed in this strategy is:

- a. An assessment of conservation programs within three other Australian utilities
- b. The creation of consultative groups within each targeted segment to help devise and/or evaluate ideas and have input into the development of the Water Conservation Education Plans
- c. Use of pilots to quantitatively and qualitatively assess the success of proposed programs
- d. Roll out campaign across entire segments and measure the campaign's effectiveness.



### 6.1 Assess existing conservation programs

This Strategy proposes that three Australian utilities which have demonstrably successful conservation programs in place be assessed and the relevant manager or executive interviewed.

The purpose of this activity is to understand how more mature utilities with experience and success in conservation programs have segmented their customer base and developed programs.

The outcomes of this assessment would be reported back to Southern Water's executive management team, with suggestions of what may be useful or relevant for Southern Water.

### 6.2 Water Conservation Consultative Groups

Southern Water's Customer Consultative Group Strategy enables the corporation to form special interest consultative groups to provide customer and community input into key policy initiatives.

This Strategy recommends the development of at least two Water Conservation Consultative Groups to capture community views and input.

As the stakeholder groups have differing requirements and views, and the campaigns will be quite different, it will be necessary to form the groups separately.

A Residential Water Conservation Consultative Group might comprise:

- Sustainable Living Tasmania
- Tasmanian Council of Social Services ( TASCOS)
- Master Plumbers Association
- 2 owner-occupier property owners
- Housing Tasmania
- Tenants Union
- Tasmanian Nursery & Garden Industry Association
- Southern Water: Angela Wright

**Formation:** Advertise September 2011; first meeting October 2011

**Purpose:** Help develop water conservation principles, approaches and messages for residential customers  
Give feedback during the development of the plan  
Assist Southern Water to tap into relevant networks and community groups

A Business / Commercial Water Conservation Consultative Group might comprise:

- Tasmanian Chamber of Commerce & Industry
- Tasmanian Small Business Council
- 2 x top 20 users
- Hospitality sector representative
- Property Council of Australia
- Southern Water: Angela Wright

**Formation:** Advertise March 2012; first meeting April 2012

**Purpose:** Help develop water conservation principles, approaches and messages for commercial customers  
Give feedback for the development of the plan  
Assist Southern Water to tap into relevant networks and business groups

## 6.3 Program pilots

Leading research by Doug McKenzie-Mohr into overcoming barriers to engaging in sustainable behaviour\* indicates that the use of pilot programs is essential. His recommended approach is outlined below, with a note on how this strategy addresses this.

Step	Notes
Identify barriers to sustainable behaviour	In section 5, of this strategy, contemporary Australian research into barriers has been presented
Design a strategy which utilises behaviour change tools	With input from consultative groups, Southern Water would devise campaigns with behaviour change tools for its Water Conservation Education Plans
Pilot the strategy on a small segment of the community	With some assistance from our market research firm, this would minimise the costs as it would identify successful and less successful elements
Evaluate the impact of the program when implemented across an entire community (segment)	This can be undertaken as part of Southern Water's market research program

This Strategy proposes that once Water Conservation Education Plans are prepared each year, they be piloted on small segments to evaluate the effectiveness of the campaigns.

This can be managed using internal communications resources, with guidance and assistance from our market research firm.



## 7. Three stepped approach

*“The main barriers to adoption of water conservation behaviours identified in the study are: the perception of inconvenience and impracticality, as well as costs associated with purchasing water saving appliances”*

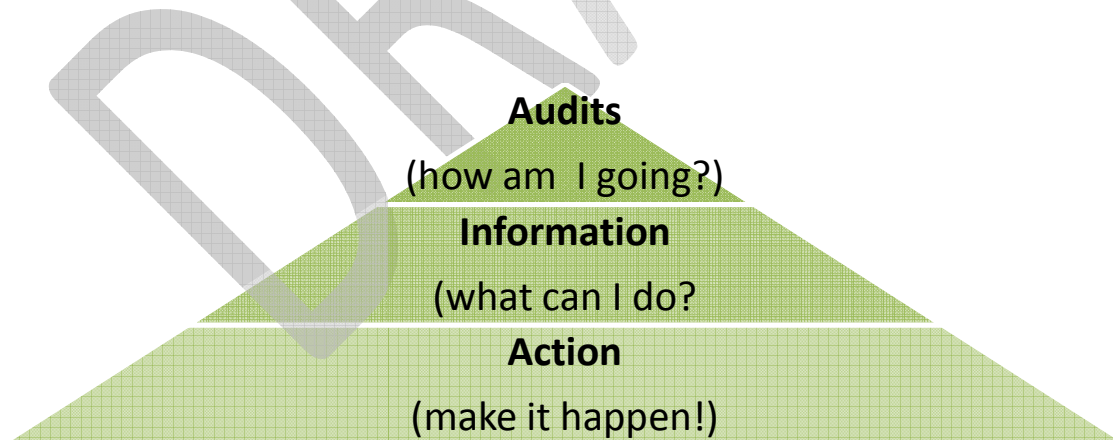
(Dolnicar & Hurliman, 2010)

To make it easy for customers to respond to campaign messages, this strategy is suggesting the Education Plans have campaigns which can be communicated and delivered in three steps.

**Step 1 – Audits.** This step includes information and incentives to encourage customers to understand how to measure their consumption, how to detect leaks and decide what is desirable for their circumstances and lifestyle.

**Step 2 – Information.** This step uses Southern Water’s existing partnerships such as the Savewater Alliance, the WELS scheme, Sustainable Living programs and Greening Australia’s education programs to deliver information about incentives, rebates, products and the many and varied possibilities customers have for managing their water consumption. This step should be designed to help overcome customers’ concerns about inconvenience and impracticality.

**Step 3 – Action.** This step is utilising Southern Water’s networks, partnerships and buying power to ‘make it happen’ for customers. This step should be designed to help overcome customer’s perceptions and concerns regarding the cost of purchasing water saving appliances.



## 8. Campaigns and Timeframes

### 8.1 Timeframes

Once approved, this Strategy is the springboard for Southern Water to develop its first Water Conservation Education Plans for 2012-13 – one each for residential and commercial/industrial.

To develop this, the process outlined in Section 6 would be undertaken as follows:

September 2011	<ul style="list-style-type: none"><li>• Assessment of existing mainland programs and preparation of report</li><li>• Formation of residential customer consultative group</li></ul>
October 2011	<ul style="list-style-type: none"><li>• First meeting/s of consultative group, charter formed, ideas canvassed</li><li>• Development of 2012-13 Plan commences</li></ul>
November-December 2011	<ul style="list-style-type: none"><li>• Second meeting of consultative group, with proposed campaign concepts presented and feedback sought</li></ul>
January-February 2012	<ul style="list-style-type: none"><li>• Plan is finalised and approved for pilot by Executive</li></ul>
March-April 2012	<ul style="list-style-type: none"><li>• Residential pilot commences and is assessed</li><li>• Commercial and industrial consultative group formed</li></ul>
May 2012	<ul style="list-style-type: none"><li>• First meeting of commercial/industrial consultative group, charter formed, ideas canvassed</li><li>• Development of 2012-13 Plan commences for commercial/industrial segment</li></ul>
June 2012	<ul style="list-style-type: none"><li>• Second meeting of consultative group, with proposed campaign concepts presented and feedback sought</li></ul>
July 2012	<ul style="list-style-type: none"><li>• Plan is finalised and approved for pilot by Executive</li></ul>
August 2012	<ul style="list-style-type: none"><li>• Commercial/Industrial pilot commences</li></ul>

## 8.2 Budget

This strategy proposes that a budget be prepared for this in parts:

**Part A:** \$44,000

This budget is currently available in the Water Metering Project budget. This would be used to cover the following:

- \$10,000 one-year partnership with Sustainable Living Tasmania to begin delivering auditing messages to community groups
- Desk-top analysis of three mainland utility conservation programs, and two communications officers to visit utilities to interview relevant manager and sight examples in situ.
- Consultative groups – facilitation and any logistical costs which may arise
- Plans – prepare and write plans
- Pilots – prepare sample materials, undertake pilots and assess outcomes
- Finetune Plans.

**Part B:** \$100,000

\$100,000 budget to be requested for 2012-13 implementation.

**Part C:** Further budget to be requested for 2013-14. Amount to be advised.

**Part D:** Further budget to be requested for 2014-15. Amount to be advised.