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Mr Greg Wilson
Chairperson
Essential Services Commission
Level 2, 35 Spring Street
MELBOURNE 3000

Response to the Essential Services Commission Consultation Paper *2008 Water Price Review Consultation — Framework and Approach*

Dear Mr Wilson

Thank you for the opportunity to respond to the Essential Services Commission (ESC) consultation paper *2008 Water Price Review Consultation — Framework and Approach*, December 2006.

The primary area of concern shared by the Concessions Unit, Department of Human Services (DHS) and the ESC is addressing affordability issues for low-income and vulnerable water customers. The Unit's submission is based on the premise that to maintain equitable access to basic levels of water to sustain well-being and health, it must be affordable to all customers, particularly for low-income households.

Water customers are not a homogenous group. Low income and vulnerable customers behave differently from other customers and affordability is a greater problem for this low income group.

With greater emphasis on water pricing as a tool to moderate demand for water and to achieve other objectives, there needs to be greater attention to the ability of low income and vulnerable water customers to respond to these price signals, to afford water and associated charges and have similar opportunities as other customers to reduce consumption and costs.

To ensure the success of water pricing objectives, including environmental, economic, sustainability and affordability, it is most important that Victorian water businesses and other stakeholders in the industry share their understanding of their low-income customers.

Water businesses are in the best position to report on the ability of low income and vulnerable customers to afford water, particularly those in hardship. More detail in the submissions of water businesses would assist the ESC assess affordability and hardship, and help achieve State Government policy objectives of access, equity and reducing disadvantage.

Attachments to this submission address the following issues:

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1. *Attachment 1 Water customers are not all the same*
Demonstrates that low income and vulnerable customers, when compared with other customers who have greater income and wealth, are quite different in behaviours, consumption patterns, capacity to respond to pricing signals, affordability and hardship.
2. *Attachment 2 Addressing affordability and protecting low income and vulnerable customers*
Highlights that a concession is just one of the tools designed to assist low income and vulnerable customers afford water. Water businesses and the ESC also have a responsibility to ensure that other methods exist to protect low income and vulnerable customers, particularly those in hardship.
3. *Attachment 3 Reporting on low income customers*
Recommendation that water businesses include in their water plans detailed analysis of their low income and vulnerable customer base, and consideration of the effect of the proposed water plan on these customers.

I would welcome the opportunity to meet with you to discuss this proposal, and I look forward to further opportunities to work with the ESC to address these issues.

Yours sincerely

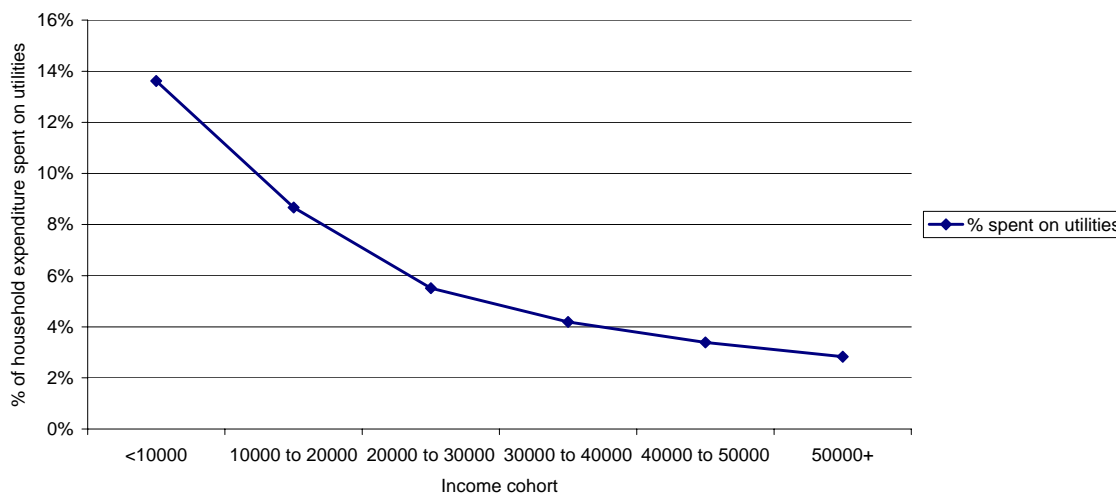
Brenda Whitmore-Seidel
Acting Director Program and Sector Support

Water customers are not all the same

Background

1. A significant proportion of the Victorian population have a low income.
2. Governments generally use the concession card as a measure that the cardholder has a low income. The Commonwealth Government assess a range of factors to determine eligibility including income and assets, family size, employment status, and age, and issue the person with a Pension Concession Card (PCC) or Health Care Card (HCC).
3. It is estimated that 25% of the Victorian population or 1.3 million Victorians hold a concession card.
4. The distribution and concentrations of low-income Victorians create different pressures on their local communities and utilities. Within the total concession population there are variations in the degree of disadvantage, some relating to income level and some relating to expenditure demands arising from the particular circumstances of individuals. Geographically, a greater proportion of cards are allocated to regional Victoria than to Melbourne.
5. Even though the majority of elderly Victorians own their own home, the level of cash incomes of pensioners means that utility bills are a significant burden and account for at least three times as high a proportion of their income compared to Victorians who are receiving average weekly earnings or higher.
6. Figure 1 is a classic Engel curve, showing much higher proportions of household expenditure spent on utilities by people on low incomes (ranging from about 13% to about 5%) than those with median to high incomes (about 3-4%).
 - Data Source: 2001 Victorian Household Utility Consumption Survey (VUCS), which was a survey of 2000 utility customers, proportionally representative of both low-income concession households and other households. In addition to a face-to-face survey, utilities reported on the actual consumption patterns and billing data of those customers.
 - Figure 1 was prepared on the basis of the household incomes reported in the VUCS data. For households with incomes of <\$10,000, an average of \$8,000 was assumed, while for incomes of \$50,000+ an average of \$60,000 was assumed.

Figure 1 - % of household expenditure spent on utilities



Source: VUCS 2001 data (main gas, mains electricity, water, sewerage)

7. A minority of pensioners receive a part pension, ie, the pension has been reduced due to other private income and/or assets. In 2003, 35% of aged pensioners and 16% of disability pensioners receive a part pension, most of those receiving only a small top-up of income from other sources.
8. Approximately one third of domestic water customer households claim a concession and have low incomes, and almost 1000 of these experienced hardship during 2005/06 and received a Utility Relief Grant.

Consumption

9. Results from VUCS 2001 identified several differences between water customers with and without concession cards.
 - The top two drivers of consumption were household size and income.
 - Aged pensioners tend to live in smaller households, with 92% either living alone or with one other person, compared to 36% of non-cardholders.
 - Water businesses reported concession households consume 13% less water on average than non-concession households (11% less over summer), with aged pensioners consuming 21% less.
 - Even when differences were accounted for, (such as household size, dwelling type, residences with gardens), concession households consistently consumed less.

Rate of lower water consumption in concession households (compared to non cardholder households):	All sizes	1 person households	2 person households	Other households
All dwellings	13% lower	12% lower	8% lower	7% (4 person households)
Semi detached houses	30% lower	30% lower	20% lower	51% (3 person households)
Detached houses	10% lower	18% lower	7% lower	5% (4 person households)

- Not only do low-income households consume less water, but they also have fewer appliances and fittings that consume water. Wealthier households are more likely to have more bathtubs, baths with spa jets, spa pools, swimming pools, water beds, dishwashers, multiple toilets and showers.
- Poorer households have lower discretionary water usage, supported by the lower rate of ownership of luxury items.

Price Elasticity

10. Many water businesses are using price as a key mechanism for modifying water consumption behaviour. Price elasticity will influence the extent to which behaviours may change.
11. However, consistent levels of lower consumption in poorer households, as reported by water businesses, indicates that household income, not price, is the major influence.
12. Not only does actual consumption data show this, but most low-income households believe it too (76% of cardholders surveyed through the VUCS 2001 reported that receiving a concession has no effect on water consumption).
13. Lower consumption levels in concession households challenges the presumption that concession households will consume more than other households, based on the economic principle that a cheaper product will increase demand and consumption.
14. Put simply, low-income restricts the capacity of cardholders to afford larger bills, and so these households modify their behaviour by reducing consumption to a more affordable level.

15. Greg Barrett's paper from the University Of Canberra *Residential Water Demand and Price Elasticity: A Survey of Literature* refers to a study in Florida that showed wealthier households have greater price elasticity.

Price Elasticities by Wealth

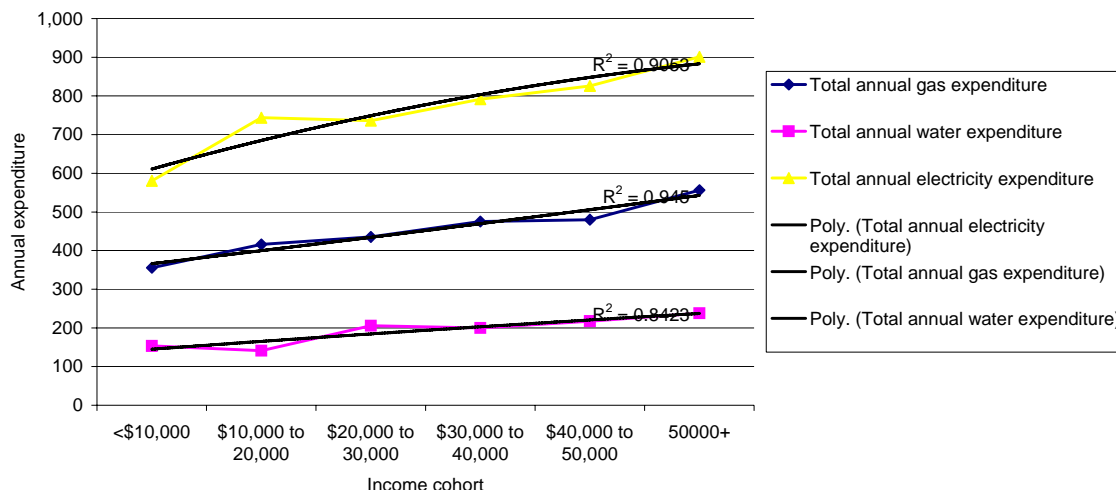
	Low Property Value (\$50,000)	High Property Value (\$150,000)
High Marginal Price	-0.01	-0.09
Low Marginal Price	-0.55	-0.74

Source: Whitcomb, 1993

This (study) contradicts the theoretical determinants which suggest that higher income families would have a less elastic demand for water because water is a smaller part of their total budget. It is likely ... the higher incomes have a larger impact on demand for water using appliances.

16. The *Review of Metropolitan Water Agency Prices Issues Paper 2002* by the Independent Pricing and Regulatory Tribunal of New South Wales considered the impact of pricing on water demand. The review of national and international literature indicated that water demand is not very responsive to price changes, and that a large increase in price will only result in a relatively small reduction in demand. Where all other factors are constant, if the water price was increased by 10%, demand would only fall by between 1 to 3 per cent (p25).
17. Figure 1 shows in every case income is a strong predictor of household consumption. Note that this figure uses all households as the basis (not just those of any particular size or type) and thus may be subject to confounding factors, but it is still a powerful comparison.

Figure 1 – Total annual utility consumption, by income cohort, 2 001 VUCS data, kilowatts



Source: VUCS data 2001 as analysed by DHS Concessions Unit

18. Elasticities are further constrained where water bills are weighted towards fixed charges. Whilst there is a strong trend to attach pricing signals to water usage charges, these signals are weakened by other fixed charges on the bill.
19. The OECD (2002) have noted
- Economic and environmental objectives are best served if the fixed charge is restricted to costs that are: (i) customer-specific (e.g. meter reading, billing, payment collection) or (ii) not related to water service volumes, even in the longer-term. Minimum charges are best avoided altogether: by clouding scarcity and environmental signals, they confuse incentives, and also frequently undermine equity*
20. It appears (based on past public water submissions) that water businesses have to date not recognised that elasticities for low-income customers are different to

wealthier customers. This materially weakens the analysis and predictions of businesses, particularly those that have relied on water elasticity estimates in their plans but have not recognised that cardholders (representing 30% of their domestic customer base) may not respond to the price signals as they would intend them to.

Reduce Water Consumption or Pay More

21. As low-income customers already consume less water, the effect of higher prices on low-income customers (who already have less discretionary usage) is that they either:
 - Reduce non-discretionary or essential water consumption and possibly compromise health and well-being outcomes, or
 - Pay higher prices where they are unable to moderate essential usage, potentially leading to increased debt amongst these households and greater levels of supply restrictions.
22. Elasticity research supports this conclusion. As water consumption increases, it is often assumed that discretionary usage increases, and so on average, greater usage households will be more elastic. In its 2004 submission, YVW quoted the study by Water Services Association of Australia, stating:

The study found that outdoor use, being more discretionary, is more price elastic than indoor use. Also the price elasticity of demand was generally found to be greater for higher consumption households.

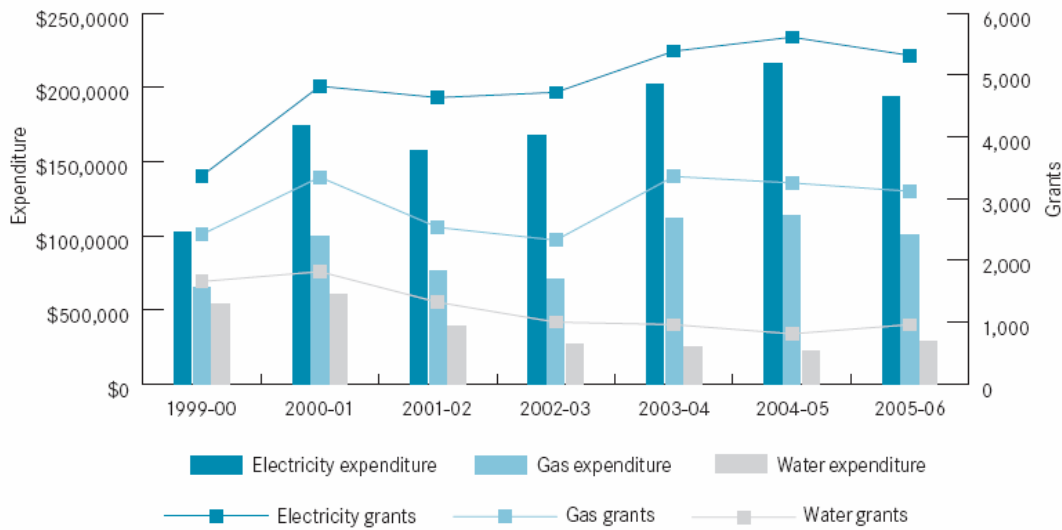
Unfortunately the second statement can be misinterpreted to mean that large family households are the same as higher consumption households, and that price elasticity for both types of households is greater than smaller water users. Whilst larger users with greater discretionary and outdoor use would reasonably have a greater elasticity, larger families with a higher level of non-discretionary usage are generally more efficient in their water usage than smaller households and would therefore be more inelastic.
23. When dwellings with a garden are compared between concession and non-concession households, the latter consume on average 288kl and concession households consume 258kl or 10% less. In dwellings with no garden, concession households consume 209kl and non-concession households consume on average 240kl.
24. Overall differences in consumption between households indicate a margin for discretionary usage. If a major area of discretionary usage relates to garden watering then concession households living in dwellings without gardens have virtually no capacity to make savings in water usage.

Difficulties Paying Bills

25. Despite being the lowest consumers of water, low-income households were more likely to have difficulty paying their bills. The VUCS 2001 survey identified
 - 13% of concession card households reported difficulty paying their water bills, and
 - 23% of non-aged concession households experienced difficulty paying their water bills.
26. When experiencing bill paying difficulties and managing accumulated debt, concession households may be eligible for a Utility Relief Grant (URG).
 - In 2005/06, the key reasons for seeking assistance amongst the customers who received an URG were: loss of employment 17%, cost of shelter 16%, car repairs 16%, purchase of essential appliances 12%, and family break-up 10%.
 - Water URG applications approvals marginally increased in 2005/06 following a steady decline in applications since 2001/02.

- Expenditure on water URGS is substantially lower than the electricity and gas industries. It is not clear why there is a greater utilisation of this hardship program in electricity and gas.

Graph: Utility Relief Grant by Utility 1999/2000 to 2005/06



Conclusions

- Given that around one third of all domestic water customers have low-incomes and concession cards, it is important to recognise the unique features of this significant customer base when considering water pricing.
 - Low-income households consume less water, even accounting for differences in household size, type, dwelling and ownership. They also have fewer appliances, particularly luxury items. Combined, these factors indicate a lower level of discretionary consumption.
 - Water demand is quite price inelastic for low-income customers. Income, not price, is the major driver of consumption amongst low-income households.
- If increased prices or new structures such as the inclining block tariffs are intended to reduce consumption, and if low income households have a lesser capacity to reduce consumption (they are already consuming less and have lower discretionary use) and if they are not as responsive to price signals, then low income households may:
 - Be negligible contributors to water savings as they have a lower level of non-discretionary water use.
 - Not be able to sufficiently reduce consumption, and so would have to bear the price increase.
 - Face a greater financial burden and incidence of hardship without delivering material reductions in water consumption.
- If the water industry is relying on pricing mechanisms to modify customer behaviours particularly discretionary usage, and if low-income customers do not respond to these price signals, then the objective of modifying consumption may not be achieved.

Addressing affordability and protecting low income and vulnerable customers

1. State Government social policy objectives are specified in several key documents.
 - *Growing Victoria Together* include goals relating to accessibility of health services, efficient use of natural resources, and a fairer society that reduces disadvantage.
 - *A Fairer Victoria: creating opportunity and addressing disadvantage* is the Bracks Government's social policy statement. Its framework includes ensuring that universal services provide equal opportunity for all, reducing barriers to opportunity, and strengthening assistance to disadvantaged groups.
2. The State Government uses a range of tools to ameliorate poverty, address affordability issues and deliver universal access regarding essential water services for Victorian domestic households.
3. Concession-related programs aim to reduce affordability barriers. The concession is a tool designed to moderate customer's bill, whilst still aiming to complement government's other pricing and environmental objectives. Specific hardship grants including the Utility Relief Grants are more targeted and customer-specific by waiving debt accumulated or providing unaffordable items or services when the customer experiences hardship.
4. Regulation aims to protect customers by considering the impact of decisions such as pricing, including on low-income and vulnerable customers. This enables universal access to be achieved by ensuring prices are set and maintained at an affordable level, and that other protections exist such as a customer charter, customer contract and hardship policies.
5. However concessions and regulation are not the only options available to address disadvantage, improve affordability and reduce hardship for low income and vulnerable water customers. Water businesses also have a role in looking after these customers.

Alternatives To Assist Low Income Water Customers

6. The OECD recognises that trade-offs must occur between efficiency and equity objectives in household water provision when rebalancing tariffs away from fixed charges towards volumetric charges, and when increasing fees and tariffs towards full-cost pricing.
7. Where there is a limited capacity to reduce household consumption, an alternative way of assisting low-income households manage bills is via targeted tariff options or a direct subsidy.

Multiple tariffs or tariff choice

8. A possible criticism of the inclining block tariff is the "one-size-fits-all" approach, where small household s/users in the first block have a lesser incentive to reduce consumption, compared to large households/users in the third tariff. Alternative price structure designs that create incentives for both small and large households could address this limitation. This could be addressed by providing a modified IBT to cardholders with blocks set at a lower consumption level to reflect their consumption patterns, or by giving customers the choice of pricing plans that best suits them.
9. A simple example is the pricing model used to charge for mobile phones, where their customers have a choice between a "\$15 plan" or a "\$30 plan" depending on their level of usage. Customers could choose a pricing plan based on their expected usage level, where each plan is suitable for a particular type of customer. For example:

- A “\$15 plan” with a \$15 fixed charge component would be most suitable for households with smaller usage patterns, and would encourage usage in the average range, for example between 50 to 60 kl per quarter. As consumption rises above this range, prices increase.
 - A “\$30 plan” with a \$30 fixed charge component would be most suitable for households with larger usage patterns, and would encourage usage in the average range, for example between 70 to 90 kl per quarter. As consumption rises above this range, prices increase.
10. Alternative pricing plans could be developed based on the optimal usage level a customer segment should use. Unlike overseas models for water pricing, where the household must report the number of people in a household, these pricing plans rely on customers choosing the plan that best suits them.
 11. The development of a contestable market in energy provides many examples of how multiple pricing plans may work in the water sector.

Subsidising Low Income Households

12. Cross-subsidising concession households bills as a practice is growing more common amongst local governments, and occurs in at least one water utility, where these organisations are self-funding the extension of concessions in recognition of local demand, need or circumstances.
 - South East Water several years ago extended the Life Support Machine concession to non-cardholders on the grounds of greater hardship experienced by customers who use a haemodialysis machine (which uses a large volume of water, thereby increasing bills). This concession is a cross subsidy funded by other customers.
13. Cross subsidising other affordability measures is also common. Several water businesses have partnered with DHS in delivered the Smart Homes program, which provides targeted low-income households with an audit and replaces inefficient water products at no cost to the customer. Program costs are shared between DHS and water businesses. Yarra Valley Water has been a major partner in developing this program since the late 1990's.
14. At least 13 Victorian local government authorities have joined the State Government in assisting vulnerable ratepayers by providing a council funded concession in addition to the State funded concession. These councils:
 - Recognise the local responsibility of assisting resident low-income homeowners with affording their rates. This commitment reflects the diversity of rich and poor and other local demographics;
 - Can report their performance as part of their Triple Bottom Line; and
 - Recognise that cross-subsidising concessions is a necessary and acceptable method of addressing customers' affordability needs.
15. Whilst a broad objective of regulators is to reduce unnecessary cross subsidising, there are, however, many precedents of the necessary use of cross subsidisation.
 - Tariff averaging is a mechanism used widely to reduce the number of cost-reflective tariffs to a small number of tariff bands. The most common example is where multiple services (and their) costs are summarised into a single pricing structure, such as a two-part tariff or an IBT. Averaging is applied partly to simplify the service supplier's accounting and billing procedures, and it puts the supplier in a position to offer a much more transparent and understandable, hence attractive, service to customers.
 - The International Development Research Centre reports in the United Kingdom and in all the European Union countries (as a result of recent regulations), some degree of tariff averaging is retained in the explicit interest of universal service; that is, averaging is used as a means to deliberately cross-subsidize.

- Victorian water businesses presently use the tariff averaging method, where they have one tariff structure, irrespective of the customer's distance from the dam or treatment plant, whether they are a domestic user or commercial user, or how much they use. This one-size-fits-all approach means that some customers are implicitly subsidising others for the true cost of their service.
16. Cross-subsidising low income and vulnerable customers would enable water businesses to address affordability problems.
- Water businesses could deliver additional benefits to their low income customers, on top of the government-funded concession.
 - Whilst the concession cap is indexed to CPI, water businesses would be able to respond directly to the difficulties caused by their CPI-plus price increases or other local issues.

Conclusions

17. Concessions and grants are specific tools to address State Government visions of reducing disadvantage and improving affordability for low income and vulnerable customers.
18. Water businesses share the responsibility with the ESC and the State Government of achieving these visions, and can consider other tools such as revised pricing structures and cross subsidies.

Reporting on low income customers

1. Water businesses work directly with their low-income and vulnerable customers and are in an excellent position to report on affordability and hardship issues.
2. It is important that businesses report on how prices implemented since 2005 have affected low income and vulnerable customers, and the responses of businesses to address any affordability and hardship issues.
3. It is also important that businesses demonstrate how future proposals will take into account unique features of these low-income customers, and incorporate learning's identified since 2005.

Limitations of the 2005 water pricing plans

4. In 2005, it was difficult to assess whether or how water businesses considered the effect of pricing proposals on their low income and vulnerable customers.
5. The ESC noted during the previous price planning process that water businesses did not generally provide detailed assessments of impacts on low-income customers as part of their plans, indicating an inadequate consideration of affordability and hardship for these low-income customers.
6. Limitations included the following:
 - Where research occurred, it generally surveyed the generic domestic customer base, and did not segment research to target low-income customers. One business indicated to DHS that research was conducted on a cross section of their customer base but did not specifically differentiate income levels.
 - It appears only Yarra Valley Water attempted to consider the impact on low-income customers through its Willingness to Pay study.
 - Customer satisfaction surveys reported were not indicative of customer's willingness or ability to pay.
 - Analysis of willingness to pay, elasticities and other customer impacts generally concentrated on the domestic customer group as a whole, without specific attention paid to low income customers.
 - Water businesses did not appear to have considered the real impact of substantial price increases on the capacity of their low-income customers to pay for water.
 - Businesses generally assumed that hardship programs can address customers facing additional difficulties with their bills.
 - There was little analysis of the effect on large families.
7. Overall, there did not seem to be acknowledgement or consideration of factors unique to low income customers, such as household demographics, lower consumption behaviours, consumption drivers or price elasticities.

What has happened since 2005?

8. In 2005, many businesses made their plans on the premise that low-income water customers, like other customers, would be able to afford these increases (where they cannot modify their consumption levels).
9. When the ESC approved the most recent water prices and water plans from 2005, water price increases above CPI were endorsed. However the impact of these increases are not widely known.
10. To assess the appropriateness of future water plans, including water prices and other proposals, a thorough understanding is required of what is presently happening particularly in respect of low income and vulnerable customers.

Pricing Principles for Low Income Households

11. To measure the success of the implementation of pricing and hardship programs, it may be useful to develop Pricing Principles For Low Income Customers to compare against, and may include the following:
- Ensure a minimum acceptable level of consumption to meet health and well being requirements at an affordable level.
 - Develop a socially responsible tariff based solution aimed at guaranteeing minimum levels of access on basic needs grounds and on improving affordability of water supply and sanitation services for low income households.
 - Ensure low income households do not have to pay a disproportionately larger part of their disposable income for water services than better off water consumers do.
 - Take account of variation in household size and its impact on consumption so that larger low-income households are not penalised unfairly.

Recommendations for future water pricing plans

12. It is important to address concerns, including those of the ESC, that water businesses in 2005 did not provide detailed assessments of the impact of 2005 proposals on low income and vulnerable customers. It is also important that the basis of future plans address this limitation, by detailing and specifically demonstrating how affordability and hardship issues for low income and vulnerable customers have been addressed.
13. It is recommended that water business submissions report on the following:
- Where studies and reports are conducted on customers, that specific analysis of low-income concession customers be included. This includes the analysis of price elasticity, consumption patterns, price signals and research into willingness or capacity to pay.
 - The impacts on large families, low income and vulnerable customers of introducing inclining block tariffs and other pricing reforms.
 - The development and success of hardship policies, with a focus on low income and vulnerable customers in hardship, and the connection between hardship policies and Utility Relief Grants.
 - The prevalence of other complementary measures in place to prevent or address hardship, such as Flexible payment plans, agreeing with the customer on a realistic payment amount, incentives, waiver of partial / full debts and retrofitting.
 - Consideration of regular Triple Bottom Line public reporting to provide the ESC and interested stakeholders with a better understanding of social programs, such as the effectiveness and performance of affordability and hardship reduction tools.
 - Consideration of a range of options that may assist low-income households (who are unable to absorb the full cost of pricing impacts) including:
 - ⇒ Additional subsidies targeted to cardholders customers;
 - ⇒ Reducing inequities by removing price differentials between domestic and business customers;
 - ⇒ More innovative methods of price structures to better provide incentives for households of various sizes;
 - ⇒ Volumetric sewage charges to strengthen water pricing signals, to reduce discriminatory fixed charges and to provide greater equality amongst smaller and larger households;
 - ⇒ Well developed hardship programs and implementation of programs such as Smart Homes that assist low income households reduce water consumption; and
 - ⇒ Reporting of social outcomes including methods of addressing affordability and hardship programs for low income customers through Triple Bottom Line reporting
 - How consideration of these issues have influenced proposals.

Conclusions

14. During the 2005 water pricing review, most water businesses did not address how price reforms and increases would impact on low-income customers. Most water businesses appeared to assume that all domestic customers are a homogenous group, basing demand and revenue forecasts on this assumption.
15. Water businesses generally did not recognise in their plans that low-income customers are different in behaviour, capacity and willingness to pay, elasticity and responsiveness to price signals, level of water usage and discretionary water usage, and have a lesser capacity to absorb cost increases.
16. Water businesses are now in a position to report on the effect of the last price reforms on low income and vulnerable customers. This information will help the water sector understand the success of those water price signals introduced in 2005, and to influence the development of future price plans.