

# **Pricing & Financing Models to Ensure Sustainable Water Supply**

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Infrastructure & Investment

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Ian, distinguished guests, ladies and gentlemen – thank you for the opportunity to address this important CEDA event on Urban Water Sustainability.

The Essential Services Commission has an important role as Victoria's independent economic regulator in variously determining and advising on a number of aspects of pricing and by implication the financing of businesses and the investment underpinning the delivery of water services across the State. The Commission was first given this role in 2004. The ESC is also responsible for regulating services in energy, ports, rail and export grain handling and administers the Victorian Renewable Energy and Energy Efficiency Targets' Schemes.

Given the bulk of my career was in energy I do now regularly observe how many of the same challenges and reform issues that confronted electricity and gas a decade or so ago (and arguably still do) now also confront the water industry.

Save for privatisation of the industry, which this Government has unequivocally said (and indeed legislated) will stay in public ownership, many of the other aspects of energy reform such as structural separation, creation of markets, regulation of the natural monopoly networks provide valuable touchstones for how sustainable and reliable water services can be provided to the community.

Water of course presents in many ways a more challenging public policy environment to work within than energy (ignoring the impact of carbon!)

and the time frames involved will undoubtedly be longer – but should in no way diminish our collective resolve to push forward. Drought, historically low storages and inflows, increased temperatures and changed rainfall patterns, the nature of the commodity, the institutional challenges, the public's strong emotional and economic interest in all things water have all contributed to the ongoing complex tradeoffs that will be required between first, best principles on one hand and having to deal with the speed of reform, and transitional issues involved on the other.

I think we are all in agreement that water prices should recover the efficient cost of supply (production, capital, financing) and signal certainly long term and where appropriate short run impact of demand. This will provide an appropriate incentive for sustainable (and sensible) water use by allowing customers to balance the relative costs and benefits of consuming water.

The Productivity Commission recently highlighted the serious economic consequences of demand restrictions. Addressing this in Victoria means that the Victorian industry alone faces some \$14B forecast capital expenditure over the next 5 years or a near doubling of the existing rate base of the Victorian water industry. For Melbourne this means prices will on average double over that period. That is an average bill of around \$500 will increase to \$1000 per annum in real terms.

To ensure that the costs incurred (and subsequently prices) are indeed efficient brings us back to considering the fundamentals of delivering and financing any form of sustainable infrastructure investment – that is assessing the potential for introducing competition into those segments where contestability is considered viable – i.e. customer choice on one hand and competing suppliers on the other. This obviously involves creating markets and the property rights (that can underpin the trading of the commodity) as well as integrated networks that will allow the transmission and trading of water across different systems and water supplies. Finally this means separating out the natural monopoly networks and subjecting them to independent regulation.

Creating the best long term incentives to achieve cost and price efficiency depends critically on the design of institutional and governance arrangements – clarity of goals – including water policy, resource management, standard setting, regulatory and service delivery, governance arrangements. Over past decade Victoria has worked to establish a comprehensive system of tradable rights to bulk and raw

water. The allocation of rights to water that is in a form that can be tradable is now in place across most but not all catchment systems across the state (although this is characterised by allocation between different end users rather than competing suppliers). There is currently no way of allowing potential new entrants to seek access to and sell water however the Government has however acknowledged the long term need for greater role contestability and or competition in water supply.

Moving forward - what's the ESC's role in all of this, noting that the Government's reform plan comprehends a far wider set of initiatives — on which the Minister will no doubt later elaborate.

Following the Victorian Competition and Efficiency Commission's inquiry into the Reform of the Metropolitan Retail Water Sector the Government has confirmed that the ESC will undertake the second metropolitan price review commencing in November this year - which will establish price paths and service standards for the next 4 years. The pricing principles and treatment of various miscellaneous charges set out in the final decision for regional businesses will also apply to the metro businesses. The hybrid form of price control and mechanisms to deal with uncertainty that were utilised in the rural and regional water price review will also be considered for the metro review.

The Victorian Government will also ask us, the ESC, to conduct a formal inquiry into the development of a state-wide access regime, including developing an access pricing methodology. The Government will also amend the Water Industry Regulatory Order to require the ESC to develop a 'ring fencing' methodology to separately identify the costs associated with water distribution, wastewater collection and retailing. As well, the ESC will be working with the Department and stakeholders to develop guidelines to apply to potential sewer mining projects.

Bearing in mind the direction, and likely outcomes of many of these reforms it is worth briefly reflecting on our views on the implications for pricing or tariffs and financing.

The structure of water prices in Melbourne is generally in the form of a two-part tariff, containing:-

- a charge that is independent of consumption;
- secondly a variable charge.

In Melbourne the variable charge is made up of three parts with those charges increasing as usage reaches certain predetermined thresholds, this

is known as an inclining block tariff. The fixed charge in Melbourne ranges from \$57 to \$125 (depending on the retailer) and the block tariffs start at around \$1.00/kL for the first 160kL per year, increasing to around \$1.20 for the next 160kL and finally around \$1.85 for consumption above 320kL per year. Average consumption in Melbourne without restrictions is around 180kL.

It is widely accepted that variable charges should be set at marginal cost to achieve the most appropriate signalling mechanism. However, there are differing views as to whether this is at long run marginal cost or short run marginal cost - which is currently being debated in the context of scarcity pricing.

Long run marginal cost pricing will be more stable over time and will facilitate long-term decisions over future water consumption, this may be the type of garden a household decides to have or whether to purchase a rainwater tank, or it may be investment decisions made by industry on recycled water and/or production efficiencies.

Short run marginal cost pricing may be best used in times when water storages are declining in the short-term with the aim of ensuring adequate future supplies by signalling to customers to conserve water. These prices would be significantly higher than prices set with regards to long run marginal cost in times of shortages. This pricing mechanism may still require some level of restrictions.

However after the investment of \$10B in Melbourne's (and surrounds) water supplies it can be assumed that water supply shortages will be less frequent and less severe. Melbourne's current inclining block tariff structure attempts to restrict demand during these times of shortage. However, with less need for this style of pricing in the future it is more likely that prices for water in Melbourne will move towards long-run marginal cost and therefore a single variable tariff.

Current estimates of long run marginal cost for Melbourne's delivered water are seen at being not greater than \$1.00/kL. In areas across Australia where desalination is used to significantly augment water supplies, the estimates of long run marginal cost for this type of technology is seen at around \$1.50/kL. Therefore you would expect a total long run marginal price that is between say \$2.50 to \$3.00 per kL would not be inconsistent with long run marginal cost.

On the financing side an important feature of incentive based price regulation is that once the prices for the prescribed services are set, the

regulator does not subsequently adjust prices within the regulatory period to reflect the difference between the actual and forecast costs of service provision. Divorcing prices from cost in this way permits the businesses to retain the benefits of reduced costs until prices are next reviewed, and in this way provides a financial incentive for the businesses to reduce cost. But over the longer term the regulatory regime still provides the certainty with which the long life assets can be efficiently financed.

In the more mature utility sectors there is increasing debate over the traditional company specific cost of service approach (known more commonly as building blocks) as against determining revenues towards the use of Productivity Indexing. In the long term it may be that such a trend will also emerge in the water sector as regulatory frameworks mature.

Much recent commentary cites the need for private investment in urban and rural water and wastewater services as an additional source for funding maintenance of existing infrastructure and for investment in the renewal and replacement of water and wastewater assets. Generally, Australian urban and rural water businesses can be characterised by low borrowing levels and strong stable cashflows. These circumstances enable businesses to considerably expand expenditure on new supply projects, maintenance and renewals with a relatively reduced impact on water prices.

ESC in its regulatory work has observed a lower reliance on debt financing among medium to small water businesses. Arguably the private sector is likely to adopt a more efficient capital structure than those currently employed within the water sector. However importantly, neither a shortage of capital nor constrained borrowing capacity is an impediment to government owned businesses funding infrastructure needs in the water sector.

The ESC also observed during its regulatory work that a number of water businesses needed to focus on improving asset management, capital budgeting processes and developing forecasting capability of future investment needs. The regional water sector has a history of delivering major projects behind schedule. From these observations the private sector's participation in the functional inputs of the water sector may be able to contribute to improving productivity through better forecasting of future investment and resource needs, the use of efficient capital structures and better management of project delivery.

The reform challenge ahead of us is significant. However, the ESC as Victoria's independent economic regulator looks forward to working with the Government and all stakeholders to deliver reliable, efficient and sustainable water services to all Victorians.

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