



Establishing Water Pricing Structures for Urban Water Supplies



Water Pricing Structures



Introduction

- ❖ Purpose of my talk today is to discuss:
 - Structuring urban water prices to maximise sustainability
 - Integrated approaches to setting prices
 - Prices that balance the needs of customers and water agencies.

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❖ I will seek to cover:

- Demand and Supply imbalances
- Cost Recovery and the Building Block approach to revenue requirements
- Long Run Marginal Cost of water
- Externalities
- The role of developer charges
- New areas for private participation and access
- Managing social outcomes

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❖ Water Demand/Supply Imbalance

- ❖ It comes as no surprise to many of you that there is a water demand and supply imbalance in many parts of the country.
- ❖ In Sydney the safe sustainable yield of the traditional drinking water catchments is 600,000 ML p.a.
- ❖ Since the beginning of this century the 10 year average consumption has hovered around this level.
- ❖ There is very little excess capacity and alternatives need to be found.

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❖ Water Demand/Supply Imbalance

- ❖ Climate change and the current drought will put downward pressure on current estimates of sustainable yields.
- ❖ If the Stern Report is correct river flows on the eastern seaboard are set to fall by 15% below previous expectations.
- ❖ Lower flows may mean a higher proportion has to stay in rivers as environmental flows to protect environmental amenity.

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❖ Water Demand/Supply Imbalance

- ❖ The easy to access sources of water have already been accessed.
- ❖ Integrated water resource planning will send us on the search for the least cost solution recognising various political constraints.
- ❖ We now face the prospect of tapping different types of water, including:
 - Groundwater
 - Augmented storage and transfer systems
 - Recycled water
 - Desalinated water
 - On site collection
 - Water savings and water efficiency measures

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- ❖ Water and sewerage prices meet two needs
 - They allow water agencies to recover the efficient cost of service provision

AND

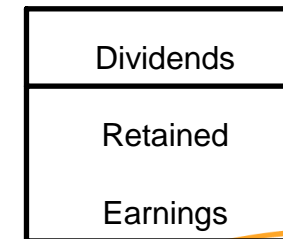
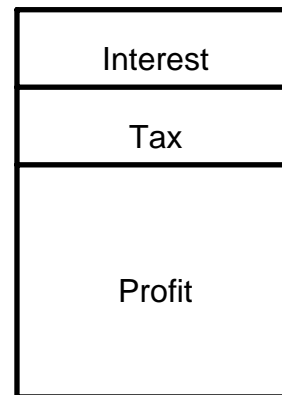
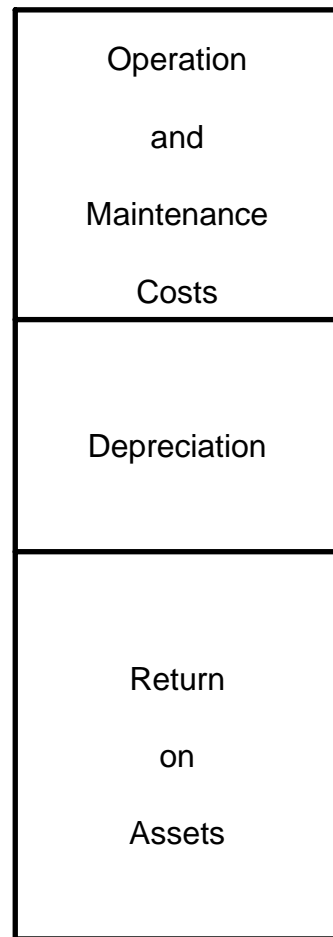
- They signal to users the cost consequences of their current consumption habits

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- ❖ In terms of cost recovery revenues are set to cover:
 - Efficient Operating, Maintenance and Administration costs
 - A Return **of** Capital (Depreciation generally 1% per annum)
 - A Return **on** Capital used to cover:
 - Costs of debt (interest)
 - Income Tax
 - Dividends
 - Provide retained earnings for future activities
 - There is no need for revenues to over recover costs

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Building Blocks for Revenue Requirements



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Capital costs as a component of revenue

- ❖ IPART adopted a Regulatory Asset Base (RAB) approach a number of years ago. This effectively:
 - Drew a “line in the sand” by effectively revaluing assets for pricing purposes to reflect their income earning capacity at the time
 - Provided a means for new and replacement assets to enter the RAB and for costs to be fully recovered through a return **on** and **of** capital
 - The price increases that support these new and replacement assets are sufficient to financially justify investments by water utilities when the need arises

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- ❖ Water Usage Prices should be equated to the Long Run Marginal Cost of Supply
- ❖ Periodic charges can be used to generate the remainder of the revenue requirement.

Why is Long Run Marginal Cost Important

- ❖ LRMC reflects the cost of the next increment of supply.
- ❖ LRMC signals to users the cost consequences of current consumption.
- ❖ If consumption grows prices will increase.
- ❖ If consumers continue to use water at the prevailing price it signals to suppliers to augment supply. If consumers unwilling to pay augmentation can be deferred

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Long Run Marginal Cost

- ❖ In 2005 the Tribunal estimated the LRMC of water in Sydney at between \$1.20 and \$1.50. per kilolitre.
- ❖ Malcolm Turnbull is on the record as saying
“We can desalinate anywhere on the coast for a cost of between \$1.00 and \$1.50 a kilolitre at the factory gate”
- ❖ This is a benchmark against which to test other water supply options
- ❖ Sydney Water’s current water usage price is \$1.264.
- ❖ This implies that the usage price is about right.

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Externalities and IPART

- ❖ Externalities are costs imposed on third parties. Desalination uses a lot of energy which in turn emits a lot of CO₂.
- ❖ The traditional economic solution is to impose a tax.
- ❖ However, it is the role of Government's to set taxes, not price regulators.
- ❖ IPART ensures that agencies can recover efficient costs, including EPA licence fees and the costs of mitigating environmental harm.

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Developer Charges

- ❖ Water and Sewerage charges are levied on a postage stamp basis. That is all users pay the same price in the same utility service area.

BUT

- ❖ The costs of servicing different areas are different. Some areas are high cost and others are not as expensive.
- ❖ Developer charges are used as a means of capturing any cost of service provision above average cost in an upfront payment on a location specific basis.
- ❖ Developer charges signal to land developers and ultimately home buyers the cost consequences of locating in particular areas.

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Recycled Water

- ❖ IPART has just completed a review of the pricing of recycled water services.

- ❖ The Tribunal subdivided recycled water services into:
 - Areas where the use of recycled water will be mandated
 - Areas where the use of recycled water will be voluntary
 - Sewer mining schemes.

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Mandated schemes

- ❖ Use of recycled water will be mandated in some large new greenfield development areas. A third pipe will be installed in these areas.
- ❖ For these schemes the Tribunal will not set prices but water agencies will be required to set prices in conformity with pricing guidelines developed by the Tribunal.
- ❖ Many of these schemes have yet to be built. There was not sufficient information available for the Tribunal to determine prices.
- ❖ The Tribunal will monitor water utility compliance with the guidelines.

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❖ The principal guidelines provide for:

- As a general rule costs of recycled water schemes should be recovered from the users of the scheme.
- Prices should be set to reflect costs on a scheme by scheme basis.
- Where a recycled water scheme results in costs being avoided elsewhere in water and sewerage systems the value of these avoided costs can be recovered from water and sewerage customers.
- Recycled water prices are to include a usage component which is not to exceed the cost of potable water without the Tribunal's approval being obtained.
- If potable water top-up exceeds more than 10% of the volume used prices are to be linked to the potable water price. Where potable water top-up is expected to exceed 20% the recycled water price is to be set equal to the potable water price.

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Voluntary Recycled Water Schemes

- ❖ Prices will be the subject of negotiation between the water agency and potential customers.
- ❖ As customers have a choice of whether to connect or not, prices will not be regulated by the Tribunal. However, the Tribunal has developed principles to assist negotiations.
- ❖ Again the target is full cost recovery with the exception of any avoided costs, subsidies etc.
- ❖ Prices should be structured in such a way as to send appropriate price signals to uses

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Sewer Mining Schemes

- ❖ These schemes will be undertaken by the private sector
- ❖ Because scheme proposals are not known and are expected to vary significantly the Tribunal will not determine prices.
- ❖ Prices are to be negotiated between the parties. Access prices are expected to cover the incremental cost of making that access available. The sewage itself will be free.
- ❖ The Tribunal will have an arbitration role where disputes arise between the parties.

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Rouse Hill Development Area

- ❖ There is a mandatory recycling scheme at Rouse Hill
- ❖ Initially recycled water prices were set at a low level to develop the market
- ❖ The stage has been reached where demand for recycled water exceeds supply and costs are not being recovered
- ❖ The Tribunal decided to:
 - Set revenues to better recover costs
 - Set the usage price at 80% of the potable water price by 2008/09
 - Reduce the fixed service charge over the same period.

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Third Party Access

- ❖ A *Water Industry Competition Bill* is currently before the NSW Parliament.
- ❖ This Bill allows for private sector service providers to gain access to incumbent water authorities' infrastructure to compete in upstream and down stream markets.
- ❖ Under the Bill new network operators and retail suppliers (the private sector) will be required to be licensed to provide water and sewerage services.
- ❖ The Tribunal will have roles in:
 - Licencing
 - Access coverage
 - Access undertakings
 - Pricing Principles
 - Cost allocation

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Third Party Access – Some implications

- ❖ The brave new world of access will have implications for:
 - Negotiation and arbitration of access applications and potential disputes.
 - Postage stamp pricing and the threat of cherry picking the most profitable customers.
 - Balancing equity and efficiency while encouraging competition.
 - Protecting small retail customers and issues such as the Supplier of Last Resort.