YARRA VALLEY PRESENTS WATER

WATER EFFICIENCY – A DRY TOPIC
WATER CONSERVATION PREVENTED MELBOURNE’S STORAGES FROM RUNNING DRY

Melbourne’s storages 2002-2010

Storages on 1 July 2010 would be empty without conservation of 695 GL

No water conservation

With water conservation

Storages empty!
**DEFINITIONS:**

**Water conservation:** Saving water  
*May impact amenity or lifestyle*  
(eg. to prevent running dry)

**Water efficiency:**  
Minimising water use per unit of activity  
*Water without compromising value*  
eg. current lifestyle
GOVERNANCE AND ECONOMIC ISSUES

1. Price setting arrangement encourages investment in infrastructure

2. Price cap discourages water efficiency
GOVERNANCE ISSUE NUMBER 1
PRICE SETTING ARRANGEMENT ENCOURAGES INVESTMENT IN INFRASTRUCTURE

Revenue requirement
5.7% WACC
Encouraging capital investment?

Return on Investments
Wholesaler charges
Opex

Cost
GOVERNANCE ISSUE NUMBER 2
PRICE CAP DOES NOT ENCOURAGE WATER EFFICIENCY

Price = \frac{\text{Revenue Requirement} [\$]}{\text{Forecasted Sales (kL)}}

Price Cap:
Discourages water efficiency due to risk of deficit
**COST RECOVERY WITH REVENUE CAP**

Revenue requirement

---

Forecast Sales

\[
\text{Price} = \frac{\text{Revenue Requirement [\$]}}{\text{Forecasted Sales (kL)}}
\]

---

Actual Sales

Pass FULL surplus on to customers \(\Rightarrow\) price decrease

---

Deficit

Up to 2% price increase passed on to customers

---

**Revenue Cap:**

Removes uncertainty
Potential benefits for customers
Neutral w.r.t. water efficiency

---

Yarra Valley Water
WHY INVEST IN WATER EFFICIENCY

- Environment benefits
- Customers want to save water
- Economic and financial benefits
- Customer benefits
CUSTOMERS WANT TO SAVE WATER

As a result of the drought I have permanently changed my water usage behaviours / habits

- 37
- 40
- 17
- 31

Melburnians will always have to be careful with water usage

- 34
- 42
- 16
- 5
- 2

I really want to save more water

- 31
- 44
- 22
- 2
DRIVERS THAT SUPPORT INVESTMENT IN WATER EFFICIENCY
1. THE COST OF WATER IS RISING
2. LOWER DEMAND → SMALLER SYSTEMS → LOWER COSTS

Peak Summer Day Demand L/s/lot

-53%

Last review of design standards

Lower Demand is Sustainable

Do you think you will use less, more or the same amount of water in 5 – 10 years time?

**Future usage generally**
- Don’t Know: 4%
- Less (0-3): 18%
- About the same (4-6): 62%
- More (7-10): 15%

**Indoors, no restrictions**
- Don’t Know: 2%
- Less (0-3): 7%
- About the same (4-6): 82%
- More (7-10): 9%

**Outdoors, no restrictions**
- Don’t Know: 2%
- Less (0-3): 8%
- About the same (4-6): 74%
- More (7-10): 16%

Mean: 4.9
Mean: 5.0
Mean: 5.2

Base: All online survey respondents (n=1209).
DEFERRED AUGMENTATION OF SUPPLY
HOW LONG CAN WE DEFER FOR?

- Wet climate, low demand
- Median climate, medium demand
- Dry climate, high demand
- Dry climate, bounce back demand
BENEFITS OF DEFERRING AUGMENTATION

This graph illustrates the net present cost benefit in millions of dollars over 20 years for different scenarios.

- Return to dry climate, bounce back demand
- Dry climate high demand
- Median climate, medium demand
- Wet climate, low demand

As the years deferred increase, the net present cost benefit also increases.
BENEFITS FOR CUSTOMERS

50 year NPV per Customer

High demand (no water efficiency expenditure)
Baseline Demand (moderate water efficiency expenditure)
Low Demand (high water efficiency expenditure)
HOW WE IMPLEMENT WATER EFFICIENCY
Drivers for Changes in Water Efficiency

Spend

Rain ↓

Reservoir levels ↓

Investment in water efficiency ↑

Rain ↓

Use ↑

Revenue ↑

Investment in water efficiency ↑

(Yarra Valley Water)
WATER EFFICIENCY – A DRY TOPIC!