



# Regulatory assessment of demand

Water Price Review 2009

30 March 2012

# Objectives of review

- ESC asked to provide advice on whether demand forecasts:
  - had been developed using appropriate forecasting methodologies and approaches, given the materiality of the forecasts for the businesses revenue and resulting prices
  - reflect reasonable assumptions about the key drivers of demand including the impact of supply restrictions
  - use the best available information, including historical data that can support trends in demand
  - take account of current demand and economic conditions

# Objectives of review

- Translation
  - Were forecasts based on sound and robust methods
  - Did the key underlying assumptions make sense, were they based on logic
  - Were the forecasts consistent with the past and if not ...
  - Where the differences between the forecasts and actuals explained

# Basis for review

- What did we have regard for?
  - Guidance issued by the ESC which set out the parameters for the assessment
  - Comparisons between businesses in relation to common assumptions
  - Relevant government policy
  - Third party evidence
  - Historical trends
  - And most importantly the information set out in the businesses water plans

# Our approach

- We went into the review with no preconceived expectations and considered all forecasts purely on merit
- Placed a high degree of emphasis on consultation
  - Proposal discussions (metro review)
  - Further information requests
  - Draft report and response to draft
  - Actively sought to develop open relationships with the businesses in order to allow businesses the opportunity to fully inform the process
- Took the position that any recommended amendment needed to be defensible ... based on evidence rather than conjecture.
  - Based on independent third party analysis (e.g. ViF, CSIRO)
  - Reflect observable trends in historical data

# Overview of process

- Step 1: review all forecast against historical actual data
  - Identify forecasts that differ from historical trends
- Step 2: review step changes against water plans
  - Check for internal consistency
  - Identify reasoning for change
  - Seek evidence of change
  - Request further information where not evidenced in water plan
- Step 3: validate assumptions driving forecasts
  - business comparisons
  - 3<sup>rd</sup> party data, review connections against ViF
  - logic and reasoning
- Step 4: amend forecasts where appropriate
- Step 5: consult on amendments
- Step 6: consider feedback and generate final advice for the ESC

# Underlying assumptions

- Future growth in customer numbers
- The impact of non-price water conservation measures
- The impact of restrictions on consumption
- Consumer responses to changes in price (elasticity)

# Growth in customer numbers

- Recommended customer connections be adjusted upwards to reflect the most recent Victoria in Future projections
- Our most material recommendation to the ESC regarded growth in connections
  - Connections affect connections (obviously)
  - Also affect volumetric forecasts
  - Also affect non-residential forecasts (where non residential are derived from residential)
- Our recommendation was consistent with the approach undertaken by water businesses
- We used the ViF household series to establish growth factors for residential connections
- In establishing the growth factors we were guided by the LGA breakups that the businesses provided
- For sewerage we applied the new ViF growth rates on the basis that growth in sewerage connections should be similar or greater than water
- For non residential our amendments were based on the methods adopted by businesses



# Non-price conservation measures

- Recommended the ESC accept the proposed non price conservation savings
- Regionals – variety of approaches, not all well described in water plans
- Metros - Compared assumed efficiency gains across all businesses for the six appliance categories and noted some inconsistencies.
- Noted that permanent water savings directly effected the expected level of Bounce Back
- 2009 adopted the Urban Water Price Review 2008 as the basis for assessing bounce back
  - Expected a return of between 70 and 90 % of prerestriction levels over a two year period
  - Accepted industry position (at the time)
  - Will need to be reconsidered in light of recent experiences
  - Guided by businesses

# Restrictions

- 2008, we assumed a medium climate change scenario and a gradual easing of restrictions
  - Consistent with water plan proposals
- 2009, in response to the draft report businesses materially revised restriction forecasts
  - Accepted revised restriction levels as not being overly conservative
  - Recommended limiting assumed savings from T155 to an annual average of 155 Lppd
  - Recommended forecasts be amended such that T155 did not impose any residual impacts
  - T155 was voluntary
  - Data to date did not support significant decreases in excess of 155
  - Businesses had

# Elasticity

- **Customers do respond to prices and price elasticity of demand is real.**
- 2008, we adopted WSAA elasticity estimates
- 2009, removed elasticity from Metros
  - Issue is the possibility of double counting when businesses employ end use models.
  - Does not mean that elasticity is irrelevant ... Rather that there is a obligation to ensure that an appropriate elasticity is adopted.
    - One that reflects and accounts for the long run price response of customers imbedded in end use models.
- Elasticity of demand is also important where businesses wish to pursue scarcity pricing.
- Concentrating on short term elasticity responses may be one solution

# Going forward

- Generally thought the level of data and information was adequate
- Found demand forecasting to be more mature than other jurisdictions such as Qld and SA
- Bounce Back
  - Problematic
  - Review of current literature
- Elasticity



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