



ICRC

independent competition and regulatory commission

Setting the ACT's water tariff structure: economic principles and social context

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“The regulator with fewer instruments than objectives typically will be unable to achieve all of his objectives, regardless of how well informed he is about the regulatory environment.”

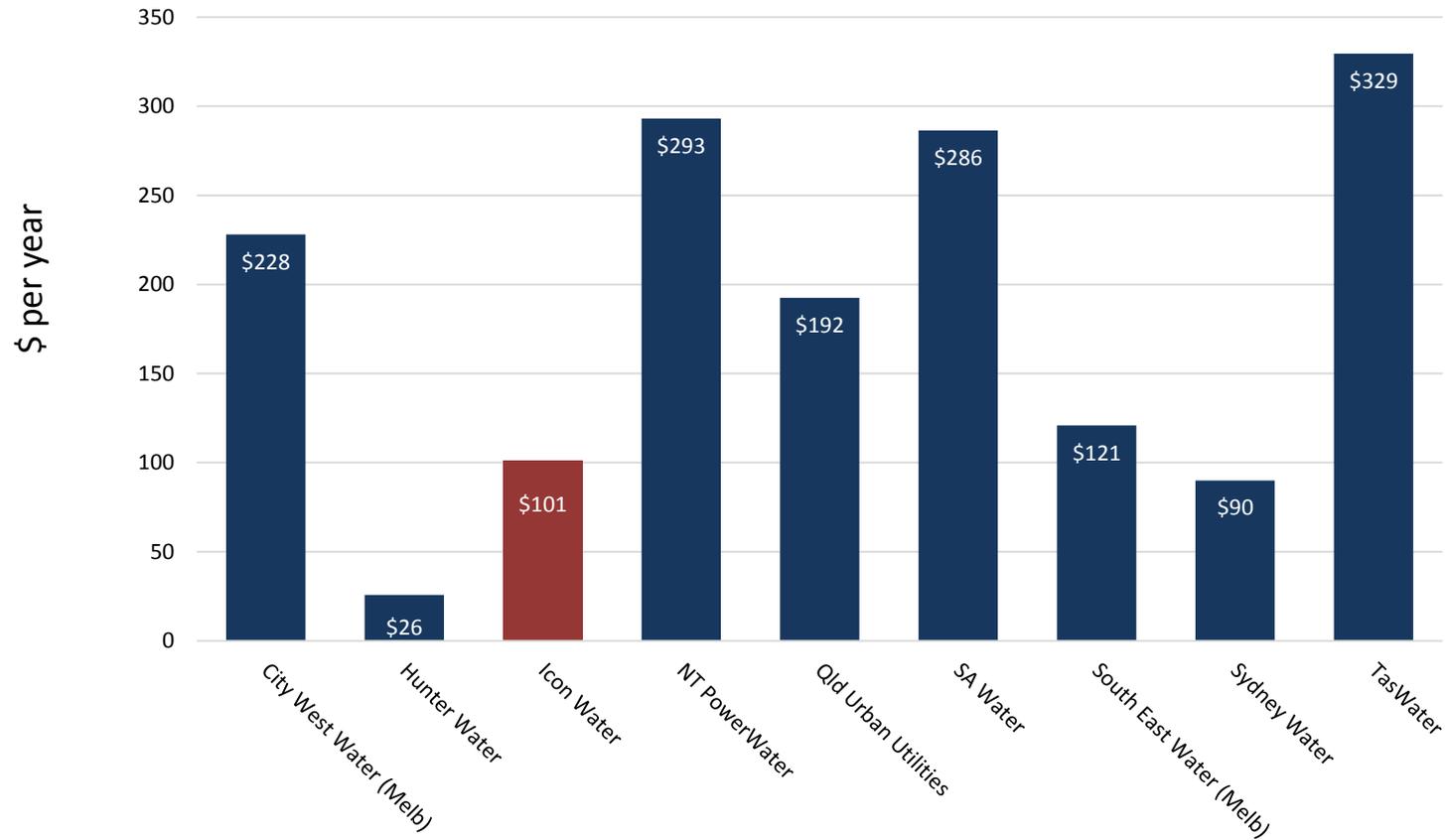
‘Recent Developments in the Theory of Regulation’, Mark Armstrong and David Sappington, Handbook of Industrial Organization, 2007

ACT's current tariff structure

- Two-part inclining-block tariff structure features:
 - very high usage charges
 - relatively low supply charges
- Utility company costs are approximately 80% fixed and 20% variable:
 - with 90% revenue derived from usage charges
- Tariffs set by the Regulator

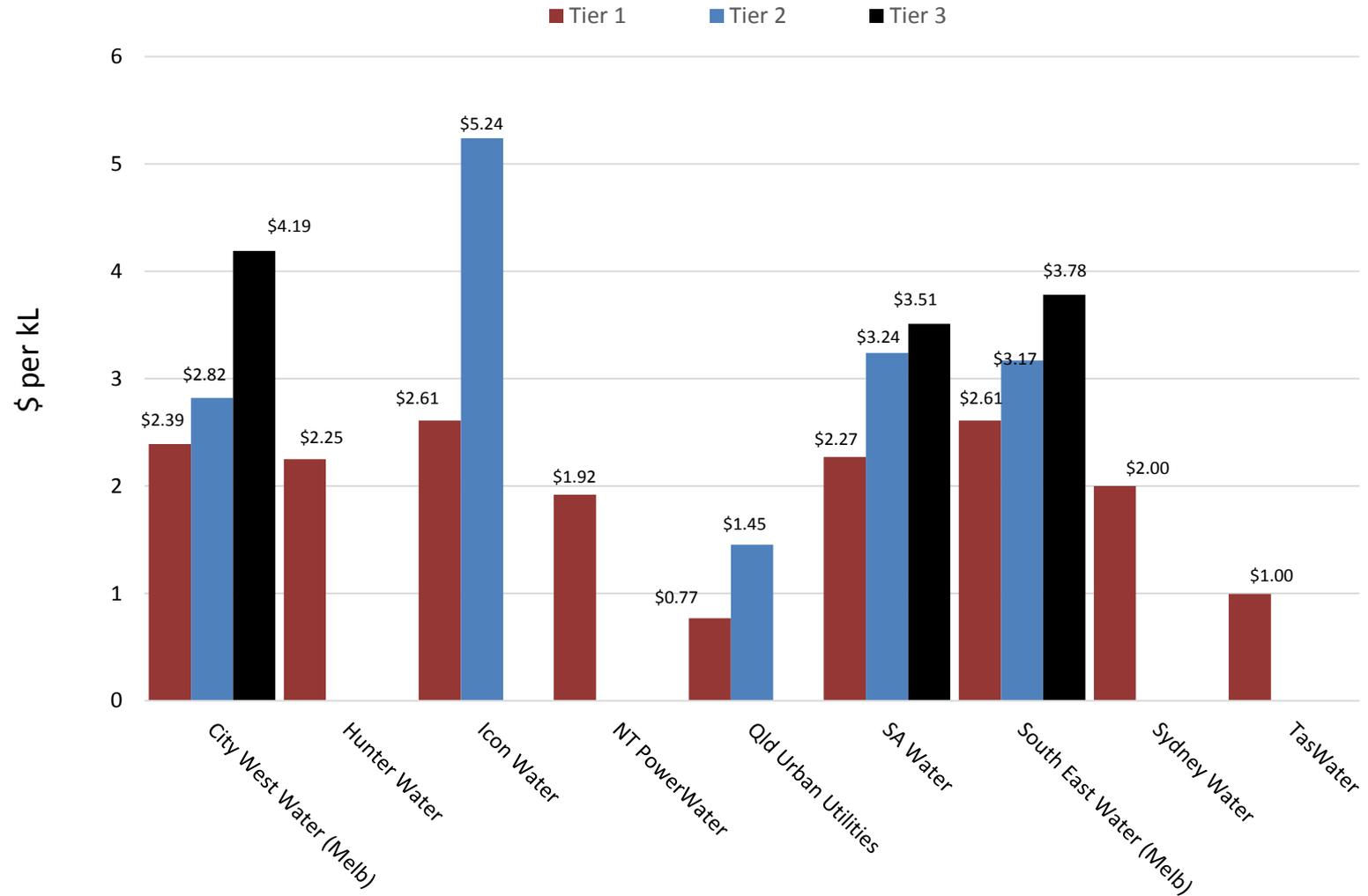


Water supply (Fixed) charges by utility, 2016-17





Water usage charges by utility, 2016-17





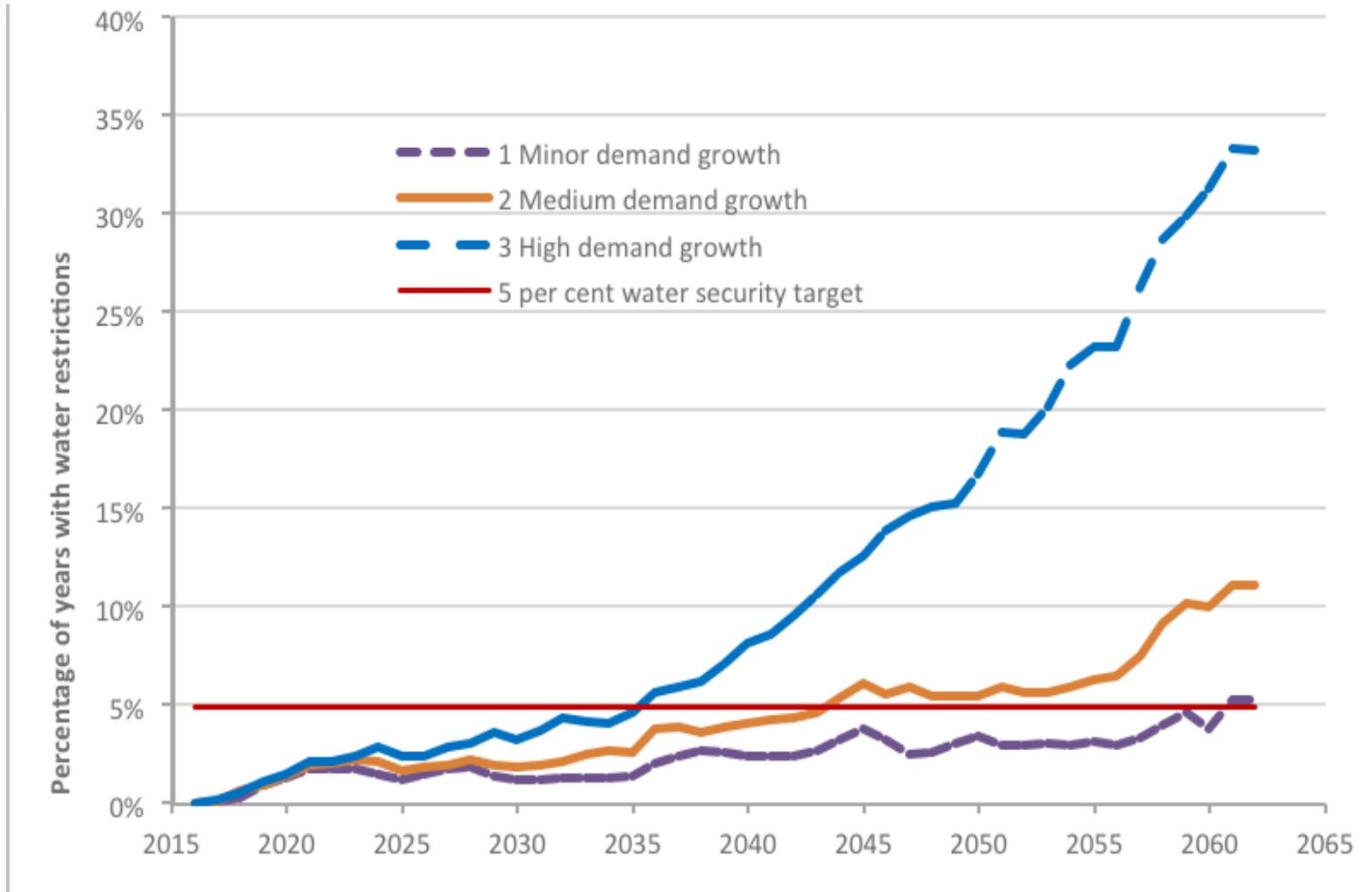
Rationale for inclining-block tariffs

- To help conserve water while making some 'essential' water available at a lower charge
- In place and useful during the Millennium Drought, together with water usage restrictions

Supply conditions and water security

- Improved water security
 - The current combined dam storage level: >90%
- Declining per capita consumption over the last 10 years
- Capacity was increased by about a third (from 206 to 278GL)
- Further augmentation not expected for next 25 to 40 years

Demand and probability of water restrictions



Problems With Existing Structure

- Incentives to use water efficiently?
- Efficient recovery of costs?
- Flat demand means ever greater reliance on usage charges
- Places great weight on accurate demand forecasting
- Risk of bypass



Policy and regulatory context

- Legislative
 - ‘overarching’ objective of efficient investment, operation and use of water in the long term interests of consumers
 - Balance economic efficiency with environmental and social considerations
- Must Have Regard to Government policies
 - *ACT Water Strategy 2014-2044: sustainable use of water*
 - National agreements
 - Murray-Darling
 - National Water initiative



Efficient pricing

- Setting a single usage charge at relevant marginal social costs (MSC)
- Will not recover sufficient revenue
- Need fixed charge component or else recover balance of costs some other way
- Modelling showed little difference b/w short run and long run MC.

Challenges aligning with an economically efficient price

- Economic challenges
 - MC pricing not straightforward
 - Don't have a value for water
 - May require continuous adjustments to reflect scarcity
 - Demand inelastic: likely to still require rationing in times of drought
- Distributional and environmental concerns
 - Large distributional impacts
 - Sunk investments by users in response to restrictions
 - Need to ensure environmental objectives are met



Draft report (2016)'s proposed rebalancing

- Proposed shift towards aligning tariff structure more closely with MSC
 - If tariffs rebalanced to reflect MSC would see supply charge increase from \$100 to \$605 approx.
 - Single usage charge \$1.74
 - Gradual implementation (around 10 yrs to deal with user sunk investments)
 - Significant redistributive impacts as low users (below 200kL) pay more
- Proposed greater role for tariffs to be proposed by regulated business
- Guided by 80% fixed, 20% variable utility cost structure

Environmental objectives

- Regulated utility is required to ensure environmental flows are given first priority
- The ACT only consumes a small proportion of the total amount of water flowing into its catchments.
- The net use, in the past 8 years, at about 8 % of total inflows after environmental flows deducted
- Rebalancing possible without compromising environmental objectives

2016 feedback

- ‘Very lively’ response to suggested structure
- Strong consumer concerns raised about
 - Perceived environmental impact
 - May diminish the value of household sunk water investments
 - May be contrary to substantial Government messaging
 - Distributional concerns (low income and low users)
 - Scepticism over possible increased role for regulated business



Trade offs and judgement required in regulation

- Balancing regulatory requirements and objectives
- Allow for the recovery of the efficient cost of providing water services
- In doing so:
 - Ensure distributional fairness
 - Consider social and environmental concerns
 - Recognize investments of users (sunk costs)
 - One instrument, several objectives

The way forward for the ACT

- Retain the two-part inclining-block tariff structure
- Gradually move prices in line with the economically optimal solution
- Consider separate tariffs for different types of consumers
- Establish a set of pricing principles which reflect:
 - Generally accepted economic and regulatory principles
 - Legislative government policy objectives
 - Environmental, social and distributional objectives
 - make clear the trade-off between objectives
 - In the end regulatory discretion is unavoidable.

Appendix



Pricing principles

1. Economic efficiency in use

Tariff structures and prices should promote the economically efficient use of Icon Water's water and sewerage services infrastructure, and should also encourage economically efficient use of the water resource itself.

2. Economic efficiency for investment and operation

Tariff structures should facilitate the efficient recovery of the prudent and efficient costs of investment and operation. The finance recovery aspect of this principle is often described as revenue adequacy or ensuing financial viability.

Costs also need to be efficient which is primarily addressed by auditing and incentive mechanisms.



Pricing principles

3. Environmental considerations

Tariff structures, prices and complementary mechanisms should ensure environmental objectives are effectively addressed.

4. Community impact – adjustment

Any change to the structure of tariffs and prices that will have substantial customer impacts should be phased in over a transition period to allow reasonable time for customers to adjust to the change.

5. Community impact – equity for low income households

Adverse impacts on households with low incomes need to be limited or moderated by phasing and other compensating mechanisms or limits on changes to the tariff structure.



Pricing principles

6. Simplicity

Tariff structures should be simple for customers to understand and straightforward for the utility to implement.

7. Transparency

Tariffs should be set using a transparent methodology and subject to public consultation and scrutiny.