

Inquiry into reforming Australia's Urban Water Sector

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About the inquiry

- Initiated by the Australian Government (and indirectly, COAG)
- Terms of reference:
 - *Examine the case for microeconomic reform in Australia's urban water and wastewater sector*
 - *Identify opportunities for efficiency gains in structural, institutional, regulatory and other arrangements*
 - *Provide options to achieve efficiency gains and propose a work program*
- Draft report released: 13 April

Evidence provides a strong case for reform

- Under difficult circumstances water supply has been maintained
- But, costs to the community higher than necessary:
 - *water restrictions and consumption targets (restrictions cost > 1 billion dollars per year)*
 - *costly mandatory conservation measures (rainwater tanks cost \$9/kL)*
 - *inefficient supply augmentation (excessive costs for Sydney, Melbourne, Perth & Adelaide)*
 - *water quality and other problems in some regional areas*

Adelaide desalination plant

- Lack of publicly available analysis to support investment decision
- \$1.8 billion capital cost
- \$328 million Commonwealth grant conditional on doubling capacity to 100 GL
- Capacity is 71% of 2007-08 consumption (compared to 15% for Sydney plant)
- Other options
 - *Purchase water entitlements (~\$190 million)*
 - *Smaller desalination plant plus water purchases as needed*

What are the impediments to performance?

- Absence of clarity and transparency about objectives
- Conflicting and inappropriately assigned objectives
 - *Policy makers, regulators (public health, environmental and economic), utilities*
- Absence of clarity, transparency and alignment of policies
- Lack of clarity about roles and responsibilities
 - *Elected representatives, policy making organisations, regulators, utilities and consumers*
- Deficient institutional arrangements and governance

What are the impediments to performance? (cont'd)

- Constraints on efficient water resource allocation and supply augmentation decisions
 - *'Policy bans'*
 - ... Rural-urban trade, indirect potable reuse, aquifers
 - *Focus on desalination plants*
 - *Limited application of 'real options' approach to planning and investment*
 - *Subsidies*
- Focus on water restrictions, water use efficiency, and conservation

What are the impediments to performance? (cont'd)

- Focus on affordability through distorting prices
 - *Water services a small percentage of income/expenditure*
 - *Inclining block tariffs*
 - *Political pressure on prices*
 - *Full cost recovery a casualty*

Goals of reform and roles of governments

- Create the incentives for institutions undertaking policy making, regulatory and service delivery functions to operate efficiently
 - *Clear overarching objective for development and implementation of policy*
 - *Policy frameworks and principles consistent with overarching objective*
 - ... (Public health and environmental protection, service delivery)
 - *Water property rights across water cycle*
 - *Best practice institutional, regulatory and governance arrangements for economic, public health and environmental regulation, service delivery*

Proposed program for reform

- Two streams
 - *High priority, universally applicable reforms across all jurisdictions*
 - *Structural reform — case-by-case*

High priority, universally applicable reforms

- Setting objectives
 - *Deliver water, wastewater and stormwater services in an economically efficient manner to maximise net benefits to the community*
 - *More rigorous application of the principles of best practice regulation*
- Procurement of supply and water resource allocation across the water cycle
 - *Remove policy bans*
 - *Assess all options on economic merit*
 - *Apply 'real options' value approach to planning/investment*
 - *Costs/benefits/risks information for community consultation*

High priority, universally applicable reforms (cont'd)

- Remove water restrictions (costs/benefits)
- Discontinue mandated water efficiency measures (costs/benefits)
- Pricing
 - *Utilities set prices (monitoring by regulators)*
 - *No mandated retail scarcity pricing*
 - *Encourage utilities to provide tariff choice*
 - ... Consumer choice
 - ... Facilitate demand management by utilities
 - ... Move to full cost recovery

High priority, universally applicable reforms (cont'd)

- Access and affordability
 - *General (not water specific) financial hardship of low income households*
 - *Rely on (in order)*
 - ... Social security and income tax assistance for low income families
 - ... Rebates (concessions) on the fixed service charge, a community service obligation funded by government
- Public health, environmental protection and economic regulation
 - *More rigorous application of six principles of good regulatory practice from PC Regulation Taskforce 2006*

High priority, universally applicable reforms (cont'd)

- Institutional arrangements and governance
 - *Service delivery by utilities*
 - ... Assign responsibility for procurement and security of supply to retailer/distributers
 - ... Improve governance arrangements for utilities
 - ... Charter between government and utility
 - ... Public reporting of utility performance against the charter
 - ... Independent periodic review of utility performance against the charter
 - *Charter*
 - ... Obligation to serve (security of supply and obligation to procure)
 - ... Processes and procedures for choosing supply augmentation
 - ... Principles, process and procedures for setting prices
 - *Establishment of a consumer representative group?*
 - *Access to an ombudsman for dispute resolution*

High priority, universally applicable reforms (cont'd)

- Institutional arrangements and governance
 - *Regulatory institutions*
 - ... Better defining the roles of regulators
 - ... Providing better guidance on the principles and frameworks regulators are to apply
 - ... Ensure that best practice institutional design, processes and procedures are adopted to make regulators responsible and accountable for their actions

Optional structural reforms

- Metropolitan
 - *Five options with increasing contestability*
- Regional
 - *Two options - economies of scale and scope*
 - ... Aggregation of small utilities
 - ... Disaggregation of jurisdiction wide utilities

Optional structural reforms — Metropolitan

- Particular merit in an option involving
 - *vertical separation of the bulk water supply function*
 - *horizontal separation of bulk water service providers by type of supply source*
 - *procurement of bulk water services via bilateral contracts, using transparent and contestable processes and procedures*
- And possibly also in introducing similar arrangements for wastewater treatment

Optional structural reforms — Metropolitan (cont'd)

- There is insufficient evidence to conclude that a competitive, decentralised urban water market is feasible and would have net benefits

Optional structural reforms — regional utilities

- Aggregate small utilities in NSW and Qld to exploit economies of scale
 - *County councils*
 - *Regional water corporations*
 - *Regional organisation of councils / alliances*
- In regional urban areas in SA, WA and NT
 - *Disaggregation of jurisdiction-wide utilities:*
 - ... Multiple regional water corporations
 - ... Retain jurisdiction-wide utility but price according to geographic boundaries

Framework for implementation

- Roles of governments
 - *COAG's a new intergovernmental agreement on the reform program*
 - ... universally applicable reforms, with agreed timetable for implementation
 - ... commitment to reviewing and implementing structural reform, with agreed timetable
 - *COAG's monitor progress*
 - ... A role for the National Water Commission
 - *State and Territory and Local Governments*
 - ... proceed with reform ASAP
 - ... opportune time in most jurisdictions
- Independent public review in 5 years

Comparison of PC & NWC recommendations

- Many similarities
 - *Set clear objectives and clarify roles and responsibilities*
 - *Remove impediments to efficient supply augmentation*
 - *Greater customer choice and consultation*
 - *Reduce reliance on water restrictions*
 - *Remove water recycling/conservation targets*
- Some differences
 - *Pathways to efficient pricing*
 - ... NWC: wider adoption of independent price regulation
 - ... PC: utilities set prices based on government principles, independent monitoring & ? role for consumer representative body
 - *PC: retailer distribution utilities procure new supplies*
 - *PC: a more detailed reform agenda with structural reform options*

Consultations and next steps

- **Feedback through public hearings & submissions**
 - *widespread support for most draft recommendations*
 - *depoliticisation a threshold issue*
 - *water industry sees the reform agenda as ambitious (some economists see it as not ambitious enough)*
 - *indirect potable reuse – health concerns*
 - *support for restrictions, mandatory conservation measures*
 - *some scepticism about tariff/service offerings*
 - *more acknowledgement of distributed systems*
 - *proposed reforms will require water utilities to develop skills in key areas (engineering meets economics)*
 - *divergent views on the role for economic regulation*
 - *call for more detail, including on reform implementation*
- **Final report to the Australian Government**
 - *31 August 2011*

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Costs to the community are large

- Costly water restrictions and consumption targets
 - *Nationally, water restrictions cost in excess of 1 billion dollars per year in the lost value of consumption alone*
- Costly conservation measures
 - *Rainwater tanks, low flow shower heads, water recycling*
- Costly supply augmentation investments
 - *\$1.1 billion cost savings in Sydney from deferring desal plant*
 - *(Modelled) \$3.1-4.2 billion loss in NPV of community welfare in Melbourne plus Perth over 20 years*
 - *Welfare losses in other cities, such as Adelaide*

Investment in desalination plants

	Initial capacity	Maximum expandable capacity	Initial (and expandable) capacity as a percentage of annual consumption in 2007-08	Initial investment	Completion date
<i>Units</i>	<i>GL/year</i>	<i>GL/year</i>	<i>%</i>	<i>(\$m)</i>	
Sydney (Kurnell)	90	180	15 (30)	1 890	completed
Melbourne (Wonthaggi)	150	200	41 (54)	3 500	2011
SE Queensland (Tugun)	49		24	1 200	completed
Adelaide (Port Stanvac)	100		71	1 830	2012
Perth (Kwinana)	45		19	387	completed
Perth (Binninyup)	50	100	21 (42)	955	2011
Total	484	674	27 (38)	9 762	

Inefficient supply augmentation investments

- Melbourne
 - *Building pipeline and a large desalination plant less efficient than building the pipeline and waiting to see if further augmentation needed*
 - *Estimated \$2.7-3.7 billion loss in NPV of community welfare over 20 years compared to real options approach*
- Sydney
 - *Real options approach suggested 30% dam level trigger for desalination plant, but contracts signed when dams at 57%*
 - *Estimated \$1.1 billion loss from not sticking to 30% trigger*
- Adelaide
 - *Building a large desalination plant likely to be less efficient than purchasing water from irrigators (and possibly building a smaller desalination plant)*