The Hon Paul Caica MP
Member for Colton

Government
of South Australia

Minister for Environment
and Conservation
Minister for the River Murray
Minister for Water
9th Floor, Chesser House
91-97 Grenfell Street
Adelaide SA 5000
GPO Box 1047
Adelaide SA 5001
DX 138
Tel 08 8463 5680
Fax 08 8463 5681
minister.caica@sa.gov.au

25 May 2011

Urban Water Inquiry
Productivity Commission
GPO Box 1248
CANBERRA ACT 2601

Dear Sir/Madam

Thank you for the opportunity to provide a submission to the Inquiry into Australia's Urban Water Sector.

Please find enclosed the Government of South Australia's submission for your consideration.

The submission responds to a number of issues raised in your draft report, including factors necessitating the decision to construct the Adelaide Desalination Plant.

Yours sincerely

PAUL CAICA
MINISTER FOR WATER

Encl.

PRODUCTIVITY COMMISSION INQUIRY INTO AUSTRALIA'S URBAN WATER SECTOR

SOUTH AUSTRALIAN GOVERNMENT SUBMISSION IN RESPONSE TO DRAFT REPORT

1. Introduction

The South Australian Government welcomes the Productivity Commission's draft report on Australia's urban water sector and agrees with the Commission that the severe and prolonged drought has posed significant challenges for policy making and service delivery.

The South Australian Government agrees with the Commission that there is a case for reform in the urban water sector and supports the view that in many cases there is not a 'one size fits all' solution.

The South Australian Government already has in place an ambitious reform agenda.

This submission addresses some of the Commission's key findings and recommendations of relevance to South Australia. It also reiterates some of the points highlighted in our initial submission that, given their lack of coverage in the draft report, must not have been sufficiently clear.

2. Objectives, Policies and Planning for the Urban Water Sector

The South Australian Government's *Water for Good* plan sets out the objectives, policies and key actions to secure the State's water future. The Government is working to ensure that the State's water sector is efficient, secure, transparent and affordable.

South Australia's unique position at the lower end of the Murray-Darling system means that water security and water quality are central to the preservation of quality of life and the environment.

In summary, the South Australian Government has the following key objectives for the State's urban water sector:

- Diversifying Adelaide's water supply options, especially away from climate dependent sources.
- Increasing the harvesting of stormwater and its use in fit for purpose activities.
- Increased recycling of wastewater and its use in fit for purpose activities.
- Maintaining permanent water conservation measures.
- Establishing regular water demand and supply statements for each region of the State and utilising these as a strategic instrument for assessing the need for water supply augmentation and/or demand management measures.
- Increasing the adoption of water sensitive urban design.
- Establishing the best possible legislative arrangements for the water industry, to promote innovation, competition, ensure safety and support water conservation.
- Establishing independent economic regulation of the water industry.

- Maintaining Government ownership of SA Water, with improved 3rd party access arrangements.

The draft report found that the role for elected governments in the urban water sector was to:

- Set objectives for policy development.
- Develop policy frameworks and objectives.
- Define property rights.
- Put in place institutional and governance arrangements.

While the Commission defines economic efficiency as a broad-based concept, their application of it to some of the issues addressed in the draft report belies this position. While economic efficiency is an important consideration in government decision making, equally important are social considerations including the views and expectations of the community. It is the role of government to ensure that its decisions take full account of social and community considerations.

The South Australian Government has explicitly stated its policy position with respect to urban water through its *Water for Good* plan and raised these in its submission to the Commission's Issues Paper. This includes:

- Maintaining Government Ownership and Structure of SA Water
  - In the immediate term, SA Water will be retained as a vertically integrated service provider. However, *Water for Good* calls for the merits of innovative and competitive arrangements to be explored in the medium term.
- Establishing New Regulatory Arrangements for the Water and Wastewater Service Industry
  - Central to the objectives of *Water for Good* is the Government's commitment to introduce a more appropriate and efficient regulatory regime for the water sector. This reform package recognises the developing nature of the water supply and wastewater service industry and will provide a single legislative focus for water planning and service delivery.
  - A proposed new Water Industry Act, which will replace existing legislative arrangements and provide a more efficient and appropriate framework for the regulation of the water industry, is currently being developed by the South Australian Government.
- Diversifying Adelaide's water supplies to reduce its reliance on the River Murray and other rain-dependent water sources.
  - A key action is to supplement Adelaide's water supply by constructing a desalination plant with capacity to produce 100 GL of water per annum.
- Economic Regulation, Pricing and 3rd Party Access
  - The South Australian Government determines prices for drinking water supplies and wastewater services provided by SA Water, but has committed to the appointment of the Essential Services Commission of SA (ESCOSA) as the independent economic regulator of the water industry.
  - The Government will request ESCOSA's advice on a number of matters relating to pricing structure, including the effect of state-wide pricing and transition arrangements for any changes to pricing. The Government will also monitor the impact of pricing reform on low income households, with any issues to be tackled by separate targeted concession arrangements.
  - In its recent publication, *Urban Water in Australia: future directions 2011*, the National Water Commission (NWC) has reiterated its support for *independent economic regulation*

as a prerequisite for effective and efficient pricing and viable water businesses. The NWC has also presented this recommendation to the Council of Australian Governments consistently in recent years in its biennial assessments.

- Independent economic regulation does not preclude light handed regulation. The *Essential Services Commission Act 2002* provides ESCOSA with the ability to adopt a number of light handed approaches to price regulation.
- Improvements to third party access arrangements for significant infrastructure services in the South Australian water industry are also being considered. Despite the need to look at improvements, current arrangements allow for alternative options/ opportunities, e.g. SA Water has in place a number of transportation arrangements, including with Barossa Infrastructure Limited (BIL) for bulk water transfer from the River Murray to the Barossa region. This involves BIL's water being transferred from a source to a storage facility owned by BIL and for its own use.

- Stormwater and Wastewater Management
  - The South Australian Government plays a collaborative role in stormwater with Local Government and other stakeholders for the purposes of flood risk mitigation and also as an alternative, non-potable water supply. This includes work through the newly formed Goyder Institute, which provides independent scientific advice to guide smart water use and innovative water management, including in relation to stormwater.
  - The current issue for stormwater is that the extremely variable quality of harvested stormwater and its erratic availability suggests that it is economically unviable with existing technologies to treat it to potable standards.
- Water Restrictions and Permanent Water Conservation Measures
  - Given recent improvements in storage levels following substantial rains and inflows into the River Murray and the anticipated progressive commissioning of the Adelaide desalination plant from mid 2011, variable water restrictions were lifted for most of the State from 1 December 2010 and Permanent Water Conservation Measures recommenced for most areas previously subjected to more stringent variable restrictions. These measures have been relabelled 'Water Wise Measures'.

Importantly *Water for Good* establishes an adaptive management approach to water security issues to ensure South Australia is well placed to meet new challenges and manage future demands for water until 2050.

3. Adaptive Planning and Management Approach

Water for Good commits the South Australian Government to an adaptive management approach to water security.

This will involve setting water security standards that will define the risk points that would threaten water supply and require decisions on options to augment supply or manage demand (or both).

Supporting these standards will be a State Water Demand Statement and regional demand and supply statements for each of the State's eight Natural Resources Management regions. These statements will provide assessments of the future demand and supply pressures on water resources and help identify the timing and need for any water supply augmentation, or demand management response. The statements will be reviewed annually and comprehensively updated every five years.

The first of the regional statements (for Eyre Peninsula) was released in April 2011, with other regional plans expected to be progressively developed up to 2014.

The Government will utilise the projections in demand and supply statements to identify when decisions are necessary on appropriate water demand and supply responses for a region. This enables long-term, sustainable and cost effective solutions to managing water supplies to be identified and implemented within required timeframes.

An independent planning process will be triggered by the Minister for Water, should an emerging demand and supply imbalance be identified. A five year trigger point has been set to allow for a thorough identification of all demand and supply options, a detailed cost and benefit assessment, funding and delivery opportunities, community engagement and for the preferred option to be establish on ground before the date when demand is likely to exceed supply.

The statements also provide publically available and current information on an annual basis on demand and supply pressures in a region, so the community are continually and consistently informed of the situation.

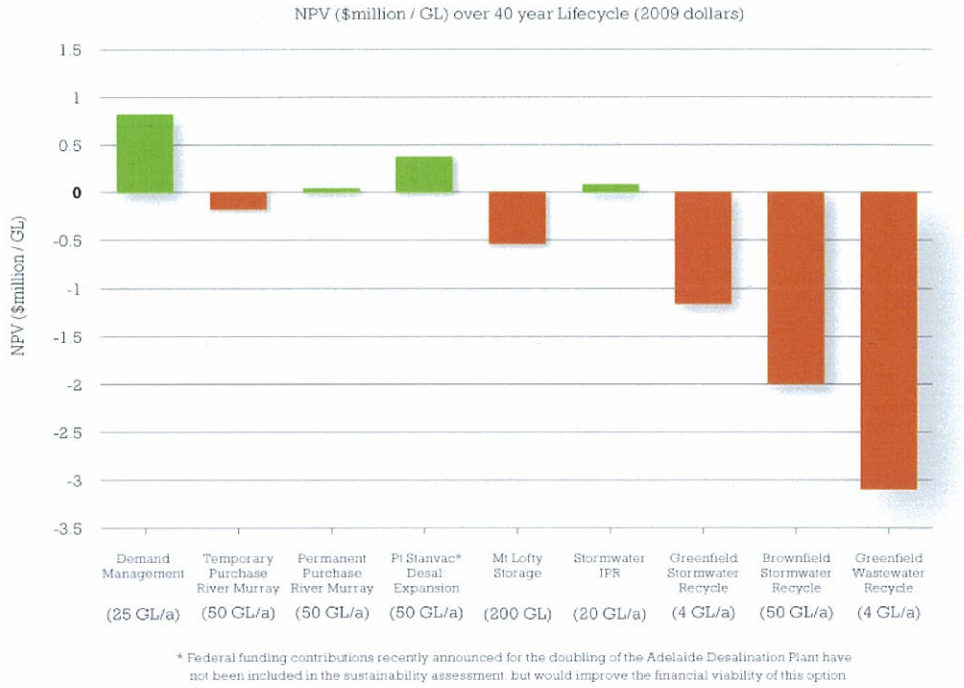
The Commission suggests governments should develop a 'charter' with each water provider that sets out, inter alia, the provider's responsibility in water security.

The economic regulation alternative to the charter, as proposed in South Australia's draft Water Industry Bill, places an obligation on providers to supply reliable services, e.g. it requires standard terms and conditions to be developed and allows licence conditions to be set that require licensees to prepare 'reliability of supply' plans. There is also scope in the draft legislation for the Minister to require water industry entities to provide information for the purposes of the Act, including for the water planning provisions. (In the case of SA Water, these arrangements will be supplemented by a Memorandum of Understanding between SA Water and the Department for Water, which among other things will cover the roles played by SA Water and the Department in relation to water demand and supply planning.)

4. Desalination and Supply Diversification

The Commission's report is limited in its context-setting for augmentation decisions. The Commission focuses narrowly on the financial costs associated with desalination, based primarily on modelling undertaken for plants in Melbourne and Perth. The Commission itself notes that its work is based on a number of assumptions and that its results are "indicative only".

However, the Commission is incorrect in suggesting there is no publicly available information on the relative cost of alternative supply options in Adelaide. In fact, the *Water for Good* plan (p119), released in June 2009, spells out very clearly that – among supply options – the desalination plant offered the best overall value for money (see figure below).



* Federal funding contributions recently announced for the doubling of the Adelaide Desalination Plant have not been included in the sustainability assessment, but would improve the financial viability of this option

The Commission also misses a much more fundamental point – this is all about the State's water security.

While Adelaide is the most direct beneficiary of the desalination plant, the plant enhances water security for the whole state. As an example, water security is enhanced for Victor Harbor because SA Water will not need to draw as much water from Myponga Reservoir for the southern suburbs of Adelaide, leaving more in the dam to meet the growing needs of the Victor Harbor area. Also, in a drought the plant will provide water for Adelaide which means that more of the water licensed to or purchased by SA Water to supplement supplies can be utilised for rural areas.

As the recent drought shows, and as the Perth experience shows, urban communities simply cannot risk relying solely on climate dependent sources. Failure of such sources would have near-catastrophic consequences for cities. Alternative supply options put forward by the Commission all run this risk.

The Commission appears to believe that purchasing River Murray entitlements is a viable alternative to desalination. But this view has no regard to the physical realities of the River Murray in an extreme, prolonged drought situation and the costs associated with water trading administrative arrangements.

The Commission's analysis is flawed because, amongst other things, it fails to recognise the decision to build a desalination plant was driven by water security considerations as a result of the dire supply circumstances that faced Adelaide brought about by:

- The unprecedented rate of deterioration of the quantity and quality of available supplies from the River Murray, and subsequent projections that this situation could continue over multiple years. Within a period of a few months the supply circumstances changed dramatically from

poor to dire and because of this the quality of water from the River had become so poor that there was an unacceptable risk that it would not meet acceptable drinking water standards.

- The administrative arrangements associated with trading water from Victoria and NSW, and the reduced annual allocations on permanent entitlement during the drought, meant that to secure a similar supply of water at a security level approaching that of the desalination plant (100 GL) would have resulted in costs to SA Water nearly equivalent to the costs of construction of the plant. This is because an entitlement purchase strategy such as that proposed by the Commission would require holding sufficient entitlement to provide 100GL at the lowest allocation (18% for SA Murray and 35% for Vic Murray), not the average or maximum allocation as indicated by the Commission, to meet the supply reliability of desalination. The report dismisses this factor by stating that carrying over allocations could be used to manage the risk, however carryover was either not available at all or could not have been relied on as a low risk strategy in any of the Southern Murray Darling Basin jurisdictions at the time.
- The whole-of-Basin response to the unprecedented drought, in which South Australia's water supply needs had to be balanced with the needs of other Basin states.

Not only are the Commission's conclusions about augmentation problems unreasonable in their portrayal of the actual events but they also are flawed in understanding of the trading environment that existed at the time.

In a drought, there can never be any guarantees that South Australia will receive its full entitlements or that there will be enough water in the Murray system to transport the water to which it is entitled. Then there is the issue of water quality – which is always under threat during prolonged drought. All this imposes huge costs, e.g. considerable capital funds were invested to ensure that SA Water could continue to extract water from the Murray (i.e. through lowering pumps) and also by constructing water treatment facilities for eleven communities whose water supply may have been compromised by algal blooms to ensure that water supplied would not harm its customers.

These issues are only likely to worsen with the onset of climate change and with the added commitment to sustainable diversion limits through the Murray-Darling Basin Plan. We should never assume that past droughts are the worst we are likely to see.

Ultimately, it comes down to risk and reliability:

- What risk is a government prepared to take on the community or a city running out of water?
- How serious is the community about responding to climate change?
- What value does the community place on ensuring sustainable water extraction from the River Murray and Mount Lofty Ranges?

In this respect, the Commission itself concedes that – for Adelaide – "the desalination option is likely to be more reliable than purchasing entitlements".

Modelling undertaken for *Water for Good* (page 50) estimates that, without desalination and other measures, Adelaide would face a shortfall of 168 gigalitres per annum by 2050 in an extreme dry year. This is why, as part of its *Water for Good* plan, the State Government is pursuing multiple supply and demand options to improve Adelaide's water supply, including the 100 gigalitre desalination plant.

For example, building on the State's strong record of wastewater recycling, the Government is committed to recycling 45% of urban wastewater by 2013. The Government recently completed the Adelaide Park Lands Recycled Waste Project[1] ahead of schedule and is now working with local government to increase recycling from local community wastewater management schemes.

Similarly, the State Government is a big supporter of stormwater harvesting projects. New schemes in Adelaide are capable of harvesting more than 6 gigalitres per annum. In partnership with the Commonwealth and local governments, the state is now investing in a range of new projects that will more than double current stormwater harvesting capacity to 20 gigalitres per annum in 2013.

Of course, unlike desalination, stormwater is a climate dependent source. If it fails to rain, there is no water. Moreover, rainfall patterns in South Australia make stormwater reuse more challenging. There is little demand for the product during the winter when most of the water is available for harvesting and little to be harvested in summer when demand might be expected to be higher. Aquifer Storage Recovery is therefore a critical component of our program.

The Government has commissioned the Goyder Institute for Water Research to develop a framework for assessing the range of stormwater use options for Adelaide, with particular emphasis on addressing water quality and community acceptance. Acceptable options will be costed in a triple bottom line analysis.

There is currently no credible information to suggest that potable use of stormwater can be achieved for a lower cost than providing desalination water from the Adelaide Plant – and this is without factoring in the issue of water security and the challenges of storage.

Work undertaken by Worley Parsons for *Water for Good* suggested a 20 gigalitre scheme of large-scale stormwater harvesting in Adelaide's northern suburbs (followed by aquifer storage, extraction and piping to the Hope Valley reservoir for additional treatment) might indicatively cost $843 million, with additional ongoing costs. This would be very expensive drinking water.

5. Water Restrictions

Another area where the Commission was critical of Australian governments was in respect of water restrictions and water conservation measures. The Commission estimated the costs associated with stage 3a restrictions in Melbourne at $1.5 billion over a ten year period. The South Australian Government understands that these restrictions come at significant cost to the community and we are looking to overcome these costs by investing in desalination and other alternative supply options.

The Government sees the adoption of water-wise behaviour as a key part of the overall mix in addressing our water security needs. In this respect, the Government has implemented various demand management strategies that include rebates for water saving measures, education programs and targeted audits on high usage companies, all of which contribute to reduced

[1] A $75m project providing extra treatment facilities, a 10-kilometre pipeline from Glenelg to Adelaide's CBD, and around 30 kilometres of pipeline around the Park Lands. It will have the capacity to provide an extra 3.8 billion litres of recycled water for reuse.

consumption. The South Australian community has responded well to these initiatives and is to be congratulated for the commitment it has shown to more responsible water use over the drought period.

6. New Water Industry Legislation

In terms of South Australia, the Commission also suggests that consideration should be given to the structural separation of SA Water on regional grounds.

The Commission has suggested the possible separation of SA Water on regional grounds to address the inefficiencies of state-wide pricing. The South Australian Government considers that any benefits gained from such a structural change would be far outweighed by the scale losses involved.

The case for structural reform has not been made in the Commission's report. However, it is the responsibility of each jurisdiction to review the performance of its essential service sectors to ensure the community is being served in the most efficient and value-for-money manner. In this sense the recommendation that each 'State and Territory should undertake a detailed assessment of the full costs and benefits of undertaking structural reform in large urban cities' is reasonable.

Also, while not structurally disaggregated, the performance of two components of SA Water's state-wide system (services provided to Whyalla and Mount Gambier) have been separately reported in the National Water Commission's National Performance Report for many years. This provides a public level of yardstick competition. The performance of other regional sections of the system is internally reported and this provides for vigorous comparison within each region.

In the broader sense, the fact that many regions of the state draw their water from the same single source, the River Murray, is likely to be relevant to the disaggregation/aggregation assessment.

The Government is committed to reforming the urban water sector in South Australia. New water industry legislation is being developed that will:

- Ensure independent price regulation of SA Water by the independent economic regulator, the Essential Services Commission.
- Provide a framework for allowing third party access to SA Water's infrastructure and encouraging new entrants into the industry, who will be offering a range of other fit-for-purpose water products and services.
- Ensure better customer protection, through the appointment of a Water Industry Ombudsman.

The South Australian Government believes that these reforms will deliver the benefits the Commission is suggesting might flow from the separation of SA Water.

7. National Reform

South Australia has been a strong champion of national co-operation in water reform, through the National Water Initiative and the establishment of the Murray-Darling Basin Authority.

In this tradition, the South Australian Government would support the Commission's suggestion to extend the national reform agenda to the urban water sector and see strong potential to link it to COAG's work on capital cities strategic planning, among other things.

South Australia also agrees that reform should not be held up in anticipation of a new national agreement. South Australia has a clearly stated policy position for the urban water sector and is well advanced in implementing necessary reforms.

However, the costs and benefits to each jurisdiction from adopting the Commission's recommended reforms have not been assessed and it is disappointing that the Commission finds that there is no case for Federal funding. The possibility of financial assistance to resource and achieve specific reforms at this stage would indicate the Federal Government's priority for reform in the urban water sector and might provide some incentive and greater capacity for more comprehensive and accelerated implementation.

A national agreement would need to provide sufficient flexibility for States and Territories to implement reform suitable to their own circumstances and recognise valuable reforms already committed to, such as those outlined in *Water for Good*.

A national agreement that is too prescriptive and inappropriately scoped will hinder reform, stifle innovation and ultimately increase the cost of reform to the community.