



Independent Expert Panel
c/- Water Act Review Secretariat
Water Reform Division
Department of the Environment
GPO Box 787
CANBERRA ACT 2601

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Dear Sirs

2014 Review of the Water Act 2007

Frontier Economics has extensive experience in all facets of water economics and water trade in the Murray-Darling Basin and appreciates this opportunity to contribute to the review of the *Water Act 2007*.

There are a number of elements of the review that have significant economic content, including assessment of:

- the extent to which water trading is occurring effectively and efficiently
- the extent to which water is being used in higher value uses
- the level of Basin wide consistency in water charging regimes
- the contribution made by those charging regimes to achieving the Basin water charging objectives.

Below are our views on these selected issues.

Effectiveness and efficiency of water trading

A significant body of research has found that the maturation of Basin water markets is increasing the efficiency of trade and that markets have provided significant benefits to water users and the community more broadly. By improving the effectiveness and efficiency of water trade in the Basin, the Water Act 2007 should be viewed as contributing to these benefits.

This analysis of the benefits delivered by more efficient water markets includes Frontier's seminal 'impacts of water trade' assessment in [2007](#) and subsequently assessments in [2010](#) and [2012](#) for the National Water Commission (NWC) as well as recent NWC analysis of trends and drivers in water markets.

Similarly, the Productivity Commission's recent submission to the Agricultural Competitiveness Issues Paper found that trading scarce water has increased farm output and productivity and that remaining unnecessary restrictions on water trading should be removed.

The PC found that access to water is a key component of the agricultural supply chain and is critical to agricultural output and productivity. An efficient system for trading water rights helps farmers to manage risks from variable water availability and increases farm productivity by allowing water resources to be allocated to their highest value uses within a trading area.

These assessments are based on evidence from the period when the *Water Act 2007* has been in operation. While many of these reforms to water trade have been driven by States, we note that the effectiveness and efficiency of water trading will be further enhanced by the recent commencement of the Basin Plan Water Trading Rules which are a direct result of the *Water Act 2007*.

These Rules, which focus on trading at the individual or ‘retail’ level, require a range of measures that are designed to improve access to water trade, and increase transparency and access to information in the water market for the whole of the Murray Darling Basin. The Rules restrict the ability of Basin States to impose restrictions on trade that are not for specified physical or environmental reasons.

However, the ability of the Rules to promote efficient water trading also depend on effective arrangements to reconcile intervalley/interstate water trade between individuals with wholesale level State water accounts. These arrangements are spelt out in Schedule D of the MDB Agreement (which is itself a schedule to the *Water Act 2007*). Our work in this area suggests that some aspects of these arrangements have led to States imposing various trade limits and/or suspensions to address third party impacts such as reduced reliability.

In our view there is considerable scope to reform these arrangements to better facilitate the objectives of the Water Act — such as refocusing Schedule D to align with the Basin Plan Water Trading Rules that are now in effect.

Water being used in higher value uses

By promoting free trade within water markets the Water Act should provide opportunities for water to be used by its highest marginal value use.

‘Highest value use’ is a vexing term that is open to misinterpretation. Average measures of the ‘value’ of water use (such as gross margin per megalitre) cannot be used to accurately determine this value and can lead to incorrect conclusions.

Free trade within markets will provide opportunities for water to be used by its highest marginal value use. In dry periods, the highest marginal value may be horticultural crops that require water to keep vines/trees alive and to maintain current and future yields. In wetter periods, the highest marginal value may be the expansion of opportunistic crops such as cotton or rice given that the value of additional water for horticultural crops or dairy pasture may be low (given crop demands are already satiated).

Our [2012](#) ‘impacts of trade’ report for the NWC estimated that interregional and intraregional water trading reduced the impact of the drought on regional gross domestic product (GDP) in the southern MDB from \$11.3 billion to \$7 billion over the five-year period 2006-07 to 2010-11. Most of the benefits of trading accrue in dry years, when the need to reallocate water to higher value uses is the greatest.

Water charging regimes

The explanatory memorandum to the Water Act outlines that the aim of the ACCC’s new functions in developing and enforcing water charge and water market rules “is to ensure that water markets are able to operate freely across state boundaries and that perverse outcomes from inconsistent water charging arrangements are avoided.” Consistent with this, the stated purpose of the Water Charge (Infrastructure) Rules developed under the Water Act is “to introduce a more consistent approach to pricing across Basin jurisdictions”. As we noted in Frontier Economics ([2014](#) which formed part of State Water’s submission), more consistent charges across the Basin will facilitate the more efficient functioning of inter-jurisdictional water markets. This is because different customers’ water trading decisions will not be distorted by the structure of the tariffs they face. For example, all things being equal water users facing higher variable charges will be more incentivised to sell their water allocations than those facing lower variable charges. This can result in some users facing higher variable charges selling their water allocations even where this is an inefficient outcome.

The implementation of the *Water Act 2007* has not always promoted pricing consistency. By way of example, the bulk water charging regimes in most Basin States are consistent, with the notable exception of New South Wales (Table 1). The ACCC’s recent final decision on State Water Pricing for the period 2014-15 to 2016-17 will maintain this inconsistency by maintaining the 40:60 ratio of fixed to variable prices for State Water.

Table 1: Fixed: Variable charges for bulk water in Basin jurisdictions

	NSW: State Water	Victoria: Goulburn- Murray Water ^a	South Australia ^b	Queensland: Sun Water (Macintyre Brook)	Queensland: Sun Water (Burdekin Haughton)
Fixed	40%	100%	100% ^b	90%	96%
Variable	60%	0%	0% ^b	10%	4%

Notes: ^a Goulburn-Murray Water bulk water charges are all based on the number of water shares (water access entitlements) held by customers. Irrigation infrastructure deliver service charges are approximately 85-90% fixed, and 10-15% variable. ^b In South Australia, water users are not charged for bulk water services. A NRM levy (division 2) is legislated and governed under the Natural Resources Management Act 2004 and is applicable to all licence holders in the Natural Resources SA Murray-Darling Basin (SA MDB) region and is charged on the basis of water entitlement held (i.e. 100% fixed). NRM water levies are directly attributable to the SA MDB Regional NRM Plan, which is protecting and improving the condition of the natural resources of the SA MDB region. A ‘Save The River Murray Levy’ is also charged to

all SA Water customers as a fixed charge per quarter.

Sources: Frontier Economics (2014 which formed part of State Water's submission) referencing GMW (2014); SA Govt (2014); SA Water (2014); Sunwater (2014a and 2014b).

This outcome would appear to be inconsistent with the objectives of the Act. The ACCC (2014, p. 124) agrees and acknowledges that maintaining a 40:60 tariff structure may distort the efficient functioning of the inter-jurisdictional water market. However, the importance of this is downplayed.

In our view, the *Water Act 2007* could be strengthened by increasing clarity around primary objectives and subsidiary objectives to provide increased guidance to the regulator to ensure the underlying intent of Act is reflected in regulatory decisions. Introduction of a formal appeal mechanism would also enhance the robustness of the regulatory arrangements.

Yours sincerely,



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