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Working together for a shared future

Recovering water in the Murray-Darling Basin **Productivity Commission** Locked Bag 2, Collins Street East Melbourne Vic 8003

Via: water recovery@pc.gov.au

## Submission on issues paper "Market mechanisms for recovering water in the Murray-Darling Basin"

The Queensland Resources Council (QRC) welcomes the opportunity to provide comments on the Commission's issues paper, "Market mechanisms for recovering water in the Murray-Darling Basin" released for comment on 19 August 2009.

QRC is a non-government organisation representing the interests of companies involved in exploration, mining, mineral processing and energy production in Queensland. It is the resource industry's key policy-making body in Queensland, working with all levels of Government, interest groups and the community. QRC works on behalf of members to ensure Queensland's resources are developed profitably and competitively, in a socially and environmentally sustainable way.

QRC notes that the focus of the Commission's work overlaps to some extent with the Senate Standing Committee on Environment, Communications and the Arts Inquiry into

- (a) the potential impacts of current and projected mining operations on all environmental values in the Murray-Darling Basin and, in particular, the potential impacts upon surface and groundwater flows and quality in the alluvial flood plains at its headwaters in the Namoi Valley and the Darling Downs catchments; and
- (b) evaluation of the potential impacts in the context of the Murray-Darling Plan and agricultural productivity.
  - In these terms of reference for the Senate Inquiry, 'mining operations' includes all minerals exploration and all minerals extraction including exploration for and extraction of gas.

QRC's comments reflect the key messages presented in the submission to the Senate Inquiry, which are essentially that, the resource sector in Queensland is:

- $\rightarrow$ amongst Australia's most highly regulated water users;
- $\rightarrow$ provides a high-value use for water;
- $\rightarrow$ applies sophisticated management and stewardship principles to the industry's use of water;
- $\rightarrow$ by paying a full economic price for water, provides an important signal for the development of new water infrastructure in regional Australia where the demand of many other water users is muted.

By way of background, the resource industry relies on long term water security to continue its mining and energy activities and invest in new projects which generate billions of dollars in export and royalty revenues for Queensland. At the state level, the resources industry is not an intensive water user, using only about 5 percent of the State's water resources. The sector is the highest value-adder to Queensland's water resources, generating more than 10 per cent of the state's total income and over half of the state's export income.

However, specific resource operations can be a major water user at the local level and this brings with it a particular responsibility to other local water users. Industry is committed to efficient water use and QRC has developed a water policy which is intended to compliment and augment the significant water management activities already conducted by QRC member companies.

QRC's broad membership also includes a number of coal seam gas producers many of whom have operations in South West Queensland that fall within the Commission's study area (i.e. the Murray-Darling Basin). While QRC fully supports the Australian Government's commitment to ensure the mechanisms used under the *Restore the Balance* program to recover water in the Murray-Darling Basin are as efficient and effective as possible, QRC would like to see the Government consider the opportunities water associated with coal seam gas operations for this purpose.

The issues paper notes the study's scope as:

- 1. Review the mechanisms used nationally and internationally by governments to purchase water entitlements or similar property rights, including reverse tender processes.
- 2. Identify appropriate, effective and efficient market mechanisms that could be used to diversify the range of options to purchase water entitlements under the Restoring the Balance in the Murray-Darling Basin program to restore environmental flows.
- 3. The study would consider, but not be limited to, issues such as:
  - the proposed pace of environmental water recovery and the depth of the water markets in the Murray-Darling Basin
  - transaction and compliance costs for applicants and the Government
  - impact on the water market, particularly where the Government may be the dominant buyer
  - the implications of a developing water market and limited market price information
  - potential to use existing or developing water exchanges, auction houses or on-line water trading platforms
  - potential methods to maximise synergies between water purchase and the Sustainable Rural Water Use and Infrastructure program
  - the capacity to use different mechanisms to purchase a mix of high, general and low security entitlements to meet identified environmental needs
  - the requirements of the Commonwealth Procurement Guidelines and the *Financial Management and Accountability Act 1997*.
- 4. Identify impediments to new and established water purchase mechanisms and how these could be overcome.

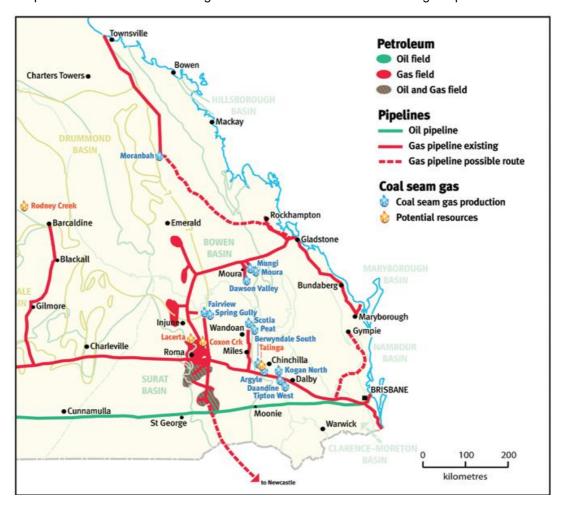
The paper further states that the Commission is to consider the program guidelines for *Restoring the Balance in the Murray-Darling Basin*, which specify the criteria used to assess sell offers and the conveyancing steps required to complete a water entitlement purchase.

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The issues paper notes that the Australian Government's Restoring the Balance program is focused on the purchase of water entitlements (emphasis added, page 3) and that the Commission's study is mainly about the use of market mechanisms for purchasing water to rebalance extractive and environmental uses (emphasis added, page 5). Further into the paper it is noted that the study's focus is on alternative market-based mechanisms that the Australian Government could use to diversify and improve its Restore the Balance program (emphasis added, page 11). While the Commission's terms of reference seem to be broad enough to consider other water sources (such as coal seam gas water), it is unclear from the issues paper whether the Commission will do so. QRC firmly believes that the study should take into account the opportunities presented by the expanding coal seam gas sector in Southern Queensland.

Queensland's coal seam gas industry has experienced remarkable growth over the last fifteen years. During that time the number of coal seam gas wells drilled annually increased from a low number of 10 in the early 1990s to a record high of approximately 600 in 2007–08. As at 31 December 2008, proved and probable reserves (2P) reached 15 714 petajoules (PJ).

In 2008, production increased to approximately 133 PJ, which represents more than 80 per cent of the Queensland gas market (Queensland Mines and Energy, Industry Update August 2009). The map below provides more details with regard to the location of the coal seam gas operations.



Source: Department of Employment, Economic Development and Innovation, Queensland Mines and Energy, Queensland Government Mining Journal, March 2008 www.dme.qld.gov.au/mines/coal\_seam\_gas.cfm

Coal seam gas water is generally variable in quality and can contain quantities of salt and other constituents that can limit the water's use without treatment. If released to land or waters through inappropriate management, coal seam gas water has the potential to cause environmental harm.

Across Queensland, significant quantities of water are being produced in the course of coal seam gas exploration and production. Currently most coal seam gas water is disposed of in evaporation ponds and only limited quantities of untreated coal seam gas water are used for livestock, coal washing and related petroleum activities. However, the industry is working to see the use of evaporation ponds discontinued and is actively seeking beneficial uses for water produced as a by-product of gas extraction.

The forecast expansion in coal seam gas water production will see a large increase in the volume of coal seam gas water requiring treatment and disposal, particularly if any of the proposed liquefied natural gas projects are developed. The Queensland Government's *Blueprint for LNG* states on page 4, that domestic CSG production in the Surat Basin will produce around 25 GL per annum for the next 25 years and that if LNG exports reach 28 mpta, then that will generate around 196 GL per annum. These are significant volumes of water.

In late 2008, the Queensland Government developed a coal seam gas water management policy that recognises this, and aims to achieve environmentally sustainable outcomes and encourage greater beneficial use of this water. For more detail see <a href="http://www.dip.qld.gov.au/growth-strategies/management-of-coal-seam-gas-water.html">http://www.dip.qld.gov.au/growth-strategies/management-of-coal-seam-gas-water.html</a>

The key features of the policy include:

- → Discontinuing the use of evaporation ponds as a primary means of disposal of coal seam gas water.
- Making coal seam gas producers responsible for treating and disposing of coal seam gas water. Unless the producers use direct injection of coal seam gas water or have arrangements for environmentally acceptable direct use of untreated coal seam gas water, coal seam gas water must be treated to a standard defined by the Environmental Protection Agency (EPA) before disposal or supply to other water users.

The policy also includes a number of additional changes to the current requirements including:

- Ponds necessary for water aggregation and the storage of brine from treatment facilities are to be fully lined to a standard determined by the EPA.
- An associated CSG water management plan is to be incorporated into the environmental management plan required for a level 1 environmental authority application.
- → Water which is in excess to that which can be directly injected or beneficially used is to be aggregated for disposal.

Prior to the release of the above policy, the Environmental Protection Agency released a draft operational policy setting out a framework for assessing projects involving the use of associated water (i.e. coal seam gas water) in late 2006.

The operational policy promotes the beneficial use of associated water in accordance with the waste management hierarchy and the process for obtaining approval. The waste management hierarchy refers to preferred management options such as waste avoidance, waste reuse and waste recycling,

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and non-preferred management options such as evaporation ponds and discharge to surface water or land.

In March 2007, the EPA released a revised draft of the operational policy which includes a draft general approval for the use of water derived from coal seam gas production. The policy was finalised in late 2007.

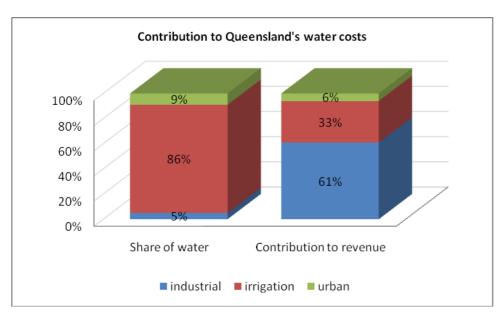
With the assurances that these policies provide in terms of the quality of coal seam water that can be released for particular purposes, QRC believes that the Commission should give particular consideration to this potentially valuable water source.

The second major comment QRC would like to make in response to the issues paper refers to comments made on page 22 of the issues paper in relation to cost reflective pricing of water.

"The interaction between programs aimed at saving water through expenditure on infrastructure and the Australian Government's purchase of water entitlements is a key issue for this study."

"An alternative approach would be to amend the pricing of water to be more cost reflective of the actual coals of delivering water to an irrigator's take-off point."

In Queensland, the resources industry contributes more than 60 per cent to Queensland's water cost despite using only 5 per cent of the available water. By contrast, while the price of irrigation water varies from scheme to scheme - generally the resource industry pays up to 10 times the irrigation price. While this partly reflects the fact that resource industry pays for water entitlements with higher reliability, it also indicates that the resource industry subsidises other sectors for the provision of key water infrastructure. This infrastructure subsidy, coupled with the fact that resource industry demands for water are consistent, provides an important trigger for the augmentation and development of new water infrastructure for the benefit of all Queenslanders.



Source: SunWater Annual Report 2007-08, page 11

One of the implications of price discrimination is that decisions on water infrastructure automatically become a political issue. If industrial users (largely resource sector) are the only sector paying a costreflective price, then it follows that only industrial demands for additional water send a clear signal to invest in new water infrastructure. The need for water infrastructure to service other sectors requires a public policy solution, which brings a subsidy - either explicit or implicit.

As an example, the use of "lower bound" pricing for many irrigation schemes reflects a goal to move towards irrigation users paying a price that reflects the direct marginal cost of that water. In these irrigation schemes, the payment of subsidies (through community obligation payments and depressed returns to public shareholders) is not clear.

Water use in the resources industry generally requires a reliable and constant access to water. This consistency is important to the State's water infrastructure providers in that it provides a base level of high level demand for the services of the infrastructure. As a result, the resources sector is an essential catalyst for the provision of key water infrastructure such as dams, pipelines and weirs. Resources industry demand provides an important trigger for the augmentation and development of new water infrastructure for the benefit of all Queenslanders.

QRC supports all water users paying a price for the supply of water that reflects the full marginal social cost of that water, any other result mutes the price signals to providers of water infrastructure, which encourages underinvestment in that infrastructure. Consistent with this market pricing approach, QRC recommends that any water purchased for the Murray Darling system should be purchased in the open market.

QRC would like to thank the Commission for the opportunity to provide comments on the issues paper and is looking forward to the Commission's draft report. To discuss QRC's submission in more detail please don't hesitate to contact Beatrix Brice on (07) 3316 2514 or beatrixb@qrc.org.au.

Yours sincerely

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