

24 October 2002

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Dear Rick

**Re: Comments on QCA BRIA draft report**

Below are some of my initial comments and questions on the QCA BRIA draft report. I look forward to discussing these with you in the near future. I would also be keen to examine the data and models used in your analysis.

1. Government payments made in the past would appear to be either:
  - a. **A capital contribution and without this the project would not go ahead.**  
Growers could not afford to pay more than their current contribution or their investment would not be commercially attractive. Given that blocks were auctioned, it would be reasonable to assume that growers paid commercial prices for land and water which indicated their commercial value of land and water to them (p19 “the auction value of land represented the total value that irrigators placed upon all entitlements associated with it.”). Given that the economics of sugar are now markedly worse and the value of their land has depreciated accordingly, it is highly questionable whether growers are now able to pay more for water.
  - b. **A gift from government to irrigators since the growers could have paid more for the dam in the first place.** If it was such a good investment, why was demand much lower than supply and growers still carrying significant debt now? And why didn't the land/water fetch a much higher price at auction to return state government with a healthy return at that time?
  - c. **Payments to reduce the risk of the investment/dam so that it is commercially attractive.** That is, it was not the \$x00m which was the problem but the 10% or so interest rate required by growers to pay if they borrowed to buy the dam in the first place. As a result, the much lower interest rate that government would be charged (lets say 3%) would mean that the project would be commercially attractive. However if this were the case, the value of land and water sales would have been almost the same as the costs of building infrastructure.

2. The QCA states (p3), “As the current price paths do not provide a mechanism by which Sunwater can capitalise on past capacities to pay, it would be inappropriate to reduce the level of return when the expected capacity to pay is low.”
  - a. I would have thought past prices were irrelevant for this study. There was no requirement for lower bound pricing or otherwise in the past.
  - b. Just because growers may have had the capacity to pay in the past, this matters little for current and future expenditures.
  
3. The QCA chose to use the same WACC for irrigators as for Sunwater. I would expect that the risk premium for cane farming in the BRIA would be substantially higher than that for Sunwater. Thus the WACC for farmers would be expected to be substantially higher than for Sunwater.
  - a. Sunwater is guaranteed of receiving 70% of its revenue from the BRIA regardless of water use. Also, it is a statutory organisation backed heavily by the state government. Under these circumstances, it is difficult to see how Sunwater could default on a loan and thus the risk premium it would obtain would be extremely low.
  - b. Cane growers in the BRIA on the other hand are faced with large risk due to large sugar price fluctuations, weather, disease and a range of other factors. Also, the majority of cane growers in the BRIA are carrying a large debt load and the amount of equity that growers have in their farms is falling with falling farm values. As a result, a number of cane growers in the BRIA have defaulted on loans over recent years. Given this, I would expect that the risk premium would be relatively high and the WACC substantially higher than for Sunwater.
  
4. It is difficult to see how government can now claim that it would like to seek a commercial rate of return given that it has not done since the inception of the scheme. To be a commercial venture, government must recover money in the initial years or this is not possible.
  - a. The use of a commercial discount rate means that, depending on the rate used, cash flows beyond about year 10 or so of the scheme are substantially lower when converted to the time of construction of the BRIA. Consequently, businesses tend to seek returns from their investment and pay the majority of the costs off early in the life of their investments.
  - b. The majority of costs of developing the BRIA appear to have been incurred on average around 1985.
  - c. It would appear that no rate of return may have been charged between 1985 and 2000, a period of 15 years.
  - d. A rate of return of less than 1 percent has been included between 2000 and 2005 according to the QCA.

- e. For the scheme to be commercial, exorbitant returns would need to be obtained by Sunwater between year 21 and 30 of the scheme (QCA used a 30 year time frame for calculating EV's).
  - f. Given this, it is difficult to see how government could possibly suggest that they intended the BRIA to deliver a commercial return.
5. It is unfortunate that the QCA was unable to examine the appropriateness of the lower bound price set by government for the BRIA. If the lower bound price set by government was found to be too high, this may change the outcome of the report.
6. The QCA appears to be taking an unrealistically hard line on what is a capital contribution. They state on p17 that, "a capital payment should be regarded as a capital contribution if the intention of the relevant parties at the time was that the capital payment would be recognised for pricing purposes."
- a. Given that obtaining a rate of return by increasing water prices in the future was not considered at the time of construction by the commonwealth, it is unlikely that the commonwealth government would have explicitly outlawed this.
  - b. Historically, government capital injections in irrigation developments have been undertaken for a range of reasons. These have included decentralised development in provincial Queensland, social issues, turning unproductive marginal land into productive land and the economic impact on towns. Commercial returns on investment did not appear to be a major consideration.
  - c. There were no clearly stated documents presented to growers saying that parties would seek to obtain a rate return in the future.
  - d. If you had asked the commonwealth government the real question which is, "were your contributions intended to occur so the state government could obtain profits from it?", the answer would have been no and the payments would have been viewed as a capital contribution.
  - e. As I understand, Bundaberg Sugar successfully fought to have mill levies recognised as a capital contribution in recent years.
7. Many of the sugar prices used to calculate EV's of water from growing cane appear to be incorrect or inappropriate (p58, 102). As a result, the EV's reported are substantially higher than they would be if realistic sugar prices were used.
- a. It is not appropriate to use a spot price in October 2000 as an indicator of future prices given that there is great volatility in sugar prices as the QCA acknowledges.
    - i. Given this volatility, the spot price usually bears little resemblance to the final sugar price received by growers.
    - ii. The spot price would also mean little when trying to assess a 30 year average future sugar price
    - iii. If you were to use a single number, a more appropriate measure would be the sugar price received by the cane industry in the previous year. For

1999-00, the price received was A\$257/t of sugar which is \$A263/t in 2000-01 dollars.

- b. The ABARE forecasts quoted in the report do not appear to line up with the actual ABARE forecasts in the OUTLOOK 2000 publications
  - i. The real numbers (in 1999-00 dollars per tonne) in OUTLOOK 2000 for 2000-01 to 2004-05 are 261, 312, 316, 333 and 359. To convert these to 2000-01 dollars, we multiply by one plus the inflation rate for 1999-00 (ie, 1.024). Therefore, the numbers in 2000-01 dollars are 267, 319, 324, 341, 368 (an average of A\$324/t)
  - ii. Clearly what QCA have done is to calculate, for example, the price of \$455/t for 2004-05 by multiplying the 2000-01 price of \$267/t by the USc/lb price in 2004-05 of 12.8 and divide this by the USc/lb price in 2000-01 of 7.5. This is an incorrect method of calculating the real \$A price since it does not take account of forecast changes in both the inflation and exchange rates.
- c. Given that the QCA was looking for long term sugar price forecasts from ABARE pre October 2000, the 10 year average price for 1995-96 to 2004-05 which ABARE forecast in 1997 of A\$302/t (1994-95 dollars) for use in the sugar industry review at that time may be a useful measure.
  - i. This equates to \$341/t in 2000-01 dollars. The sugar price averaged \$352/t in the first 5 years of this forecast which would mean that the price would have to average \$330/t between 2000-01 and 2004-05 for the 10 year forecast to hold. This number is very close to the forecast from OUTLOOK 2000.
- d. An assessment of trends in the real sugar price over the last 20 years would be useful at identifying long term future prices.
  - i. This would suggest that an average price around \$350/t or above over next 30 years is extremely unlikely and a price around \$250/t is much more likely.
- e. Long term real prices for most commodity tend to fall gradually over time typically by around 1-2% per year. This is no different for sugar and thus the concept of holding real prices constant between 2005 and 2030 in the QCA paper is questionable. ABARE typical uses this scale fall in long term real prices for most, if not all, agricultural commodities.
- f. Movements in the sugar price in the last decade have largely been influenced by Brazil. Brazil is the largest sugar producer and exporter in the world and movements in sugar prices are largely attributed to the size of Brazilian crops and to the level of Brazilian exports.
  - i. The Brazilian currency depreciated massively in 1998 as a result of political instability leading to the linking of the Brazilian real to the US dollar being unsustainable. This depreciation is likely to be a permanent change in the value of the real.

- ii. As a result of this currency depreciation, Brazil has become a much more competitive sugar producer and consequently sugar production and exports have increased markedly.
    - iii. This has led to a permanent shift down in the world sugar price and consequently future prices would be expected to be significantly and permanently lower than historical levels.
    - iv. As a result, it would be difficult to see how long term prices could possibly average around \$350/t or higher. In fact, even \$300/t would appear to be optimistic.
    - v. The only way that prices could average well over \$300/t is if the Brazilian currency appreciated significantly which would appear to be unlikely.
  - g. The WRU forecasts of sugar prices appear to reflect an optimistic and unrealistic increase in prices between 2000 and 2005. Also, price forecasts appear higher than those used by NRM as the basis for economic assessments for various WAMP's
  - h. The prices used in the Hilderbrand report would appear to be reasonably realistic. However while the average estimate of \$25/t of cane, which would equate to roughly \$250/t of sugar, the optimistic price used appears to be extremely optimistic and probably outside the realms of the possible.
  - i. Also, the issue of volatility of sugar prices and difficulty in forecasting prices was seen as a hindrance to using EV.
    - i. However, as pointed out previously, the volatility and errors in forecasts are not likely to be as much as the QCA has stated. And there is considerably more volatility in short term prices (eg, daily or yearly) than there is in long term average forecasts (eg, 5 year or 30 year averages).
    - ii. Also, given that a forecast of 30 year average sugar price required, a reasonable estimate can easily be obtained by undertaking a trend analysis of historic real prices. 5 year average forecasts can also be forecast in this fashion with reasonably low volatility.
8. It is clear from the report that the QCA casts doubt on the ability of the BRIA to run as a commercial entity. This occurs because the industry contribution to the scheme is only about 20% of the total costs of the scheme in their opinion.
- a. Given the low and fluctuating capacity to pay by the growers in the Burdekin, it is unlikely that government will ever be able to charge a commercial rate of return on scheme assets.
  - b. Given that the Burdekin is considered to be one of the more commercial schemes in Queensland, this would suggest that the Queensland government has little ability to charge rates of return in other schemes throughout Queensland.
9. It is clear from this study that it is extremely difficult for the QCA to clearly determine the purpose of the BRIA scheme from the Commonwealth and state governments as well as industry and other participants. Also, it has been extremely difficult to determine the costs

of the scheme and the ability of growers to pay above lower bound payments. It has also been an extremely time consuming and expensive exercise

- a. Given this, it would be an extremely difficult and time consuming exercise to undertake for all irrigation schemes in Queensland
- b. Given that the BRIA is one of the newer schemes in Queensland, other schemes will be much more difficult to review if not impossible.

10. Elasticity of demand and profit maximisation issues were not considered by the QCA. If prices are set too high and above what growers can afford, water use will fall as growers go bankrupt or reduce water use based on higher marginal cost. I'm not sure that this is in Sunwater's or the governments interest. These factors should be considered by the QCA and government when setting water prices and looking at their appropriateness. I would expect that it would not be appropriate for government to seek a positive rate of return if this would lead to the profitability of Sunwater falling.
11. p 99 indicated that the QCA accepts that public interest needs to be considered in water supply and pricing activities. And this can be reflected as transparent CSO's from government.
12. p 102 states that, "a commercial service provider would, in general, only provide a price adjustment for a customer where a failure to do so would affect the longer term viability of the service provider. Such a circumstance may arise if commodity prices on international markets fall sufficiently so that the current nature and level of farming activity is unprofitable in the longer term." This appears to apply in the Burdekin and other cane areas at the moment.
13. The paper discusses a range of circumstances where it is not appropriate for an entity to charge a positive rate of return.
  - a. The majority of these exceptions clearly apply to the BRIA including periods of substantial excess supply, redundant and overengineered assets, government CSO and capacity of customers to pay.
    - i. Some of these issues are explored in the paper while others including excess supply do not appear to be explored despite the fact that there is clearly an excess supply meaning that the value of the water in a commercial sense is zero. P 97 states, with respect to excess supply, "this may include the sale of water without seeking to recover any return on capital. This is appropriate provided no users who are willing to pay more are excluded and the sale has no longer term impact on the security of supply for other users."
    - ii. Also, the arguments from QCA on capacity to pay and CSO appear contradictory at times. For example, they indicate on p102 that the EV is likely to be zero under a range of sugar price assumptions.

- b. We would argue that there are other exceptions including:
  - i. Where assets are sunk
  - ii. Where assets cannot be moved to profitable uses that can pay a rate of return. That is, opportunity cost is zero
  - iii. When agreements were entered into in the past with respect to developments
  - iv. When assets/resources (including water and land for dams) are sold in the past at market prices that reflect their true commercial value at the time.
  - v. Where a positive rate of return would lead to the profitability of Sunwater falling.

14. QCA states (p39), “Arbitrary exclusion of assets on the grounds that they are sunk fails to provide management with the incentive to enhance shareholder value, and does not provide incentives for the better management of assets or for future investment.”

- a. Renewals have been set aside to undertake future refurbishments of the scheme. It is not appropriate to charge a rate of return on these projects given that they have been funded in advance by customers
- b. Legitimate items for future investments including new dams will need to negotiate an acceptable financing structure to be approved. Writing off sunk assets does not influence this negotiation.
- c. If the only reason for not supporting the sunk assets approach is because of the disincentive to enhance shareholder value then a move to local management would overcome this dilemma and disincentive. Shareholders value would be maximised by charging the lowest possible price. Also, the determination of maximum prices by government is meant to be an incentive for Sunwater to continue to increase efficiency
- d. p 63 states, “the cost of capital is a forward looking concept that reflects the expected return, relative to risk, that should be earned from investing in the asset.” But if the asset was built in the past and the opportunity cost of using the asset is 0, then the rate of return would be 0.
- e. ABARE has written many papers about sunk costs with regards to water pricing all of which have a very similar message. One of these papers was Collins, Hall and Scoccimarro ( 1996), COAG water reforms and farm incomes in the southern Murray Darling basin, OUTLOOK 96, p123-135.
  - i. This paper stated (p125), “It has generally been recognised that past water infrastructure investments were progressed for a myriad of reasons, and there is little economic merit in recovering a depreciation charge from current irrigators. Little of the capital tied up in water supply infrastructure could be salvaged and used else where in the economy and therefore represents a sunk cost. ...the levying of any depreciation charge that served to reduce capacity use on this sunk capital would impose a net loss on the economy.”

- ii. P 127 states, “While accepting the principle of the opportunity cost of capital, and putting aside revenue raising considerations, it is unclear why governments would seek a return on past water infrastructure investment. As noted earlier, little of the capital tied up in water supply infrastructure can be salvaged and used elsewhere in the economy, thus it represents a sunk cost. By seeking a return on this capital, some changes in farm investment and production patterns may occur, but it is unlikely that these changes will result in the situation that would have occurred had a full return been sought from the outset. Rather, any changes to provide a return on this capital that serve to reduce capacity use on this sunk capital would impose a net loss on the economy.”
    - iii. P128 states, “Notwithstanding the importance of efficient pricing regimes for water delivery, the development of water markets may have a greater impact on the efficiency of water use and the pattern of irrigated agriculture in Australia.”
15. According to the report, the total value of grower, mill and commonwealth contributions is \$271.3m and the depreciated value is \$202.2m. The DORC for the BRIA was calculated at \$256.7m (p53).
- a. The total contributions of the 3 groups above are greater than the DORC which means that a rate of return would not be appropriate.
  - b. The total depreciated contributions are \$54.5m less than DORC. At 8%, this amounts to around \$9/ML which is about the amount currently being charged above lower bound. Consequently, although current price is fine, government cannot charge any more.
  - c. If the 2% rate of return sought by the state government in 1980 was applied to the \$54.5m, then clearly an excessive price has been charged in the BRIA.
  - d. If the EV is calculated to be below that of the DORC as I suspect it will, this is likely to lead to the rate of return being charged in the BRIA to be excessive if the total value of grower, mill and commonwealth contributions are deemed to be capital contributions.
16. Some of the major outcomes and findings by the QCA are hidden in the report as subtle comments. Many of these comments will be lost on the majority of people or will not be read. It is unfortunate that these findings cannot be stated as major outcomes of the review because of the extremely narrow and restrictive terms of reference for the QCA. This casts doubt over the validity and outcomes of the whole report and clearly further work must be done in these areas for the report and the process to have real credibility.
17. p 103 states, “the authority notes that the return to Sunwater above lower bound only accounts for 2 to 3 percent of the costs of sugarcane production in the BRIA.” If these numbers are correct, it may be only a relatively small component of costs but represents a

large proportion of the profit margin from cane growing in the BRIA. Consequently, it would also have a large impact on the value of farms in the BRIA.

18. It is extremely clear from my perspective that growers in the BRIA were not aware that the state government intended to seek a rate of return at the time that the BRIA was developed.
- a. Government should have stated very clearly their intention to charge a rate of return before they sold growers land and water.
  - b. It is clear that government did not make reasonable efforts to clearly articulate this intention to growers at the time that land and water was sold in the BRIA.
  - c. Given that government did not make their intention to seek a rate of return clear to growers at the time of sale, it is not reasonable to assume that growers did factor this into their bids when purchasing land and water.
  - d. It would appear that growers were enticed to purchase land and water when they did not understand what they were purchasing. Also, they did not understand what price government was able to charge for water in the future with respect to seeking a rate of return. As a result, growers purchased assets that had a much lower value than they had thought.
  - e. It will be up to the BRIA to collate evidence to back up their assertion that they were not aware of governments' intention to charge a rate of return through statutory declarations and providing written evidence of governments' intention at the time the BRIA was developed.

19. If government continues to extract any profits from cane growing in the BRIA, there is little incentive for cane growers to increase their profit.

Thankyou.

Yours faithfully

Eric\_Danzi  
SENIOR MANAGER WATER