THE SECOND SUBMISSION

FROM THE BRIAC

TO THE QCA

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Of course water authorities make high profits.

They are monopolies.

High profits by monopolies are not necessarily an indicator of efficiency.

EPAC economist, quoted in Walker and Walker (2000, p 109)

I.   *Focus of this Submission*

This second submission by the BRIA Committee addresses the second and third terms of reference of the Minister's direction notice to the Queensland Competition Authority.

Terms of reference 2 and 3 are as follows:

> "2.   Determine the appropriate weighted average cost of capital that could be incorporated in the price of providing those water infrastructure services; and
>
> 3.   Determine whether the current price paths incorporate any excess return on capital based on the above analysis."

At the outset, we note that the QCA is not bound to use the valuation of assets established by Arthur Andersen and that, while the Authority is enjoined to use the lower bound costs of the scheme incorporated in gazetted price paths and demand forecasts used in the rural water pricing process, the third term of reference explicitly requires the Authority to form its own opinion on whether the current price paths (including the lower bound costs) incorporate an excess return on capital. This means necessarily that the Authority *must* review the reasonableness of the lower bound costs used for the

gazetted price paths. If the QCA finds that the efficient lower bound costs are below those used for the gazetted price paths, it follows that the current price paths incorporate a return on capital, which is necessarily excessive if one accepts that capital has already been fully recouped.

We also note that this submission raises issues which were not canvassed in the Authority's inquiry into the Gladstone Area Water Board (GAWB). For example, the appropriateness or the validity of the capital asset pricing model (CAPM) for a government owned utility was (perhaps surprisingly) not challenged by participants in that inquiry. Accordingly, the Authority is not bound, in any sense of precedent, by its use of the capital asset pricing model in the Gladstone case.

Because this submission is intended to be a public submission, no reference of any kind has been made to any confidential material supplied by SunWater or any other party. Given also that this submission addresses itself primarily to the principles which the QCA should adopt in looking at terms of reference 2 and 3, we have provided indicative, rather than concluded, figures at this stage drawing mainly on the Mardsen Jacob Report which is attached..

II   *The QCA must use the Relevant and Appropriate Accounting and Finance Concepts and Standards*

The conventional wisdom underlying the COAG and NCP water reforms was that:

(1)   Water authorities in Australia were unprofitable and delivered a low return on the "investment" governments had made in them.

(2)   Hence, they should be made to deliver a rate of return to their government owners equal to the rate of return on private sector equity investments.

Those assertions, constantly repeated, have assumed the status of urban legend, if not the status of self-evident truths.

Both these assertions need to be challenged.

Leaving aside whether water schemes were undertaken as "investments" or were created as public utilities for public benefit, as Walker and Walker (2000) and Walker (1993) have pointed out, public sector accounting for water authorities has often employed techniques which result in false or misleading figures showing low profitability when the reality is that water authorities have been more profitable than most listed industrial companies.

Walker and Walker (2000, p 87-88) point out that "many of those GTEs [government trading enterprises] were highly profitable by private sector standards, but had only *reported* low levels of profitability. This occurred because Australian GTEs were required to adopt radical methods of accounting – methods not used anywhere else in the world ... there are some important differences in the way private sector and public sector entities value their assets. It is not widely recognised that since the late 1980s, Australian GTEs have used a system of accounting which is radically different from that used in private sector accounting. This has produced radically different financial results." (original emphasis)

They go on to observe that "the major omission [of the Steering Committee *Guidelines on accounting policy for valuation of assets of Government Trading Enterprises*] was a failure to recognise that recent advocacy of the use of current replacement prices was that for consistency, the amounts by which asset values were increased should be brought to account in the operating statement as revenues (or unrealised gains). Adoption of this model of 'clean surplus' accounting would have meant that poor rates of return would have been converted into good rates of return. As it happened, the end result of the Working Party's ill-informed activities was that Australian GTEs were told to

adopt a system of accounting which produces figures for 'profit' and 'rate of return' which differ substantially from the figures which would be produced by private sector firms using private sector accounting methods. ... The Steering Committee had set out to ensure that the accounting methods used by GTEs would enable comparisons to be made between the government-owned businesses and 'comparable' private sector firms. They ended up promoting a system that ensured exactly the opposite", see Walker and Walker (2000, p 97)

It was also forgotten that "A significant proportion of the assets of water authorities has been acquired through compulsory 'donations' from property developers. ... From an accounting perspective, the receipt of these 'donations' meant that water authorities had to record an increase in their assets - but most authorities recorded the receipt of these assets as an increase in 'reserves' rather than a source of revenues - the treatment indicated by the accounting profession's statements of accounting concepts. Having recorded increases in assets, water authorities then wrote-off those assets through depreciation charges (which were treated as expenses, and hence reduced reported profits). The combination of these treatments meant that the more donated assets received by those GTEs, the lower their reported profits.", Walker and Walker (2000, pp 104-105)

The net result is that, after adjusting for revaluations and placing accounts on a common historic cost basis "water authorities were far more profitable than listed industrial companies.", Walker and Walker (2000, p 106)

We noted in our first submission that indicative figures which take into account land and water sales suggest the Burdekin scheme has already more than recouped its capital costs.

We therefore regard it as *imperative* to this inquiry that the accounts for the Burdekin scheme be re-cast on the basis of normal historic cost accounting conventions with

revaluations, land and water sales and grants brought to account so that the financial performance of the scheme can be fairly compared with a public sector discount rate.

Second, the assertion that public sector investments should meet a hurdle rate of return based on private sector equity investment also needs to be challenged. While it is often asserted that the cost of capital should be the same for the public sector as for the private sector, Walker and Walker (2000, p 143) note pointedly that "These claims are normative, ideological statements. They reflect someone's opinions about how the world should be run. They also reflect a fundamental misunderstanding of the underlying rationale for the estimation of a 'cost of capital' to guide the ranking of capital projects or to estimate the value of businesses. They are at odds with an established body of literature from the disciplines of economics and finance."

Most economic literature argues that the public sector discount rate should be much less than the private sector discount rate and that the private sector equity risk premium is not applicable. Further, external benefits need to be brought to account in deciding whether a public sector investment meets that lower social discount rate. In addition to rejecting the applicability or relevance of the capital asset pricing model (CAPM) to determining a hurdle rate of return for a public sector investment such as the Burdekin scheme, we note that, even if a CAPM approach were taken to determining a weighted average cost of capital (WACC), there are various aspects which need closer scrutiny. These are discussed in the following section.

III. _Term of reference 2 - The appropriate weighted average cost of capital_

There are two possible approaches to determining a cost of capital for a publicly owned water utility - the traditional public finance view or the new private finance (capital asset pricing model) view.

1. _The traditional public finance view_

The traditional public finance approach would be to simply look at the interest costs actually incurred by the Government in relation to the scheme. Simply put, how much is the government borrowing for the scheme and what is it paying as interest on its loans?

In the case of the Burdekin scheme, it is noted that SunWater has apparently inherited no debt in relation to the scheme whence it follows that the scheme has either being funded through Federal or State taxes or has repaid any loans through sales of land and water allocation or through surplus revenue.

It should be noted that traditionally it was seen as absurd that tax monies expended on public works should be treated as if the funds had been raised in capital markets. The so-called "equity" in a government owned corporation such as SunWater merely represents a sum of taxpayers' money spent. The money was not raised through a voluntary exchange in equity markets but by legislative coercion. No taxpayer ever received a prospectus from government inviting equity funds for tax-funded public works. No taxpayer was ever given a share certificate. Taxpayers who contributed the funds were not offered a rate of return on "their investment" by governments. The cost of such "equity" capital to government in legal and accounting terms is simply zero.

To take a private sector analogy, suppose a thief set up a $2 company and embezzled

$1 million from a bank which he then placed in that company. One might treat the $1 million as a donated asset or as income from the company's point of view and one might include it in a formal sense as part of the shareholders' equity attributable to the owner (the thief). But it would be wrong to talk about the need to pay a cost of capital equal to a market rate of return as part of this "equity raising". No equity in the company was issued to the bank from which the $1 million was embezzled. The amount really represents an illegal profit to the owner (the thief) rather than a cost of capital to his $2 company. If the $1 million is to be put in a balance sheet it should also be passed as a profit through the income statement and included as such in computations for the company's rate of return on its original $2 of assets.

Because private companies cannot usually increase their capital asset base through expropriation (the annexations of the East India Company in the 18th and 19th centuries are an exception), it is understandable that finance analysts assume that all equity in the company must be contributed by its owners who are entitled to a rate of return on their investment. However, this assumption is not valid in the case of public sector businesses which can be funded through taxes or themselves require the "donation" of assets (e.g. by developers).

It is true that the raising of taxes usually involves deadweight loss and hence an economic cost at the time they are levied but that distortion is a one-off loss at that time and does not represent an ongoing contractual or quasi-contractual cost of servicing dividends on "equity". If one is to take an economic point of view and take account of deadweight losses arising from tax funding of public works one also has to bring to account the external benefits created by those public works - but these are entirely different matters to arguing for a financial accounting return on notional "equity".

From the taxpayers' point of view, charging a rate of return against them on assets which they have already paid for in taxes amounts to double dipping and a form of further taxation. Governments, of course, have the opportunity, if Parliaments so

empower them, of raising taxes as they think fit, but there is no logical economic reason why a tax in the form of charging a "return" on taxpayer funded assets is more efficient or desirable than any other tax or form of revenue raising.

The traditional public finance view (which we endorse) is that the appropriate weighted average cost of capital in the case of the Burdekin scheme is simply the actual interest rate charged on scheme loans outstanding. But we understand there are no such loans outstanding. Hence the actual return on capital should be zero. The scheme has been paid off, there are no loans outstanding and it is not appropriate to charge a rate of return on monies levied as taxes for public works.

2. The private finance (capital asset pricing model) view

In recent years, under the guise of competitive neutrality, a fashion has arisen for treating taxpayer owned and funded public utilities as if they were private sector companies raising capital in public markets.

On this view, it is argued that a weighted average cost of capital should be constructed on a notional basis reflecting private sector returns on equity capital and debt financing costs, together with taxation costs. It should be stressed that this weighted average cost of capital is purely notional. It does not represent an actual cost of capital, no more than replacement cost represents the actual construction cost of physical assets.

As with the notional valuation of assets, the BRIA Committee rejects completely the view that irrigators should be charged on the basis of notional costs. *We therefore urge the Authority to reject the use of the capital asset pricing model, which is based on a notional rather than the actual cost of capital.*

The rejection of notional costs should be enough to dispose of this matter, but we wish to also point out that the capital asset pricing model involves serious logical

contradictions when applied to a government owned business.

IV. *Criticisms of the capital asset pricing model*

1. *General criticism: the irrelevance of market rates of return on private equity*

The capital asset pricing model uses the rate of return on private equity as part of the process of constructing a deemed weighted average cost of capital to be applied to the capital base. This rate of return includes an "equity premium" over the return on debt. However, this "equity premium" in returns on private equity is irrelevant to the cost of funds to government.

Professor John Quiggin, a member of the Authority, has himself pointed out that the existence of an observed equity premium in private capital markets "is no reason to use the private equity rate of return as a discount rate to evaluate income streams for assets in public ownership."(Quiggin, 1996, p 149). While he acknowledges that "the fact that the private return to equity is inappropriate as a basis for evaluating public investment projects does not automatically imply that the government bond rate should be used" he also goes on to point out that governments can insure against risk through the tax system and that "the pure risk premium applied in the valuation of public infrastructure projects and the returns from government business enterprises *should be lower* than the private equity premium." (Quiggin, 1996, pp 150-151, emphasis added). His conclusion is that "the pure risk premium for public investment *must be lower* than the private equity premium.... the appropriate pure risk premium for the public sector should be around one-sixth of that for private sector equity, or about 1 per cent in addition to the real bond rate." (Quiggin, 1996, p 153). It follows that traditional public finance borrowing is an appropriate and efficient method of funding public works.

Walker and Walker (2000, p 300) note that "If one is a true believer in the privatisation of public trading enterprises, or just think that privatisation would be good for business

(yours), then it makes sense to argue that the cost of capital for the public sector should be the same as the rates identified for private sector firms. High discount rates will reduce estimates of retention values, and hence produce results which are biased towards privatisation. The claim that the cost of capital 'should be the same' for public sector and private sector firms is not based on empirical evidence. The concept of 'cost of capital' is a theoretical construct, and the cost of capital of individual firms or governments cannot be measured directly. The processes undertaken by financial analysts to quantify the cost of capital involve a series of arbitrary assumptions, several of which are just not relevant to the public sector. ... Governments issue debt instruments, but don't raise new equity capital."

The only real reason why one would wish to apply a CAPM model in determining a WACC for a water authority would be that one was contemplating a privatization through a public float or a trade sale and was seeking to maximize the sale price at the expense of water users. We are unaware that the Queensland Government has any plans to sell off SunWater to a consortium of merchant banks or by way of a public float. We should be shocked if the Government were considering such a step (given the investment by our members in its assets). Accordingly, we see no reason to apply a high private sector WACC to attribute *notional* costs of capital against the Burdekin scheme.

2. Internal contradictions in previous public sector application of WACC

The concept of a weighted average cost of capital based on returns to debt and equity comes from private capital markets where finance analysts are looking at nominal pre or post –tax returns to investors. These returns to investors are *total returns*, that is, they include nominal capital gains and nominal dividends, post any corporate tax. As Walker and Walker (2000, p 117) point out "Whenever private sector analysts refer to the financial returns being obtained from investments in securities, they include both the cash streams generated from those investments, and the gains being enjoyed (or

losses incurred) from increases in the market value of those securities. ... Similarly, the rates of return earned on an investment in shares is calculated by taking into account the combination of dividends, and increases in the value of those shares."

Hence, a company seeking to ensure that it meets its cost of capital on its assets looks at its total nominal returns on its asset base. Its return on assets and its return on equity *is based on nominal historic cost accounting, treating revaluation gains and losses as part of the income statement.*

Unfortunately, the application of these private sector concepts to the public sector has rarely been consistent. If the capital asset pricing model is to be employed (which is certainly not conceded) then it can only be employed with **all** its accompanying private sector assumptions and accounting procedures.

These include:-
- the use of historic cost accounting and depreciated actual cost conventions, not deprival value, replacement cost or depreciated replacement cost;
- the avoidance of all inflation adjustments;
- the inclusion of all revaluation gains or other holding gains on assets, whether realised or unrealised, as part of the income of the business;
- the after-tax returns from the business must be completed on the basis of the actual owner's tax status, assuming the owner has adopted a tax-efficient vehicle for carrying on the business;
- government subsidies or grants are brought to account as income;
- the cost of debt in computing the business' income statements must be the actual interest cost, not any notional interest cost; and
- the business operator bears all risks of obsolescence, optimization or stranding.

3. Revaluation gains

If financial analysts are seeking to test whether the return on assets being generated by a private sector business is meeting its weighted average cost of capital, they compute the return on assets on a similar basis by including nominal revaluation gains over historic cost as income from the holding of assets. It does not matter to them that such "income" may lead to higher depreciation charges later or that a revaluation "gain" is only an adjustment for inflation. Nor should it, since for their purposes, all that is required is to compare total nominal returns on opening asset values as a ratio with a weighted average of nominal total returns on debt and equity. Economists may worry about historic cost accounting masking a depletion of capital stock in real terms, but that is not the business of financial markets - so long as nominal total returns are being compared with, and are in excess of, nominal total costs of capital, investors are ahead.

4. Government subsidies and grants

We note that under the *Income Tax Assessment Act 1997* section 15-10 bounties and subsidies received by a business are included in assessable income, to the extent they are not already treated as ordinary income. Usually they will be treated as ordinary income. It is apparent from the definitions of "bounty" and "subsidy" in The Shorter Oxford English Dictionary that those terms are applied to payments made by a public authority by way of assistance to the recipient. Windeyer J in *Placer Development Ltd v Cth* (1969) 121 CLR 353. At 373 observed that "A subsidy was defined in America fifty years ago as "a legislative grant of money in aid of a private enterprise deemed to promote the public welfare": Shumaker and Longsdorf, Cyclopedic Law Dictionary. This I take to be, broadly speaking, the sense in which the word is currently used in Australia....". Similarly, McTiernan and Williams JJ in *FCT v Squatting Investment Co Ltd* (1954) 88 CLR 413 at 611 considered that a bounty or subsidy is a payment "made for the purpose of assisting persons to carry on a business at the time the payments are

made or, perhaps, to commence a business in the future". Accordingly, a private sector firm would be required to include in its income statements the value of any government subsidies or grants in computing its rate of return on equity or assets for purposes of testing whether it met a hurdle rate of return computed under a WACC approach. Thus SunWater's Burdekin scheme accounts would have to show government grants as income when the QCA tests whether the scheme has surpassed a given WACC.

5. Risks covered by equity premium

It should also be pointed out that private sector premiums on equity rates of return cover risks of obsolescence or loss. Hence use of the capital asset pricing model in the public sector would require a rigorous enforcement of the rule that the public sector business bears all risks of obsolescence, optimisation by competitors or asset stranding. In practice it is doubtful whether such a rule can be rigorously enforced as no government is willing to see the bankruptcy of government owned business.

6. Transitional issues

From an economic efficiency point of view there is every reason to object to the application of a WACC to the "value" of sunk investments. A WACC is a forward-looking measure of expected capital costs. It has no relevance to pricing of sunk assets created and financed under a different regime. This is not merely a fairness or equity issue, it goes to the heart of the dictum that in economics "bygones are bygones". Logically, there should be no WACC applied to sunk capital under a CAPM approach as the model is aimed at efficient use of *future* invested capital. If one were to say that SunWater should earn a private sector rate of return on investment that should only be applied to future, not past, investment decisions.

7. Further criticism of aspects of a CAPM approach to determining a WACC

In addition to the above more general criticisms of computing a WACC using a CAPM approach we wish to point out there are further technical issues relating to how the building block elements of a WACC would be established in any case.

8. Corporate tax rate and imputation credits under WACC

As noted below, SunWater should be treated as an income tax exempt entity with an exempt shareholder if one is to apply a CAPM approach to computing a WACC. Hence pre and post-tax rates of return should be the same. The corporate tax rate in the conventional WACC formula should be zero.

9. Risk premium on debt

We know that proponents of the use of a weighted average cost of capital usually suggest that the debt component include a risk premium for debt interest above the risk-free rate. For example, in the Gladstone case, a debt margin was urged and accepted.

However the applicability of a debt risk margin in the case of SunWater needs to be challenged. SunWater is wholly-owned on behalf of the Crown in right of the State of Queensland by the shareholding Ministers. The shareholding Ministers are entitled to direct SunWater's board as to what prices may be charged. In addition, it may be that the shareholding Ministers may have de facto influence over dividend or profit retention policies of SunWater.

In these circumstances, a professional lender such as a bank would take advice on its avenues of recourse in the event of a debt default by SunWater. We suggest that a bank would be advised that the shareholding Ministers are de facto or shadow directors of SunWater in terms of the Corporations Law, given the extent to which they can

influence decisions of the board of SunWater. Accordingly, should SunWater commit any act of insolvent trading or other breach of the Corporations Law which visits personal liability on directors, that liability would also be sheeted home to the shareholding Ministers. Hence, a bank would not charge a substantial premium over its risk-free rate because it has a de facto Crown indemnity from the State of Queensland in relation to loans to SunWater.

Lest this be thought a hypothetical possibility, we know that Air New Zealand rapidly settled a potential claim by creditors of Ansett Airlines who were arguing that Air New Zealand was a de facto or shadow director of Ansett and therefore Air New Zealand was liable for Ansett's debts. In that case, the practical effect was that the New Zealand Government as Air New Zealand's major shareholder, had to intervene. In the case of SunWater, the liability link to government is even more direct than in the Ansett case.

The net result therefore is that if the capital asset pricing model were to be applied, there is no logical basis for adding a risk premium for debt interest. To justify such a premium, the Authority would have to demonstrate that the shareholding Ministers are not de facto or shadow directors of SunWater

Of course, this argument against imposition of a debt risk premium (as with our other comments on technical aspects of the CAPM model) only needs to be dealt with should the Authority not accept our prior submission that there is no remaining debt chargeable against the Burdekin scheme and that the capital asset pricing model is irrelevant to public sector schemes in any case.

10. Conclusion regarding term of reference 2

To demonstrate how misleading it can be to apply a private sector rate of return test without using the normal private sector accounting conventions we attach Professor R G Walker's 1993 critique of the low profitability asserted in respect of some Australian

water authorities. (see Appendix 1) His work shows the kind of forensic accounting which the QCA must carry out before accepting any assertion that SunWater has not met a given rate of return on equity or assets.

We note that IPART (2001, p 31) drew a "line in the sand" to put a zero value on pre-existing capital assets partly because of similar forensic accounting problems in establishing legacy costs. Unless one draws a "line in the sand" and lets "bygones be bygones", neither the unrecouped capital base nor an efficient level of opex going forward can be determined without going into the history of an irrigation scheme and dealing with legacy or endowment issues. Unless one is willing to undertake a thorough forensic accounting to establish historical profitability and examine issues such as maintenance backlogs or depreciation cashflows, it is simply impossible to determine an appropriate rate of return on capital for the future because what an infrastructure owner should get in the future is a function of what he did get in the past.

If the QCA were to employ the capital asset pricing model to calculate a weighted average rate of return to be charged against net unrecouped capital in the Burdekin scheme (if any), it would need to ensure that income statements for the scheme had included all nominal revaluation gains in the past and counted all government grants as income. To put it bluntly, any attempt to use the capital asset pricing model without *all* the accompanying private sector assumptions and accounting procedures upon which it depends is so fundamentally irrational that one might well expect that it would be set aside by a Court in administrative law proceedings.

It is accordingly submitted that use of the CAPM approach be rejected. In our view, the appropriate weighted average cost of capital for the Burdekin scheme is the long-term bond rate *actually incurred* on *actual unpaid borrowings* relating to the scheme. As it is our understanding that all borrowings for the scheme have been repaid, the actual required capital return would be some 5.9% applied to borrowings of zero, giving a required return on capital of zero.

V. *Term of reference 3 - Whether the current price paths incorporate any excess return on capital*

In our first submission, it was argued that the figures suggest that BRIA irrigators have already more than repaid their share of capital expenditure in the Burdekin scheme. It follows that anything paid by irrigators above the correct lower bound (efficient operational expenditure) is necessarily an excess return on, or excess recoupment of, capital.

We have noted that the QCA is not "bound" to accept lower bound costs as applied in setting the gazetted price paths. While it is directed to "use" the lower bound as applied for the gazetted price paths this can only sensibly mean that the lower bound is to be taken as a starting point for inquiry rather than conclusive evidence of what are efficient lower bound costs. Logically, the lower bound costs assumed to date have to be open to examination in auditing the price paths for excess returns on capital, else the inquiry would be futile.

1. Lower bound

The lower bound is meant to comprise efficient operational expenditure (opex) only. While the Water Reform Unit was meant to determine such a lower bound, we note that the Marsden Jacob Report (2000), commissioned by the Burdekin Interim Local Management Committee (ILMC), strongly argues that efficient opex is considerably below that identified by the Water Reform Unit. A copy of the Marsden Jacob Report is attached to this submission and we accordingly will not reproduce all its arguments here but draw to the QCA's attention areas where the Marsden Jacob Report erred on the side of finding too high a lower bound. (see Appendix 2)

Marsden Jacob (2000, pp ES vii, 21) suggested an indicative Budget for the scheme

would be $7.706 million comprising $6.982 million for distribution and $0.724 million for headworks.

Figures previously released to BRIAC under Freedom of Information (WRU, 2001, p 12) show actual Burdekin costs (excluding interest and insurance) for 1998-99 of $7.335 million including a contribution of $2.226 million to Central Office costs. Yet in discussions with the Burdekin ILMC, the WRU (2001, p 14) proposed total prices of $36 per ML and $11.70 per ML for Channel and River irrigators which assumed 2000/01 budgets of $11.449 million and $0.348 million respectively. These charges were adopted by the Government and SunWater, even though it was acknowledged by WRU (2001, p 14) that they incorporated over-recovery of costs at 132% and 191% for channel and river irrigators.

These apparent discrepancies between the revenue implied in the gazetted price paths and Marsden Jacob's and WRU's own estimates of operating costs are enough alone to require a thorough review by the QCA of the extent to which the current price paths incorporate an excess return on capital. But we also note that WRU (2001, p 19) also released a benchmarking study which showed that State Water Projects' total corporate overhead cost per customer of $1,187 (or $7.70 per ML) was substantially above Goulburn-Murray Water and Southern Rural Water at $398 ($2.96 per ML) and $180 ($3.35 per ML) per customer respectively. This also calls into question the validity of the Burdekin's $2.226 million contribution to Central Office overhead costs

2. Cost allocation between beneficiary groups

A key issue is the allocation of operational costs between some 300 farmers and up to 250,000 other users or external beneficiaries.

There are four major user groups for the Burdekin scheme:

- Townsville – Thuringowa Water Board
- North Burdekin Water Board
- South Burdekin Water Board
- Burdekin River Irrigation Area (BRIA).

Marsden Jacob (2000, pp 17-18) adopted a cost allocation procedure which was from one point of view relatively generous to the North and South Water Boards. Because those boards had access to river flows prior to the construction of the scheme, they are not charged for most of the Burdekin allocation. However, some BRIA farmers and users of the older irrigation schemes also had pre-existing riparian rights to water before introduction of the scheme and on this basis one might think were equally entitled to a reduction in terms of a cost allocation formula.

We also note that Marsden Jacob did not seek to apportion costs to external beneficiaries. Yet if the COAG formulation for lower bound costs includes externalities, adjustments should be made in favour of users for positive externalities. In the case of the Burdekin, there are fiscal externalities to government as well as benefits to recreational users (of which, there are some 70,000 to 80,000 visitors annually to the Burdekin Dam).

Marsden Jacob in a letter of 27 July 2000 to the Burdekin ILMC included supplementary modelling to include resource management costs of $108,000 and a price path cost of $630,000 for notional land taxes and rates for land under channels, the dam and surrounding areas. Even on this computation, the local management costs remain some 13% percent lower than those for the price path. Marsden Jacob's revised figure was $8.444 million versus the Water Reform Unit's $9.314 million.

As noted below, we would reject the concept that the Burdekin scheme should be liable

for taxes in general or land tax and rates in particular, given that the land under the dam in channels has no alternative use and should therefore be valued at zero. Further we would question the concept of a resource management cost.

We would also suggest the following areas need investigation by the QCA.

In relation to employees, it needs to be established that past unfunded superannuation liabilities are not being transferred from the Government to SunWater customers. Where an employee has accrued entitlements for superannuation, long service leave, sick pay etc from service in a Government department such as State Water Projects, the cost of such accrued entitlements should remain with the Government and not be transferred to a corporatised entity such as SunWater for passing on to its captive customers. If the gazetted price paths include figures for labour costs which incorporate catch up funding charges for such previously accrued employee entitlements, they should be reduced accordingly.

3. Depreciation versus renewals annuity

We note that there is a great difference between conventional concepts of depreciation and renewals annuity accounting for assets with perpetual lives. Normal depreciation seeks to apportion the cost of an asset over its useful life. Such depreciation may be straight line, accelerated or computed on a financial annuity basis which assumes the depreciation charges are invested, whether internally or externally, to recover the original cost of the asset.

First, it must be emphasised that normal depreciation is not based on inflated or revalued asset values but on actual, original, cost. Depreciation based on revaluation of assets is objectionable. As Walker and Walker (2000, p 90) noted "the public sector's upward revelations often involved depreciable assets, leading to higher depreciation charges." They also drew attention to the criticisms of the NSW Auditor-General.

"Some have had misgivings. In his 1990 report to Parliament, NSW Auditor-General Ken Robson devoted some attention to the revaluations by the Sydney Water Board, and other agencies, and the effect of those revaluations on reported 'costs':

> *It is the flow-on effect of additional depreciation charges following asset valuation which is my major concern. This effect is displayed by increased costs and depressed operating results in Income and Expenditure Statements. My concerns in this area are that costs will be overstated, that increased prices will be more easily justified and that depreciation charges will in time exceed original cost.*", Walker and Walker (2000, p 98)

Second, it must be noted that in the case of assets with perpetual lives, normal depreciation concepts are irrelevant. Thus land is not depreciated. It is also generally accepted that assets such as dams or channels have a perpetual life if properly maintained.

Hence, the concept has arisen of a renewals annuity charge to be expensed against an irrigation scheme's income instead of charging depreciation against capital asset costs.

A renewals annuity charge is fundamentally different to the concept of a financial annuity sinking fund to recoup original asset cost or build up a fund for its replacement.

A renewals annuity charge is merely a device for smoothing lumpy, infrequent, maintenance and refurbishment costs. The balance of a renewals annuity account may be thought of as an "unders and overs" tin to cover the occasional large maintenance cost. Sometimes the account balance may be in surplus as prepayments are made for anticipated expenditure; other times it may be in deficit as a result of unanticipated large maintenance costs which are being amortized over several years.

Over the long run, the balance in a renewals annuity account should be zero: it should neither be in permanent surplus nor permanent deficit - on average, each generation of irrigation users should be meeting the maintenance and refurbishment expenses attributable to that generation. There should be no building up of a fund to recover the cost of, or to replace, assets which do not depreciate. The building up of such a fund would amount to a form of "double charging" of the original generation of users who would be contributing towards both the original capital costs of a scheme as well as towards its replacement. Nor should the renewals annuity charge build up a fund able to be abused as a "hollow log" to be plundered for the payment of dividends to the owner. In this regard, we note that the Marsden Jacob report (2000, pp 24, 30) may have allowed too great a charge for the renewals annuity in that cash reserves could be built up.

Further, any renewals annuity must be based on an asset register (which is also needed for CGT accounting purposes).

Finally, a renewals annuity must be based on a customer-approved refurbishment plan. Just as the body corporate for a strata title block of home units approves budgets and levies for maintenance of common property, so some form of local management and user approval is necessary to prevent gold-plating or excessive maintenance costs.

4. Renewals annuity accounting: transitional issues

There are also serious transitional issues which needs to be addressed when an irrigation scheme changes its system of accounting to a renewals annuity approach. These are adjustments for any backlog of maintenance and transfer of accumulated depreciation charged previously.

While the Burdekin is a relatively young scheme and one would not expect serious backlogs of required maintenance, it is important that any such backlogs be either

rectified or a credit provided to the renewals annuity account on the transfer of assets from State Water Projects to SunWater. Equally important is that to avoid double charging users for asset maintenance or renewal, accumulated past asset depreciation charges (with interest) should be credited to the renewals annuity account on the changeover to renewals annuity accounting. Otherwise, users are not given proper credit for amounts previously charged towards asset refurbishment. Accordingly, the QCA needs to check that there was no backlog of maintenance and that the renewals annuity figure computed for establishing the gazetted price paths included a credit (with interest) for previous accumulated depreciation and is computed on the basis of a zero net balance in the account over the long-term. BRIAC would be seeking to establish that this is the case.

We note that if the QCA followed IPART in adopting a "line in the sand" approach it could then be argued that users must accept that such transitional issues cease to be relevant, but unless the QCA adopts a comprehensive and consistent "bygones are bygones" approach, users are entitled to demand full credit for past contributions towards capital costs or depreciation charges..

5. Tax equivalent regime (TER) logic needs to be queried

The logic of imposing taxes of any kind on SunWater needs to be questioned at several levels.

First, there is the primary legal and economic logical impossibility of the Crown taxing itself. When the Federal fringe benefits tax, for example, was introduced, it was recognised that the Crown taxing itself was a legal nullity and that the Crown no more pays tax when money is paid from a government department to the Treasury than does a person incur a cost by moving money from the left to the right pocket. In addition to this fundamental logical problem, the mutual fiscal immunities of State and Commonwealth are recognised to a large extent by section 114 of the Constitution

which prohibits State or Commonwealth imposing taxes upon each other's property. While it may be suggested that tax equivalent regimes are necessary for competitive neutrality and are a COAG requirement now incorporated in the *QCA Act*, we must politely insist that the fundamentals of constitutional law should be given somewhat more consideration than hitherto.

Second, the *QCA Act* definition of "competitive neutrality" is only relevant where there are "competitors or potential competitors". But SunWater's Burdekin activities have been recognized and declared as a monopoly, so the *QCA Act* does *not* require a tax equivalent regime to be imposed for "competitive neutrality reasons" - there are no competitors or potential competitors. (Nor would there be if the optimal pricing rule of "price equals short run marginal cost" is enforced). Hence, the general constitutional law and statutory tax exemptions should be given full effect by the QCA in examining whether excess returns are incorporated in the current price paths.

Third, the compliance costs of taxes "paid by government agencies" are a pure social waste which should not be visited upon users of irrigation schemes. If the Crown wishes to extract more money from users of irrigation schemes than it should do so in a visible and transparent manner in the form of higher prices rather than through the creation of notional costs which are themselves costly to determine. We suspect the adoption of tax equivalent regimes is merely a covert device to conceal what would otherwise be seen as unjustified price rises.

There are also some specific observations which may be added in relation to specific taxes.

6. Income tax

Even if an equivalent tax regime were to be applied, it should be applied on the basis that a profit maximising entity would take advantage of all provisions of the relevant tax

law. Company directors are under a legal duty to minimise tax lawfully wherever possible.

Accordingly, if SunWater makes losses or has accumulated depreciation write-offs which eliminate its taxable income, these should be used to attribute a zero tax rate to SunWater in respect of the Burdekin scheme. An optimal marginal cost pricing rule would generate ongoing tax losses. We note that the Marsden Jacob Report (2000, p ES vi) stated that "A preliminary analysis of notional company tax indicates tax would not be payable for up to 30 years ..." based on asset values on the books of State Water Projects.

An even more fundamental point is that the shareholder of SunWater is an income tax-exempt entity, namely, the Crown in right of the State of Queensland. Although a a non-resident or government-owned company cannot maintain a franking account (which gives rise to refundable imputation credits), it should be recognized that no competent private sector tax adviser would tolerate a corporate structure which created a 30 per cent tax liability to the Commonwealth in respect of a tax-exempt shareholder. Instead of being constituted as a corporate entity, SunWater would be organised as a trust or partnership so that net profits (if any) would flow tax free to the tax-exempt owner. If the capital asset pricing model (to which we object in any case) is to be applied, the commercial reality is that pre and post-tax rates of return would be the same and that SunWater would not face any additional tax cost on its market cost of equity capital.

A second point which appears to have gone unnoticed in previous consideration of competitive neutrality is that an irrigation scheme could be organised as a valid charitable trust and therefore be tax-exempt in any case. Bradshaw (1983, p 28-30) notes that the Statute of Elizabeth on charitable uses embraces, as charitable, objects of public utility such as trusts for localities or for provision of some of the indispensables of a settled community. In addition, "agriculture partakes of that fundamental social quality which can give a charitable nature to a trust or purpose relating thereto which is

beneficial to the community". We further note that the recent Commonwealth Government Inquiry into the Definition of Charities accepted the view of the Charities Commission for England and Wales that a charity may conduct and carry on what was formerly a government function, see Commonwealth of Australia (2001, pp 235-237). Accordingly, an irrigation trust established on a charitable basis would be tax-exempt, regardless of whether the Crown in right of the State of Queensland had any influence or control.

The QCA must therefore assume a zero rate of tax if it seeks (against our views) to apply a CAPM-derived WACC to the Burdekin scheme. It is quite inappropriate to burden irrigators with a cost of capital which includes *notional* corporate tax costs which would never be payable in a competently organised competitive private sector setting. Irrigators should not be expected to pay for a failure by SunWater or the Government of Queensland to seek competent income tax advice to ensure use of tax losses or achieve tax-free status, as is properly and legally possible.

Incidentally, we note that proper application of income tax rules requires SunWater to maintain a CGT register of all its assets on a historic cost basis. If SunWater is seeking regulatory approval of an asset base, it should be required by the QCA to deliver its CGT asset register for the Burdekin scheme and SunWater should not be allowed to seek a rate of return on any asset cost which it is not willing to have audited by the Commissioner of Taxation. Once again, this highlights the irrationality of seeking to charge irrigators for a return on asset costs never incurred or long since recouped. Tax law does not allow such conduct nor does conventional private sector accounting. If SunWater is not willing to have its Burdekin scheme accounts re-cast back to the origins of the scheme on private sector and historic cost tax accounting principles, the QCA must place a zero value on such unsubstantiated "costs".

7. Land taxes and rates

Land taxes and rates are based on the unimproved value of land. In the case of an irrigation schemes such as the Burdekin where easements have been set aside for channels or land has been resumed for a catchment, there is no land value attributable. The value of the Burdekin scheme is reflected in the values of the irrigated land parcels (which are subject to rates or land taxes as the case may be). The market value of land underneath the channels and catchment is zero since such land has no other use.

8. Externalities

We note that the COAG expert groups have said that lower bound costs should include externalities. However, there are beneficial as well as negative externalities from irrigation schemes. Indeed the beneficial externalities are usually much greater than the negative externalities, else the scheme would not have been built.

Hence it follows that recurring annual beneficial externalities should be credited against charges to be levied from immediate users. As noted in our first submission, these include land taxes, rates, stamp duties, GST, avoided welfare dependency costs, etc. Given that capital has already been recouped before counting these externalities, the annual value of these recurrent external benefits should be credited against recurrent user charges when the QCA is examining whether the recurrent net revenues from the Burdekin scheme incorporate an excess return on capital.

9. Conclusion regarding tem of reference 3

The current gazetted price paths appear to generate $11.8 million in revenue (WRU) versus an efficient cost which would be less than $7.7 million (Marsden Jacob). This

figure may be reduced on further examination of other material being supplied to the Inquiry in confidence.

The starting figure of $7.7 million is also subject to the downwards adjustments noted above (e.g. renewals annuity and depreciation, taxes and rates) and to adjustment for recurring external benefits. If, for example, capital has been recouped and there are continuing external fiscal and other benefits of $5 million per annum attributable to the scheme, then charges to irrigators should be reduced further accordingly.

VI. *General Conclusion*

This submission has noted several areas where the QCA will need to ensure it applies a consistent logical approach to determining the cost of capital or excess returns to capital incorporated in gazetted price paths.

These areas include -

- the inapplicability of a private sector CAPM approach to modelling a required return on "equity" where the "equity" comes from taxation revenue:
- the logical problems in applying the CAPM model without a proper forensic accounting on private sector historical cost principles which include revaluations in income statements;
- the inapplicability of equity risk or debt risk premiums;
- the inapplicability of a tax equivalent regime in general and for income or land taxes in particular;
- the need for a renewals annuity not to generate a long term positive fund balance;
- the need to credit a renewals annuity with accumulated previous depreciation on an accounting changeover;
- the need to ensure there is no transfer of previous superannuation or

maintenance backlog liabilities; and

- the need to credit beneficial recurring externalities against the costs of the scheme allocated to irrigation users.

IPART's approach of drawing "a line in the sand" and putting a zero value on both legacy assets and liabilities is one logical possible response to dealing with many of these difficult issues, particularly where records are incomplete. But it should go without saying that it would be not only unacceptable to irrigators but irrational in the administrative law sense for a body such as the QCA to apply internally inconsistent or incomplete methodologies in seeking to compute a rate of return on capital or to establish efficient operational expenditures for the purpose of testing whether gazetted price paths incorporate an excess return on capital.

We therefore trust that the enumeration in this submission of serious points of principle which need to be addressed by the QCA will assist in guiding the QCA to a fully reasoned, thoroughly consistent and defensible set of findings.

REFERENCES

Bradshaw, F M (1983) *The Law of Charitable Trusts in Australia*, Butterworths, Sydney

Commonwealth Competitive Neutrality Complaints Office (1998) *Rate of Return Issues*, Productivity Commission, Canberra, December

Commonwealth of Australia (2001) *Report of the Inquiry into the Definition of Charities and Related Organisations*, AusInfo, Canberra, June

Independent Pricing and Regulatory Tribunal of New South Wales (IPART) (2001) *Department of Land and Water Conservation: Bulk Water Prices* Determination No 3, December, Sydney

Marsden Jacob (2000) *Local Management: An Efficient and Effective way Forward*, Report to Burdekin Interim Local Management Committee, 30 June

Officer, R R (1994) *The Cost of Capital of a Company under an Imputation Tax System*, **Accounting and Finance** vol 34, no 1, May, p 1-17

Queensland Competition Authority (2001) *Gladstone Area Water Board: Investigation of Pricing Principles*, Draft Report, Brisbane, November

Quiggin, John (1996) *Great Expectations: Microeconomic reform and Australia*, Allen & Unwin, Sydney

Walker, R G (1993) *Evaluating the Financial Performance of Australian Water Authorities* in Johnson, Michael and Stephen Rix, editors *Water in Australia: Managing Economic, Environmental and Community Reform* Pluto Press and University of New South Wales, Sydney

Walker, Bob and Betty Con Walker (2000) *Privatisation: Sell off or sell out? The Australian experience,* ABC Books, Sydney

Water Reform Unit (WRU) (2001) *Papers released to Burdekin River Irrigation Area Committee (BRIAC) in response to FOI request of 29 May 2001*

ATTACHMENTS

Marsden Jacob (2000) *Local Management: An Efficient and Effective way Forward*, Report to Burdekin Interim Local Management Committee, 30 June

Walker, R G (1993) *Evaluating the Financial Performance of Australian Water Authorities* in Johnson, Michael and Stephen Rix, editors *Water in Australia: Managing Economic, Environmental and Community Reform* Pluto Press and University of New South Wales, Sydney