

SEQWATER'S 19 MARCH 2013 SUBMISSION / RESPONSE TO QCA REQUEST OF 12 MARCH 2013

19 March 2013

From: Colin Nicolson
Sent: Tuesday, 19 March 2013 3:18 PM
To: Angus MacDonald
Cc: Damian Scholz
Subject: FW: potential question for Col (Central Brisbane WSS)

Hello Angus

Here are our responses to the questions below. We are looking at whether we can calculate kWhr/ML for Clarendon and Atkinson Dams.



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From: Angus MacDonald
Sent: Tuesday, 12 March 2013 3:11 PM
To: Colin Nicolson
Subject: RE: potential question for Col (Central Brisbane WSS)

Dear Colin

RE: QCA Information Request - 12 March 2013

I write seeking further information on the following matters.

QCA Question 1

Central Brisbane River WSS – QCA has received a submission from an irrigator on costs incurred in monitoring water quality in this scheme.

Specifically: “...below the dam and prior to entering Mt Crosby WTP...”.

The Authority commissioned SKM report (p.50 of the Authority’s Vol 2 Draft Report) states: “Under the ROP and licenses subordinate to the *Water Act 2000*, Seqwater is required to monitor water quality in storages, releases and recreational areas.”

The questions are:

- what are the water quality monitoring requirements associated with releases between Wivenhoe Dam and Mt Crosby WTP;
- what is the total all sectors costs (say for the base year in 2013-14 dollars); and
- how much of this cost has been allocated to irrigators and on what basis was that cost allocation done?

Seqwater Response to Item 1

1. *The requirements for this section of river are related to Seqwater’s requirements for the ROP under the Water Act 2000 (for Wivenhoe Dam releases, Lake Manchester and Mt Crosby Weir) and requirements for Seqwater’s Wivenhoe Drinking WQ Management Plan under the Water Supply (Safety and Reliability) Act 2008. This manifests as monitoring at 11 sites which are essentially monitored as per the table below.*

Monthly	Ecoli/Enterococci Nutrients TSS Iron and Manganese Chlorophyll and Algae Sulphate Physicochemical
Quarterly	Total metals
Biannually	Organic contaminants
Annually	Sediments (not all sites)

2. *The budget for 2013-14 for water monitoring costs for the scheme below the dam wall is \$270,508.*
3. *As fixed operating costs, the allocation to irrigators was 50% using HUF and 50% using WAE.*

QCA Question 2

Mary Valley WSS – Irrigators submitted that meters were replaced about 5 years ago *to the current standard.*

Specifically, an irrigator recently submitted:

“Efficiency of SEQ water, I believe they still have a long way to go in this area. Our water meters were upgraded to what we were told was the current standard about five years ago, I received a phone call on Tuesday the 12th of February 2013 to say that SEQ water would be bringing contractors around to look at the upgrading of our water meters, I queried this as they were done previously and was told that they were due to be done again, they arrived at our sites at Yabba creek 10.30 on Wednesday 13th February 2013 bringing three utes with a total of four people. This does not appear efficient to me. (I provided real times and dates so diaries and work logs can be checked).” Source: Gary Rozynski 2013 (Mob: 0407 630 697)

This issue was also raised during consultation in Gympie on 12 February 2013, where Seqwater indicated it did not (likely) replace meters 5 years ago and, if that did occur, it would not (likely) be replacing the same meters as part of the new program this year within 5 years. However, an irrigator does not agree, submitting that meters replaced five years ago are being replaced this year.

Please provide further detailed advice on this matter, so that our Final Report can document a clear and accurate response to the following:

In Seqwater's response, please address two broad matters in detail: (a) whether 5 year old meters are being replaced; and (b) why it is necessary/efficient for the four contractors in three utes to carry out the initial assessment.

Seqwater Response to Item 2

- (a) *Seqwater is undertaking a meter replacement program driven by meter installation safety considerations and the need to ensure meter installations meet manufacturer specifications. In the process, worn and non-functioning meters will also be replaced. The meters in question were already installed when Seqwater took responsibility for the Mary Valley WSS from SunWater on 1 July 2008. Because of differences between the Seqwater and SunWater asset information systems, Seqwater does not have reliable records of the age and condition of the meters acquired from SunWater.*

Seqwater will repair or replace meters depending on the condition of the meter at the time of inspection. In certain circumstance Seqwater will replace meters that are 5 years old. It is noted that SKM disagreed with the shorter meter lives that Seqwater ascribed to its meters. The longer lives recommended by SKM appear to be more consistent with meters operating in reticulated water systems where the quality of the water is vastly higher than the quality of raw water pumped from rivers and streams for irrigation purposes. Whilst Seqwater concurs with SKM's assessment of meter lives under those conditions, Seqwater's operational experience has shown that mechanical-type irrigation meters subjected to raw, unfiltered water that has a content high in gravel, sand, grit and botanical matter dramatically shortens meter life expectancy. Also, it has been found that high water volumes passing through mechanical meters will shorten the manufacturer's life of a meter. After 5 to 6 years operating under these conditions the accuracy of irrigation meters has been found to progressively deteriorate. The replace or repair decision is driven by cost based on the particular circumstances.

It is important to note that the meter replacement program being undertaken by Seqwater focusses on the meter installations of which the meter is one component. Seqwater will replace mal-functioning meters, regardless of age, if repair is not economically viable. Seqwater will replace meter installations where the current location is unsafe or when the installation does not meet manufacturer specifications (i.e. 10 times the meter diameter of straight, horizontal pipe leading into the meter and 5 times the meter diameter of straight, horizontal pipe after the meter). When a meter installation is replaced, the associated meter may also be replaced because that is often the lowest cost option. When that happens, the replaced meter will be repaired if viable and used elsewhere or may be stored for spare parts or, if in good condition, will be serviced and used elsewhere.

In regards to the meters in question, the entire installations are being replaced to meet both safety requirements and manufacturer's specifications for accuracy. Consequently, it is clear that the meters were not installed to current standards. However, as the meters were previously installed by SunWater, Seqwater is not able to comment on the installation standards adopted at the time. In the case to hand, the actual meters may be replaced, despite their age, depending on a range of factors including cost, condition and viability of repair.

(b) The four people at the site were 2 Seqwater staff (local manager and project manager) and 2 independent contractors who attended the site at their own expense and at their reasonable request to see the site before submitting quotes to undertake the work. 2 additional contractors who were also invited to submit quotes did not attend. It should be noted that replacing these meter installations is part of a larger parcel of work on which the contractors were submitting quotes.

The three vehicles used were 1 Seqwater vehicle for the 2 Seqwater staff and each contractor elected to use their own vehicles at their own cost. It should be noted that the Seqwater staff were travelling to another project site immediately afterwards. That project site was in the opposite direction to that in which the contractors would travel at the conclusion of the meter site visit. Consequently, it was more efficient to take the Seqwater vehicle to the meter site and then travel directly to the second project site.

Seqwater acknowledges that improved communication with Mr Rozynski may have addressed some of his concerns at the time of this event.

QCA Question 3

The copy of the Morton Vale Contract we have on record, suggests the Morton Vale Pipeline was commissioned in 1993. Is this correct? If not, when was the Morton Vale Pipeline commissioned?

Seqwater Response to Item 3

The Morton Vale Pipeline was completed and commissioned in 1997.

QCA Question 4

Please provide detailed calculations of your forecast Fixed and Variable Electricity cost for Central Lockyer, include:

- a) the Tariff Number/s (e.g. Tariff 22 or other)
- b) the fixed and variable rates you used for 2012-13 (I will likely adopt the Authority's Draft Determination revised tariffs for 2013-14 – but need to know the current tariffs to pick the right one)
- c) estimated KWh per ML and the calculation underpinning that (as for Pie Creek)
- d) the volume of ML assumed to be pumped and delivered in 2013-14 and each of the following three years (noting how full the dam currently is and that pumping 50% of its volume may not be considered a realistic assumption in light of March / April 2013 conditions).

If possible, the steps/data for (a) to (d) above is should also be provided to us in relation to the Mary Valley bulk fixed electricity costs.

Are there any other noteworthy material electricity cost items you can think of? If so, same would apply. Our Chairman is very focussed on electricity costs.

Seqwater Response to Item 4

Central Lockyer

Central Lockyer Valley WSS electricity budget for 2012-13 was calculated on the assumption that a total of 50% of its volume would be pumped being 25% used and 25% replenished. Although recent wet conditions means actual electricity costs are well below budget, the 50% assumption is still considered to be a reasonable average over the 4 years of the price path. It should be noted that because of the extended dry period in the years leading up to Clarendon Dam filling in 2010, there is no previous history of electricity usage upon which to base the budget assumptions. Consequently, the assumptions made by Seqwater's experienced operators and managers are considered to be the best guide available to estimate electricity usage. The electricity tariff is T22.

Mary Valley

The attached Excel file shows historical electricity usage which was used to calculate the peak/off-peak usage assumptions. The variable electricity charge calculations for the Pie Creek Tariff Group are set out below.

The first table shows the electricity charge based on the Tariff 22 rates for 2012-13 indexed to 2013-14. This table differs from the variable charge calculation submitted by Seqwater in two ways. Firstly, it corrects a spreadsheet formula error that excluded the off-peak cost and it includes the service charge omitted in the submitted variable charge calculation.

1. Determine kWh per ML Pumped			
Total kWh for period 1/12/08 to 15/3/2012		102267	kWh
Total ML pumped for period		310.49	ML
kWhr per ML pumped		329.4	kWh / ML
2. Determine unit cost \$/kWh			
	Peak	Off-peak	Service Fee*
Peak/Off-peak pumping	67%	33%	-
Tariff 22 (2012-13) \$/kWh	0.202	0.18118	1.07434
Variable electricity cost (pumped) \$/ML	45.47	20.39	1.29
Total variable electricity cost (pumped) \$/ML	67.15		
3. Apply distribution loss factor			
Assumed distribution efficiency	82%		
Indexation	2.50%		
Variable charge (\$/ML taken)	\$2013-14	82.28	

* Per metering point per day

This second table shows the electricity charge based on the 2013-14 rates for Tariff 22.

1. Determine kWh per ML Pumped			
Total kWh for period 1/12/08 to 15/3/2012		102267	kWh
Total ML pumped for period		310.49	ML
kWhr per ML pumped		329.4	kWh / ML
2. Determine unit cost \$/kWh			
	Peak	Off-peak	Service Fee*
Peak/Off-peak pumping	67%	33%	-
Tariff 22 (2013-14) \$/kWh	0.2392	0.19077	1.19867
Variable electricity cost (pumped) \$/ML	52.53	20.94	1.41
Total variable electricity cost (pumped) \$/ML	74.88		
3. Apply distribution loss factor			
Assumed distribution efficiency	82%		
Indexation	0.00%		
Variable charge (\$/ML taken)	\$2013-14	\$91.76	

* Per metering point per day

Lower Lockyer

The forecast electricity budget for Lower Lockyer Valley WSS was based on the expenditure patterns of the 2009-10 and 2010-11 years. The previous historical electricity usage does not provide useful trend information because of the extended drought conditions in the scheme. Consequently, the assumptions made by Seqwater's experienced operators and managers are

considered to be the best guide available to estimate electricity usage. The electricity tariff is T22.

Central Brisbane River

Seqwater has revised its 2012-13 electricity forecasts for the Central Brisbane River WSS downwards following the move of the Wivenhoe Dam electricity usage from a tariff basis to a large contestable contract basis in April 2012. Consequently, total electricity forecast usage in 2012-13 fell from the original tariff-based estimate (T22) of \$262,000 to \$157,000 based on a combination of tariffs (T22) and a contestable contract. Consequently, Seqwater submits that the electricity costs for Central Brisbane River WSS should now be forecast from the revised base of \$157,000 (\$2012-13).

Seqwater's responses to the above matters would be appreciated **by Tuesday 18 March 2013, please.**

Kind regards

Angus MacDonald

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