Background paper
QCA review of irrigation prices

Supplementary Information on Electricity Cost Management

August 2011

Contents

1 Introduction

The Queensland Competition Authority (QCA) is to recommend prices for SunWater's bulk water and distribution customers. SunWater has prepared Network Service Plans (NSPs) that set out the forecast operating and capital expenditure for each water supply scheme and distribution system. These forecasts include electricity costs of pumping in distribution systems, as well as relatively minor electricity costs in bulk water schemes.

SunWater submitted a paper to the QCA in February 2011 that described SunWater's approach to energy management and the preferred approach to recovering the cost of electricity, including year-on-year variations to Franchise electricity tariffs which are outside the control of SunWater. This supplementary paper is in response to the QCA's request for further information on SunWater's approach to electricity procurement. In particular, the QCA is seeking assurance that SunWater's decision to continue to utilise Franchise tariffs is optimal and that contestable market procurement options have been assessed.

This paper only considers pumping sites relevant to the QCA's irrigation pricing review – that is, the bulk water and distribution sites. There are many other sites in SunWater's portfolio and some of these have been moved to contestable contracts where a benefit has been identified.

This paper is structured as follows:

Section 2 provides an overview of SunWater's bulk water and distribution electricity consumption and costs;

Section 3 assesses whether SunWater's sites are on the optimum Franchise tariff;

Section 4 quantifies cost differences in moving to contestable contracts;

Section 5 discusses future risks to electricity procurement costs; and

Section 6 provides a conclusion.

2 Overview of Bulk Water and Distribution electricity costs

Electricity costs for SunWater's bulk water and distribution schemes are $7m[1] pa representing approximately 15% of operating costs. Electricity is predominantly used to pump water within distribution systems. There is relatively minor consumption in bulk water schemes that involve off stream storages (e.g. Eton, Dawson Valley, and Bowen Broken) or in bulk water schemes that require pumping to supplement stream flows (e.g. Redgate Relift, Upper Condamine North Branch).

There are 58 pumps used to supply water in the bulk water and distribution systems. A list of these sites and their associated electricity tariffs are shown in Attachment 1. The total bulk water and distribution load averages 40 GWh/a. Overall, SunWater has a total electricity load of around 150GWh/a, which makes SunWater a very large electricity customer in the Queensland market.

SunWater regularly monitors its position with regard to electricity procurement and is able to demonstrate that its electricity costs are being prudently managed within the context of the electricity market in Queensland. The Queensland retail electricity market provides SunWater with the option of remaining on Franchise tariffs or moving into the competitive market on a contestable contract. At this stage, all of SunWater's bulk water and distribution sites remain on Franchise tariffs because the regulated prices have been assessed over many years as being consistently lower for SunWater's sites than contestable market prices[2].

[1] Source: NSP data January 2011. All financial figures in this paper are GST exclusive.

[2] Three of SunWater's commercial pipeline sites have moved onto contestable contracts (Awoonga Dam, Boocoolima and Wooderson).

3 Are SunWater's sites currently on the optimum Franchise tariffs?

Before considering whether the contestable market offers better value to individual sites, it must first be confirmed that each site is on the optimum Franchise electricity tariff.

3.1 Structure of the Franchise Electricity Tariffs

The Queensland Government, through the Minister for Energy, publishes Franchise tariffs annually. There are a range of tariff structures available to franchise customers varying from a simple volume charge for all usage on Tariff 20, to peak and offpeak volume charges under Tariff 22, to the introduction of demand charges under Tariff 43. A detailed description of the tariffs most relevant to SunWater bulk water and distribution sites is contained in Attachment 2. A high level overview of the different characteristics of each of these tariffs is given in the table below.

Table 1 –Overview of Major Tariff Options

Tariff	Structure	Favoured Consumption Pattern
20	A single c/kWh volume charge for all consumption	High peak usage
22,62,65	Peak and offpeak c/kWh volume charging	High offpeak usage High demand not penalised
43	Adds a demand charge to peak and offpeak volume charging	High offpeak usage Peak demand levels controlled

The optimum tariff for individual sites is a product of their consumption patterns weighed against the different tariff structures. Sites that are able to move a large proportion of their consumption into offpeak periods will benefit from the structure of the time-of-use tariffs, such as Tariff 22. Whereas sites that must pump during peak hours will most likely be favoured by Tariff 43, as long as peak demand levels can be controlled.

The ability of sites to reduce costs through offpeak pumping is determined by factors such as demand profiles, pumping capacity and flexibility, control systems and the availability of off-stream storage.

3.2 Tariffs Selected for SunWater's Sites

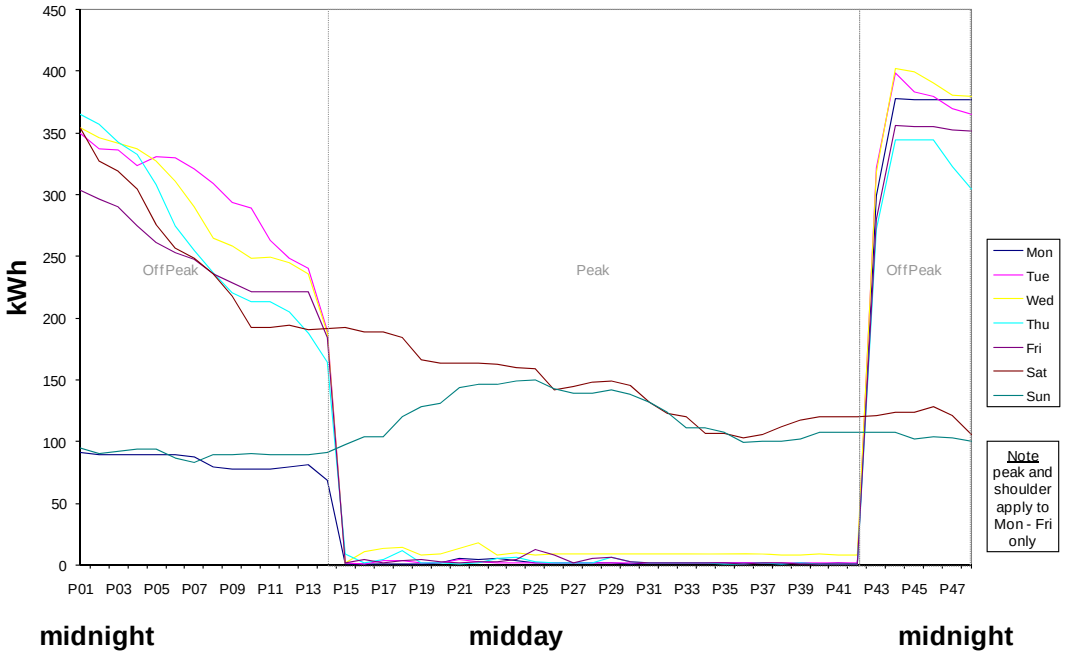
Tariffs currently applicable to SunWater's bulk water and distribution sites are summarised in Table 2, which shows that 99% of this load is supplied under Tariffs 22 and 43.

Table 2 –Bulk Water and Distribution Site Tariff Summary

Tariff	Number of Sites	Annual Consumption
20	2	<0.1 GWh/a
62	2	0.1 GWh/a
65	3	0.1 GWh/a
22	46	22.7 GWh/a
43	5	16.7 GWh/a
Total	**58**	**39.6 GWh/a**

Tariff 22 has proved to be the optimum Franchise tariff for the majority of SunWater bulk water and distribution sites with more than half the total load on this tariff. Tariff 22 allows SunWater sites to take advantage of offpeak energy rates but doesn't penalise sites for the increased demand that occurs by concentrating pumping into the offpeak period. A typical load profile of a site that benefits from the Tariff 22 structure is the Woongarra Pump Station, which operates primarily in offpeak to minimise costs.

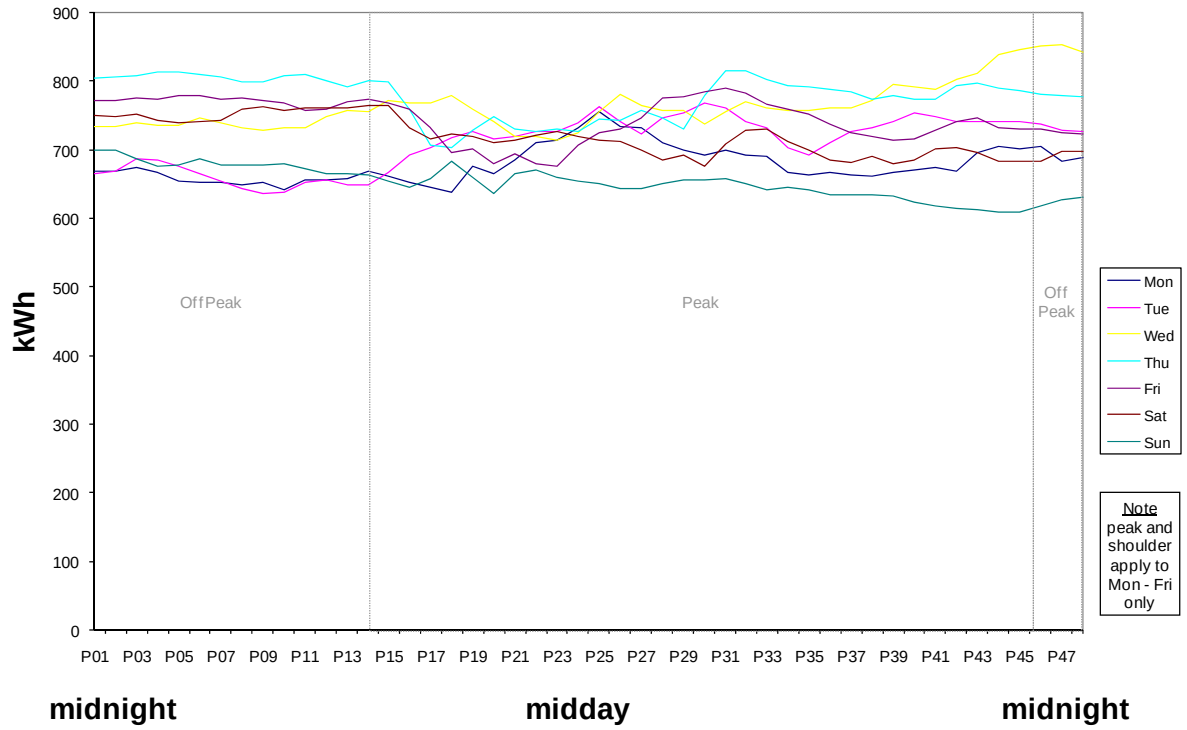
Figure 1 – Woongarra Pump Station Load Profile (Tariff 22)



The load profiles in this paper show consumption for each day of the week[3], averaged over the entire year.

The four sites supplied under Tariff 43 account for 47% of the total bulk water and distribution load. These sites are characterised by their flat load profile reflecting the fact that when they are operating they tend to operate 24 hours per day in order to meet demand. Shown below is the load profile for Haughton Pump Station, which is the largest of the Tariff 43 sites and which alone accounts for 30% of the entire bulk water and distribution load.

Figure 2 – Haughton Pump Station Load Profile (Tariff 43)



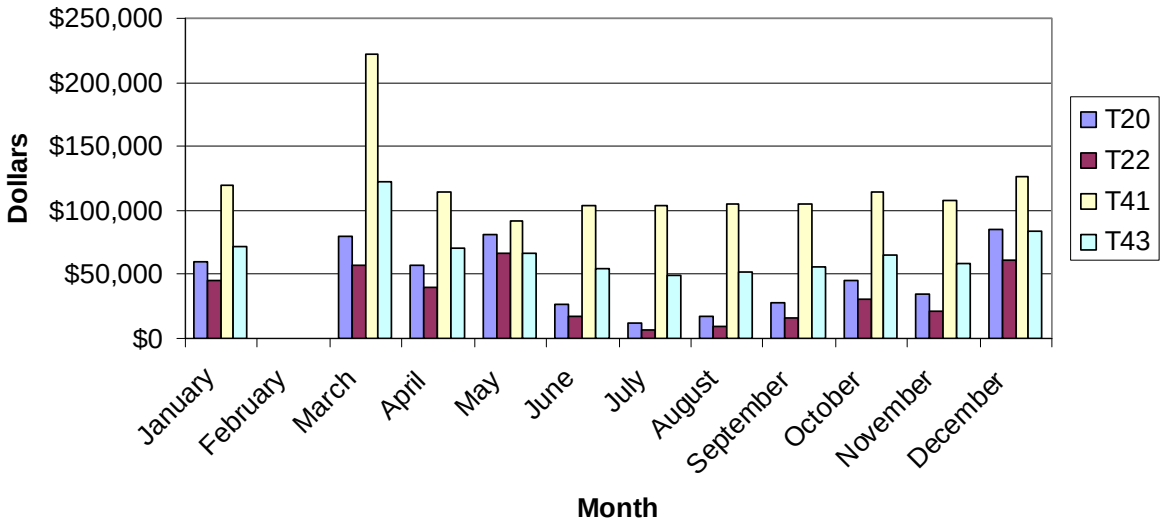
A representative sample of 18 of the 58 bulk water and distribution sites was collated and used in the assessment of Franchise tariff and contestable contract costs throughout this paper. This sample of sites covers 80% of the load and contains at least one site from each distribution system.

[3] The 48 half-hourly periods of each day are shown as periods P1 to P48. For example, P25 refers to the period 12:00pm-12:30pm.

3.3 Confirming that SunWater's Sites are on the Optimum Tariffs

SunWater regularly monitors the relative cost of different Franchise tariffs and will move sites onto alternative tariffs where sustained cost savings are identified. The relative performance against alternative tariffs is monitored through cost comparison reports provided by SunWater's franchise retailer, Ergon Energy. As an example, the tariff comparison chart below confirms that Tariff 22 is the lowest cost tariff for the Quart Pot pump station[4].

Figure 3 – Quart Pot Pump Station Franchise Tariff Comparison



In addition to the regular monitoring of tariffs, SunWater has recently performed further detailed analysis on the representative sample of 18 bulk water and distribution sites (accounting for 80% of electricity consumption). Costs were compared across a range of tariffs looking at three years of consumption data from May 2008 to Apr 2011.Table 3 shows that each of the sample sites are on the optimum tariff.

Table 3 –Franchise Tariff Analysis by Site

Pump Station	Tariff	Optimum Tariff from Ergon Analysis	Annual Cost	Difference on next best Tariff
Haughton	43	43	**$1,750k**	+5%
Quart Pot	22	22	**$500k**	+40%
Isis	22	22	**$490k**	+75%

[4] There was no bill for Quart Pot in February; the February and March bills were combined.

Pump Station	Tariff	Optimum Tariff from Ergon Analysis	Annual Cost	Difference on next best Tariff
Millaroo A	43	43	**$300k**	+5%
Woongarra	22	22	**$200k**	+80%
Mirani Weir Stage 3	22	22	**$160k**	+35%
Gattonvale	22	22	**$130k**	+35%
Elliott 1 & 2	22	22	**$120k**	+25%
Gooburrum	22	22	**$110k**	+120%
Monduran	22	22	**$110k**	+120%
Millaroo B	22	22	**$70k**	+35%
Paddy's Green A	22	22	**$60k**	+65%
St George	22	22	**$40k**	+25%
Mirani Weir Stage 1	22	22	**$40k**	+60%
Theodore	22	22	**$40k**	+55%
Victoria Plains	22	22	**$40k**	+60%
Owanyilla	22	22	**$30k**	+60%
Fairbairn	22	22	**$10k**	+30%

So the findings from both the regular monitoring of sites against alternative tariffs and a more detailed analysis of the sample of 18 sites confirms that all SunWater bulk water and distribution sites are on the optimum Franchise tariff.

4 Should SunWater's sites remain on Franchise tariffs?

Having confirmed that the bulk water and distribution sites are on the optimum Franchise tariff, the next step is to identify any sites that would potentially benefit from moving into the contestable market.

4.1 Electricity Market Deregulation

The retail electricity market in Queensland has been progressively deregulated since 1997. All customers now have the option to negotiate contestable contracts and there are many retailers in the market competing for this business. SunWater has the option to procure electricity from the contestable retail market but has determined on a number of occasions since deregulation that Franchise tariffs are the lowest cost option for the bulk water and distribution sites. Consequently, SunWater currently procures all electricity in its bulk water and distribution systems from Ergon Energy under the Franchise tariffs[5].

It is important to note that a change from regulated Franchise tariffs to the contestable market is irreversible for SunWater's large sites (which account for 98% of the irrigation load). Hence any gains from a move into the contestable market must be realisable and sustainable over the longer term for these sites in order to be attractive.

4.2 Comparing Contestable to Franchise Costs in the Current Retail Market

The benefits of a site moving into the contestable market can be estimated by modelling contestable market costs against the benchmark of the site's Franchise tariff. Since market deregulation, this comparison has been able to be made and projected forward with some confidence because Franchise tariffs have increased in a predictable manner. For the past five years, Franchise tariff increases have been determined under the BRCI[6] framework, which is designed to ensure that cost increases in the contestable market are reflected in Franchise tariff increases. A by-product of this process is that customers have had a level of certainty that identified contestable savings would be sustained into the future.

However, the Franchise tariffs and supporting robust BRCI framework are currently being overhauled by the QCA under the Franchise tariff review[7]. Importantly, Franchise tariffs are likely to be "re-balanced" with winners and losers across the various Franchise tariffs.[8] However, the outcomes of the review won't be known until the end of May 2012, which means that the benchmark tariffs that have existed contiguously since market deregulation cannot be relied upon beyond June 2012. Consequently, customers can have no confidence that identified contestable savings will be sustained into the future.

In this environment, it would be very difficult to mount a business case to move any site into the contestable market. The additional uncertainty of the carbon tax and its impact on energy

[5] Three of SunWater's commercial pipeline sites have moved onto contestable contracts (Awoonga Dam, Boocoolima and Wooderson).

[6] BRCI = Benchmark Retail Cost Index, a process administered by the QCA.

[7] The review is officially called the "Review of Regulated Retail Electricity Tariffs and Prices". Further details can be found at the QCA's website: www.qca.org.au/electricity-retail/RevEPandTS/

[8] See letter from electricity pricing consultant, Systems Clear, in Attachment 3.

prices adds further risk to this analysis. Rather than project forward into the uncertain future of the current Franchise market, it was decided to look back to determine if SunWater's sites would have benefited from a move to the contestable market in the recent past. The comparison was therefore made for the 2010/11 financial year, which could be modelled with some certainty given that wholesale market prices and Franchise tariffs are both known for this period, and carbon pricing was having little or no impact on wholesale market pricing at this time.

4.3 Contestable Electricity Cost Drivers

When a customer enters the contestable market, their true cost-to-serve is revealed through the unbundling of costs into network charges and energy charges. These two charging components make up around 95% of a contestable bill.

4.3.1 Network Charges

Network charges for SunWater's sites are calculated by the network side of Ergon Energy behind the scenes and are not directly charged to SunWater under the Franchise tariffs. However, if a site enters the contestable market these network charges will be passed-through to SunWater on their monthly bill.

This unbundling of network charges disadvantages many SunWater sites. For example, sites supplied under the Franchise Tariff 22 are not subjected to any demand charges. However, in the contestable market most of these sites would be subject to high demand charges within their network charges, making the transition to the contestable market uneconomical.

In some cases, the network charges for specific sites also have large fixed price components that alone swamp any other benefits of moving into the contestable market.

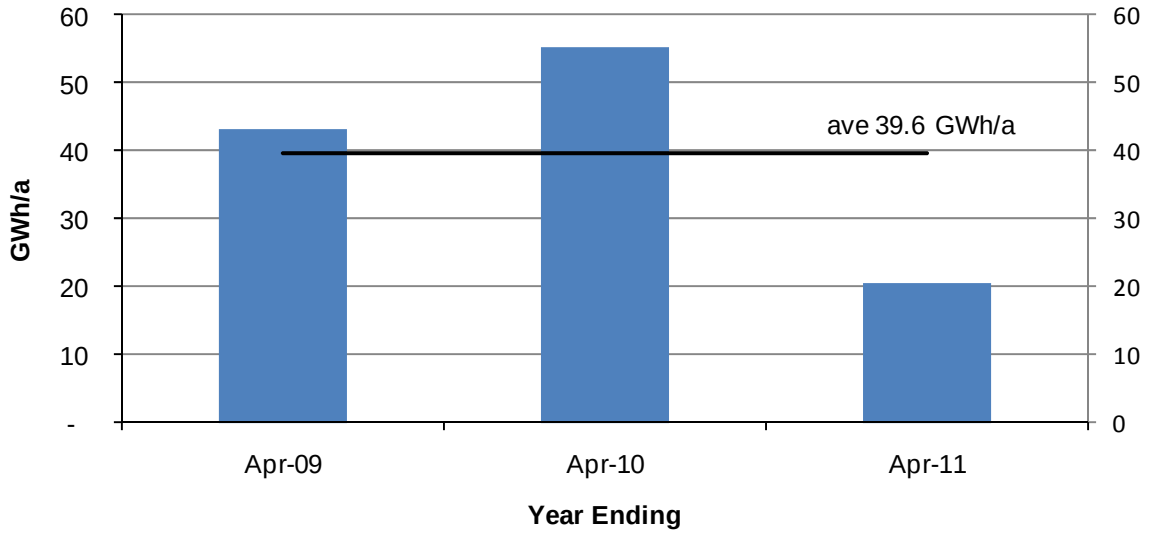
Network charge information for each SunWater site has been obtained from Ergon Energy for inclusion in the analysis of contestable costs.

4.3.2 Energy Charges

The other major component of a contestable bill is the energy charges. Electricity retailers purchase electricity from the electricity pool for each half-hour and the price varies according to the time of day, day of week and time of the year. Retailers hedge their load to limit their exposure to the volatile pool prices. The pool and hedging costs are primarily driven by the time-of-use of electricity which makes the site load consumption patterns critical to energy pricing.

Most of SunWater's sites have offpeak or flat intra-day load profiles, which result in lower than average energy prices when compared to typical "peaky" customer load profiles (e.g. office buildings). However, many of the bulk water schemes and distribution systems have loads that vary from zero demand to full demand on a frequent basis, have large variations across the seasons and even larger variations from year to year. The large annual variations in SunWater's bulk water and distribution electricity consumption for the past three years are shown in the following chart.

Figure 4 – Annual Variation in SunWater's Bulk Water and Distribution Load



The large variations in electricity load associated with SunWater's sites are difficult to predict and therefore are difficult for the electricity retailers to hedge. This presents a volume risk to retailers that will be passed on to SunWater through higher prices, exposure to pool prices and/or onerous risk management constraints.

4.4 Modelling Contestable Contract Costs for SunWater Sites

SunWater has estimated the contestable charges for 2010/11 for the sample of 18 bulk water and distribution sites listed in Table 3. This representative sample of sites covers 80% of the bulk water and irrigation load and contains at least one site from each distribution system.

Network charges for 2010/11 were determined from the network codes or site specific charges provided by Ergon Energy for all individual sites.

Energy costs were estimated using a modelling approach that emulates that used by electricity retailers in determining contestable contract pricing. This modelling used wholesale market prices and a site's individual profile to determine a load-weighted energy cost for each modelled site as it would have been had the site gone into the contestable market prior to the 2010/11 financial year.

Wholesale market prices for the contestable energy charge modelling were based on prices from the Sydney Futures Exchange on 1 December 2009. Prices were sourced from a period approximately six months prior to the beginning of the financial year, which represents a typically lead time for obtaining a contestable retail contract. These prices are at the mid-range of prices experienced in the lead-up the 2010/11 financial year and are relatively low in historical terms. The wholesale market prices used in the contestable energy cost modelling are shown in Table 4.

Table 4 –Wholesale Market Prices used in Energy Cost Modelling

Year	Quarter	Peak ($/MW)	Offpeak ($/MW)
2010	Q3	44.75	24.12
2010	Q4	55.65	25.63
2011	Q1	92.00	22.52
2011	Q2	44.40	23.35

Electricity load profiles for each modelled site were based on three years of half-hourly meter data for May 2008 to Apr 2011, where half-hourly meter data was available (11 sites). Profiles for sites with accumulation meters (7 sites) were based on monthly peak/offpeak consumption figures for the same three-year period, scaled to a half-hourly basis using the shape of a comparable site.

Three years of meter data was considered necessary for this analysis to capture the enormous variation in electricity consumption from year to year in response to water availability and customer demand.

No allowance was made in the analysis to cover the volume risk due to the large variations in SunWater's load consumption from year to year.

Network charges, energy costs and other charges were combined to give a total estimate of contestable costs for each of the sites analysed. These estimated contestable costs were then compared with the Franchise charges for 2010/11 to determine if there was a potential saving from moving sites to the contestable market. An example of the results of this analysis is shown below for Quart Pot Pump Station, which shows the major cost components of contestable arrangements.

Table 5 – Detailed Cost Comparison for Quart Pot Pump Station (T22)

	Annual Cost Franchise Tariff 22	**Estimated Annual Contestable Contract Cost**			**Overall Difference**
		Energy	**Network**	**Total**	
Volume Charges	**$499k**	$140k	$40k	**$180k**	
Demand Charges	**n/a**		$590k	**$590k**	
Fixed Charges			$10k	**$10k**	
Other Charges	**$1k**	$40k		**$40k**	
Total	**$500k**	**$180k**	**$640k**	**$820k**	**+60%**

The analysis for Quart Pot shows that the estimated cost under a contestable contract is 60% above that of the Franchise tariff. The main difference between the two options is the large demand charge recovered as part of the network charges that are borne by the customer when entering the contestable market. These demand charges alone outweigh the total charges to Quart Pot under the Franchise tariff ($590k c.f. $500k). The increases estimated for Quart Pot are typical of the increased charges that most of SunWater's Tariff 22 sites would experience if they were to enter the contestable market.

By comparison, the two Tariff 43 sites modelled have only a marginally higher contestable contract cost because both the Franchise tariff and the network charges include large demand charge components. Despite this, the estimated contestable costs for the Tariff 43 sites modelled are still at or above the Franchise tariff costs for 2010/11.

A summary of the differences between Franchise and contestable costs for the 18 sample sites is shown in the following table.

Table 6 – Summary of Franchise to Contestable Costs by Site

Pump Station	Annual Cost on Franchise Tariff		Estimated Annual Contestable Contract Cost			Overall Difference
	Tariff	Total	Energy	Network	Total (incl. other charges)	
Haughton	43	**$1,750k**	$500k	$1,190k	**$1,770k**	1%
Quart Pot	22	**$500k**	$140k	$640k	**$820k**	60%
Isis	22	**$490k**	$125k	$515k	**$670k**	35%
Millaroo A	43	**$300k**	$90k	$200k	**$300k**	0%
Woongarra	22	**$200k**	$50k	$400k	**$470k**	130%
Mirani Weir Stage 3	22	**$160k**	$45k	$120k	**$170k**	10%
Gattonvale	22	**$130k**	$40k	$90k	**$140k**	5%
Elliott 1&2	22	**$120k**	$40k	$110k	**$160k**	25%
Gooburrum	22	**$110k**	$30k	$350k	**$400k**	250%
Monduran	22	**$110k**	$30k	$530k	**$590k**	420%
Millaroo B	22	**$70k**	$20k	$55k	**$80k**	5%
Paddy's Green A	22	**$60k**	$20k	$70k	**$90k**	60%
St George	22	**$40k**	$10K	$40k	**$50k**	30%
Mirani Weir Stage 1	22	**$40k**	$15k	$45k	**$60k**	45%
Theodore	22	**$40k**	$10k	$45k	**$60k**	45%
Victoria Plains	22	**$40k**	$10k	$40k	**$55k**	45%
Owanyilla	22	**$30k**	$10k	$80k	**$90k**	240%
Fairbairn	22	**$10k**	$5k	$15k	**$20k**	100%

The modelling indicates that most of the sites would have seen a large increase in electricity costs from entering the contestable market. There are a few sites with Franchise costs comparable to contestable costs. In particular, the Tariff 43 sites modelled are closest to contestable costs due to the large demand charges they experience on this tariff.

SunWater will continue to monitor the relative costs of our bulk water and irrigation sites as part of our ongoing analysis of electricity costs. However, there would need to be a significant and sustained benefit to justify the increased risks inherent with any move to the contestable market. At the moment, the identification of any future benefits is problematic given that the QCA's Franchise tariff review is effectively resetting the benchmark tariffs against which contestable benefits would be assessed. This situation will not be resolved until the QCA produces its final report in May 2012. In the interim, SunWater will progress our analysis of electricity consumption so that we are well prepared to act should any opportunities arise out of the review.

One known contestable market risk identified in the contestable market modelling for this submission is the volume risk due to the large variations in annual electricity consumption for SunWater's portfolio of sites. No allowance for volume risk has been factored into the figures shown in Table 6. In practice, retailers are likely to pass this risk back to SunWater through measures such as increased prices, penalties for incorrect load forecasts from SunWater or exposure to pool prices and/or the wholesale contract market for large load variances. Under Franchise tariffs, volume risk is effectively absorbed by the entire group of customers on the Franchise tariffs.

Based on this representative sample of sites, Franchise tariffs have offered consistently lower costs than contestable contracts, as well as offering protection from market risks.

5 What are the Risks to SunWater's electricity costs?

5.1 QCA Franchise Tariff Review

The recently-announced review of these tariffs by the QCA introduces significant uncertainties into SunWater's current Franchise purchasing arrangements. This review could potentially lead to increased electricity costs for SunWater's bulk water and distribution sites. This uncertainty will remain until the review delivers its final report on 31 May 2012 and the changes are implemented in July 2012.

The principal Government objectives in initiating the review are to achieve alignment between the network charges and Franchise tariffs, and to make the resulting Franchise tariffs cost reflective.

5.1.1 Retail and Network Tariff Alignment

Alignment is to be achieved by basing the Franchise tariffs on an N + R framework, where N represents the network charge component of each tariff and R represents the retail costs (primarily the cost of energy).

Alignment between Franchise tariffs and network charges could mean that the option that SunWater currently has to choose between Franchise tariffs may be effectively revoked. This would mean that many of the SunWater sites that are currently on the volume tariffs, such as Tariff 22, could be forced onto demand tariffs, such as Tariff 43. For most affected sites this would result in a steep increase in electricity cost.

Another risk to SunWater's electricity costs is the potential for the Government to force >100MWh/a sites in Regional Queensland into the contestable market, as they have directed for South-East Queensland. While such a move is not in the current scope for the QCA, it is an ongoing risk for SunWater that would significantly increase electricity costs for our bulk water and irrigation sites.

5.1.2 Franchise Tariff Cost Reflectivity

Cost reflectivity could mean that Franchise tariff prices are increased to better reflect the underlying costs of the tariff group. However, the Government has simultaneously directed the QCA that the N cost component of each tariff should be equal to the approved Energex network price for the relevant tariff year. Energex's network tariffs are generally lower than the equivalent Ergon Energy network charges and therefore this change should partially offset any potential tariff increases.

The QCA's review is likely to lead to a "re-balancing" of Franchise tariffs, however it is unclear whether individual tariffs will increase or decrease in price. This means that the benchmark tariffs that previously existed for contestable price comparisons cannot be relied upon to identify sustainable contestable savings into the future and won't be known until after May 2012. In the interim, SunWater will monitor the progress of the tariff review and, where appropriate, make submissions to the QCA on issues directly affecting bulk water and distribution electricity costs.

5.2 Introduction of a Carbon Tax

An additional risk to SunWater's electricity costs is the proposed introduction of a carbon tax by the Commonwealth Government of $23/tonne in July 2012. This is expected to result in an initial increase in electricity prices of approximately 10%[9]. The carbon tax will also increase by 2.5% in real terms in July 2013 and July 2014, placing further pressure on electricity prices. Cost increases will be equally reflected in both the Franchise and contestable markets and therefore are unlikely to impact on SunWater's decision-making with regard to entering the contestable market. However, these are real increases above the real increases already being experienced in electricity prices, are beyond SunWater's control and will need to be included in SunWater's cost base for determining irrigation prices.

[9] "Gillard's carbon blueprint", Marcus Priest and David Crowe, Australian Financial Review, 11 July 2011.

6 Conclusion

Are SunWater's sites currently on the optimum Franchise tariff?

SunWater's bulk water and distribution sites have been shown to be on the optimum Franchise tariffs. This conclusion is based on analysis of a representative sample of bulk water and distribution sites and the knowledge that costs for other sites have been monitored and optimised over many years.

Is it clear that SunWater's sites should remain on Franchise tariffs?

The contestable costs have generally been much greater than Franchise tariff costs for the sites examined to date. There are a few sites that are close to contestable market costs and these will continue to be monitored by SunWater as part of our ongoing analysis of electricity costs.

What risks exist that could change the electricity supply landscape for SunWater?

There is a plausible risk that the QCA tariff review will recommend changes to the Franchise tariff schedule that will increase SunWater's bulk water and distribution electricity costs. In particular, alignment with the underlying network tariffs and improvements in cost reflectivity are likely to increase SunWater's electricity costs. SunWater will contribute to the tariff review, where appropriate, by making submissions to the QCA; however the risks presented by the Review are largely beyond SunWater's control.

The imminent introduction of a carbon tax by the Commonwealth Government is expected to result in an increase in electricity prices of approximately 10%. This increase will be equally reflected in both the Franchise and contestable markets and therefore is unlikely to impact on SunWater's decision-making with regard to entering the contestable market. However, these are real increases above the real increases already being experienced in electricity prices, are beyond SunWater's control and will need to be included in SunWater's cost base for determining irrigation prices.

Attachment 1 - Franchise tariffs adopted for each pump station

System	Segment	Pump stations	Current Tariff
Barker Barambah Bulk Water	Upper Redgate	Upper Redgate	65
Bowen Broken	Bulk water	Gattonvale Offstream Storage	22
Bundaberg Distribution	Gin Gin/Bingera	Monduran	22
		Tirroan	22
		Bucca	22
		Bullyard	22
		McIlwraith	22
	Abbotsford	Abbotsford	22
	Gooburrum	Gooburrum	22
	Woongarra	Woongarra	22
		Walker Street	22
	Isis	Isis	22
		North Gregory	22
		Quart Pot Ck	22
		Dinner Hill	22
Burdekin Haughton Distribution	All Distribution System	Clare A	43
		Clare B	43
		Millaroo A	43
		Millaroo B	22
		Millaroo Relift	62

System	Segment	Pump stations	Current Tariff
		Dalbeg A	43
		Dalbeg B	22
		Dalbeg Relift	65
		Haughton 1, 2/3, 4/5 & Temp	43
		Elliott ½ and 3/4	22
		Barratta MC B8 Relift	62
		Healeys Lagoon	22
		Healeys Lagoon - Reed Beds	20
Dawson Valley	Bulk Water	Moura Offstream storage	22
Dawson Valley Distribution	All Distribution System	Theodore	22
		Fork Farmers	65
		Gibber Gunyah	22
Eton Bulk Water	Bulk Supply	Mirani No. 1	22
		Mirani No. 2	22
		Mirani No. 3	22
Eton Distribution	All Distribution System	Abingdon	22
		Mt Alice	22
		Victoria Plains	22
		Oakenden	22
		Brightley No.1	22
		Brightley No.2	22

System	Segment	Pump stations	Current Tariff
Lower Mary Distribution	All Distribution System	Owanyilla	22
		Main Roads	22
		Walker Point	22
		Copenhagen Bend	22
Mareeba Dimbulah Distribution	Relift Segments	WB10 PSTN	22
		Paddys Green A	22
		Paddys Green B	22
		Price Creek A	22
		Price Creek B	22
Nogoa Mackenzie Distribution	All Distribution System	Selma	22
		S3A	22
		S1B	22
		S2A	22
		LN3 Drain	22
St George Distribution	All Distribution System	St George	22
	Additional Pumping	Buckinbah	20
Upper Condamine Bulk Water	North Branch only	Yarramalong	22

Attachment 2 - Electricity tariffs (2010/11)

Extracts from Queensland Government Gazette No Proof 41 NQC1-9#

Retail Electricity Prices For Non-Market Customers

Tariff Schedule (Only Relevant Tariffs Shown)

(28 May 2010)

***Tariff 20* – General Supply**

This tariff shall not apply in conjunction with Tariff 21, 22, 62 or 63 at the same installation.

All Consumption **21.75 c/kWh**

plus a Service Fee per metering point per month of **$13.54**

***Tariff 22* – General Supply – Time-of-Use**

This tariff shall not apply in conjunction with Tariff 20, 21, 62 or 63 at the same installation.

For electricity consumed between the hours of 7.00 am and 9.00 pm, Monday to Friday inclusive -

All Consumption **26.43 c/kWh**

For electricity consumed at other times -

All Consumption - **9.31 c/kWh**

plus a Service Fee per metering point per month of - **$29.82**

***Tariff 43* – General Supply Demand – Time-of-Use**

Demand Charge –

$13.87 /kW chargeable demand

Energy Charge –

For electricity consumed between the hours of 7.00 am and 11.00 pm Monday to Friday inclusive - **13.71 c/kWh**

For electricity consumed at all other times - **5.48 c/kWh**

plus a Service Fee per metering point per month of - **$45.64**

The chargeable demand in any month shall be -

(a) the maximum demand recorded in that month; or

(b) 60 percent of the highest maximum demand recorded in any of the preceding eleven months; or

(c) 400 kilowatts, whichever is the highest figure. 'Demand' shall mean the average demand in kilowatts over a period of 30 minutes, as measured on the distribution entity's meters. Customers taking supply under this tariff will not be supplied under any other tariff at the same premises.

***Tariff 65* – Irrigation – Time-of-Use**

For electricity consumed in a fixed 12 hour daily pricing period (as agreed between the retail entity and the customer from the range 7.00 am to 7.00 pm; 7.30 am to 7.30 pm; or 8.00 am to 8.00 pm) Monday to Sunday inclusive –

All Consumption -	**22.16 c/kWh**
For electricity consumed at other times -	
All Consumption -	**12.20 c/kWh**
plus a Service Fee per metering point per month of -	**$14.26**

No alteration to the selected daily pricing period shall be permitted until a period of twelve months has elapsed from the previous selection.

Attachment 3 - Letter from Systems Clear