Irrigation Prices for SunWater Schemes: 2011-16

Lower Burdekin Water Submission to the Queensland Competition Authority

December 2011

Lower Burdekin Water

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Executive Summary

Lower Burdekin Water (LBW) is a joint venture between the North Burdekin Water Board and the South Burdekin Water Board. We are a major bulk water customer in the Burdekin Haughton Water Supply Scheme (BHWSS). LBW has a medium security water allocation of 255,000 ML and we service 625 irrigators.

This Submission outlines the impacts of the findings and prices outlined in the QCA's Draft Report on LBW and our position on relevant issues.

LBW findings and issues

LBW strongly reinforces the findings of the QCA to retain the current arrangements with respect to the pre-dam water (sometimes referred to as the free allocation). The QCA's findings reflect the legacy from several deliberate, considered and consistent Government policy and regulatory decisions since the establishment of the BHWSS. See Section 2 of this submission for a discussion of this issue.

LBW have analysed the key elements of the proposed tariff applicable to LBW. The outcomes of our research are that the QCA-proposed tariff structure:

- Will result in little or no incentive to implement water use efficiency in the Lower Burdekin.
- Does not recognise the fact that LBW has significant groundwater resource responsibilities under the OIC and that the proposed tariff structure results in perverse incentives for achieving those outcomes (i.e. it is inconsistent with economically efficient groundwater management).
- Is significantly above the QCA's own calculations of actual lower bound costs and will result in further real increases in water costs to LBW's members (up approximately $80,000 or 12% per annum). This is effectively inconsistent with the Ministers' referral notice.
- Does not recognise the fact that LBW has historically had a specific tariff structure (implemented through the sales contract conditions).

These issues are outlined in depth in Section 3 of this submission.

In addition, the QCA has not assessed the issue of existing carry-over arrangements in the Burdekin. Furthermore, the QCA should note that LBW and SunWater are currently negotiating the transfer of some administrative arrangements relating to 56 riparian irrigators (SunWater customers) from SunWater to LBW. To ensure administrative simplicity, it is our intention to undertake these tasks on behalf of SunWater under a separate commercial agreement. These issues are outlined in Section 4 of this submission.

Proposed solution

Given the potential adverse outcomes that would result from the QCA-proposed tariff, LBW proposes an alternative tariff structure specific to our sales contracts that we believe is more consistent with the requirements of the Ministers' referral notice.

LBW request that the QCA consider a more efficient LBW-specific tariff that simultaneously better reflects the circumstances of LBW and maintains SunWater's revenue stream in real terms in the long-term.

We have modelled a tariff structure that we believe meets these objectives. Specifically, for 2012-13 the tariff would be $7.50 (Part A) and $2.89 (Part B) for a total tariff of $10.39 ML. This compares to the QCA-proposed tariff $9.92 (Part A) and $0.47 (Part B) for a total tariff of $10.39.

See Section 5 of this submission for an overview and analysis of LBW's proposed tariff.

1. Introduction

Lower Burdekin Water (LBW) is a joint venture between the North Burdekin Water Board and the South Burdekin Water Board (the Water Boards). LBW service 625 irrigators (predominantly sugar producers) and have a medium security water allocation of 255,000 ML.

Unlike many other irrigation service providers, LBW has broader responsibilities than just water supply service delivery. LBW is also responsible for natural resource management, in terms of replenishment of the groundwater aquifer that lies under the Water Boards' operational area. This requires the management of the aquifer to simultaneously mitigate the risk of irrigation salinity, avoid seawater intrusion, and to provide effective and efficient water supply services to our members. LBW have been successfully delivering those multiple outcomes for approximately 50 years.

We operate on a cost recovery commercial basis where any operating surplus is reinvested into service improvement. Our costs are typically around $5 million per annum and SunWater charges are typically around 10-15% of total operating costs.

This submission

LBW has prepared this submission to the Queensland Competition Authority (QCA) in relation to the Review of Irrigation Prices to apply to SunWater Supply Schemes for 2011-2016 – specifically in response to the QCA Draft Report.

This submission outlines the impacts of the findings and prices outlined in the QCA's Draft Report on LBW and our position on relevant issues.

The approach in developing this submission has been to review of the QCA Draft Report, relevant consultants' reports, and submissions from other parties (including SunWater). In addition, we have developed and used a financial model of LBW that enables us to assess the potential impacts of regulatory decisions on LBW's finances.

LBW has developed a number of positions on key issues highlighted by our analysis. These are highlighted in shaded boxes throughout this submission.

2. LBW supports QCA's findings on pre-dam water

LBW currently holds a pre-dam allocation of 185,000 ML from the Burdekin Falls Dam that does not accrue charges – sometimes referred to as a 'free water' allocation.

These allocations are a reflection of the fact that the water boards both preceded the establishment of the Burdekin Falls Dam. They also reflect the broad scope of objectives of the Boards that go significantly beyond simply the provision of water supply services.

Previous analysis outlined in relevant position papers and other reports relevant to this current QCA review indicates:

- The current treatment of the pre-dam allocations reflect a legacy from several deliberate, considered and consistent Government policy and regulatory decisions since the establishment of the BHWSS.
- SunWater have essentially accepted that the pre-dam allocation should be excluded from pricing arrangements.
- While this issue has been raised by third parties in their submissions, those submissions have not reflected the outcomes of the significant analysis undertaken by the QCA, SunWater, consultants working for the QCA, or LBW.
- Furthermore, as stated in our April submission… *"The loss of the free water allocation would increase LBW's costs by approximately $2.96 million per annum and the costs could not be avoided by LBW and would be passed onto our customers. Any loss of the free water allocation would trigger the need for LBW to raise our prices to irrigators by at least 44% from current budgeted prices for the next financial year."*

The recommendation in the Draft QCA report was:

- *"The Authority recommends that SunWater should continue to meet, and bear the costs of, legacy arrangements.*
- *The Authority recommends that pre-existing rights to free water should be maintained where they continue as part of an existing agreement or as part of a current legislative or Government policy. Those customers benefitting from the supplemented supply should pay for the costs of that supply. Neither SunWater nor customers with pre-existing right to free water should bear these costs."*

LBW position statement

- LBW strongly reinforces the findings of the QCA to retain the current arrangements with respect to the pre-dam water.

3. QCA-proposed tariff

As outlined in LBW's previous submission (April 2011), LBW has a significant concern regarding the changes to the current tariff regime. This section analyses the impacts of the QCA-proposed tariff on LBW.

Comparison of tariff structures

It is instructive to examine the key differences between the current tariff structure and the proposed tariff structure.

Current tariff structures

While LBW is broadly considered a Burdekin River irrigator, as advised in our submission of April 2011, our existing sales agreements with SunWater differ from the current Burdekin River tariff structure. The structures of our sales contracts are:

- For the NBWB on 2010-11, a pre-dam (uncharged) allocation of 111,000 ML reflecting the existence of the Board prior to the BHWSS, and a billable allocation of 45,000 ML, consisting of progressive water charges for use above 111,000 ML, specifically:
  - 9,000 ML of take or pay water ($15.99/ML single part tariff in advance)
  - 6,000 ML of sales water ($15.99 single part tariff paid in arrears and only charged if use exceeds 80,000 ML)
  - 30,000 of purchased allocation ($2.32 Part A and $13.67 Part B, both paid in arrears effectively making it a single part tariff)
  - an ability to carry-over unused water between water years for a period up to six months. However, carry-over water must be used (and paid for) before the free water allocation for the next water year can be accessed.
- For the SBWB in 2010-11, a pre-dam (uncharged) allocation of 74,000 ML reflecting the existence of the Board prior to the BHWSS, and a billable allocation of 25,000 ML, consisting of progressive water charges for use above 74,000 ML, specifically:
  - 6,000 ML of take or pay water ($15.99/ML single part tariff in advance)
  - 4,000 ML of sales water ($15.99 single part tariff paid in arrears and only charged if use exceeds 80,000 ML);
  - 15,000 of purchased allocation ($2.32 Part A and $13.67 Part B, both paid in arrears effectively making it a single part tariff)
  - an ability to carry-over unused water between water years for a period up to six months. However, carry-over water must be used (and paid for) before the free water allocation for the next water year can be accessed.

In effect the existing sales agreements create a specific tariff for LBW reflecting the fact that we are essentially a major bulk water customer in our own right.

LBW position statement

- The QCA should recognise that LBW's tariff structure is effectively customised and specific to LBW as a bulk-water customer.

- LBW should not be considered a typical Burdekin River customer.

QCA-proposed tariff structure

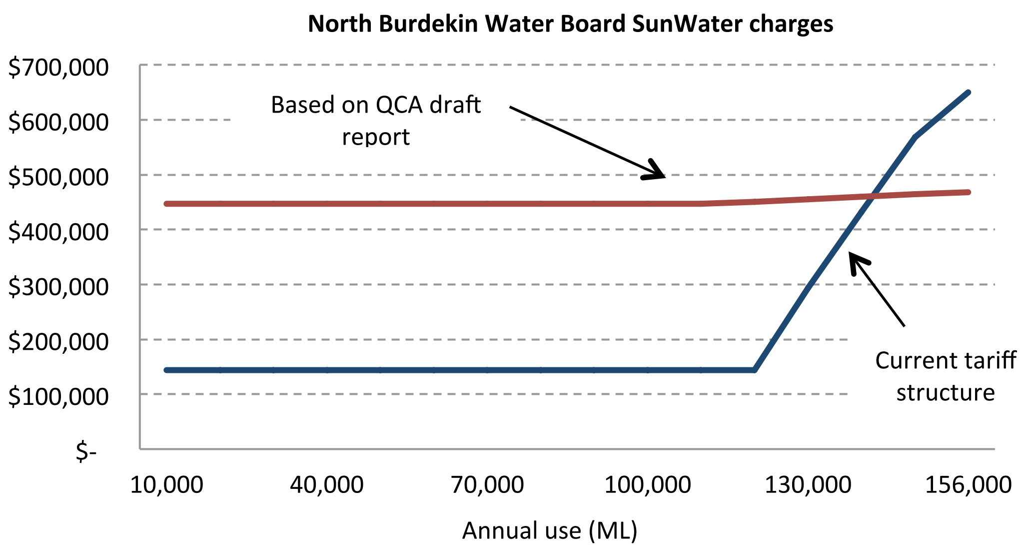
As expected, the QCA have separated out the bulk water and distribution charges. The new Burdekin River tariff is $10.30/ML (i.e. $9.92 (part A) and $0.47 (part B)). While the total tariff has dropped, the tariff structure has changed radically with 95.5% of the charges being fixed (up from about 15% previously).

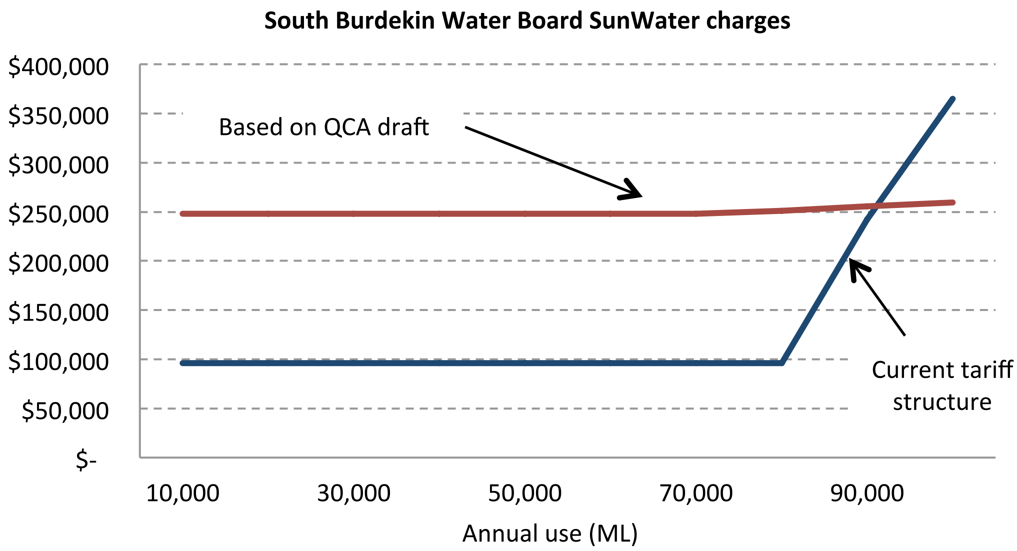
It should also be acknowledge that while the per ML tariff for river irrigators will actually fall reflecting the unbundling of the Burdekin River tariff – currently $16.56 ($14.16 (part A) and $2.40 (part B)) to the new Burdekin River tariff of $10.39 ($9.92 Part A) and $0.47 (Part B)), the new tariff is still significantly above the cost reflective tariff of $4.22 ($3.75 (part A) plus ($0.47 (Part B)). This is discussed further below.

Comparisons of tariff structures – water cost curves

The tariff structure proposed by the QCA results in a radically different water service cost curve for each of the Boards. The Figure 1 shows the current and QCA proposed tariff structures across the potential demand for the NBWB and the SBWB respectively.

Figure 1: NBWB & SBWB SunWater charges





Source: LBW analysis

The key points to note include:

- Despite the fact that LBW has an entitlement to pre-dam water at no cost, the existing sales contracts with SunWater result on LBW paying at least around $240,000 per annum even when no billable water is actually used.
- LBW's current water costs rise sharply in years where demand is high. This is also when rainfall has been lower. The current tariff structure encourages water use efficiency.
- The proposed new tariffs place significantly higher costs on LBW at lower demand volumes and lower costs at high levels of demand. The proposed tariffs do not provide incentives to implement water use efficiency.

LBW position statement

- The QCA should note that their proposed tariff structure is radically different to the current tariffs outlines in the sales contracts between LBW and SunWater.
- The QCA-proposed tariff provides no incentive for water use efficiency.

Impacts of new tariff structure

The following sections outline the impacts of the changes in tariffs proposed by the QCA.

Compatibility with best practice groundwater management

The responsibilities if LBW are significantly greater than simply providing water services to their 625 members. Under the Orders in Council, LBW has a responsibility of maintaining the health of the aquifer for the benefit of the community. This also includes maintaining the level of the aquifer to simultaneously reduce the risk of irrigation salinity, reduce the risk of seawater intrusion, and maintaining the health groundwater dependent ecosystems. These responsibilities are financed from our member charges.

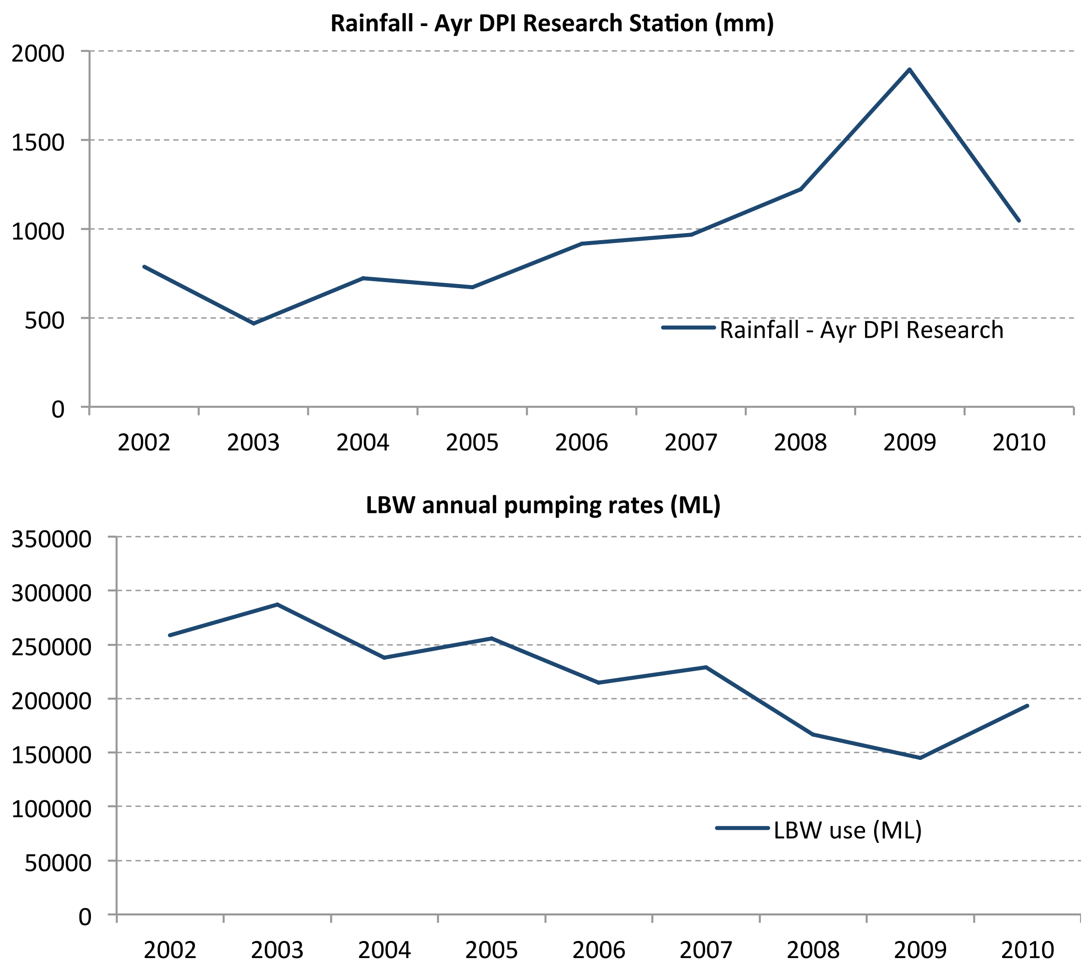
While the current system provides less revenue certainty to SunWater, it is economically efficient as it provides the appropriate incentives to reduce pumping by LBW in wetter years. Rainfall and pumping rates over the past 10 years are shown in the Figure 2. The key point to note is that LBW has been reducing pumping in wetter years to best meet their multiple commercial *and* natural resource management objectives. This has been reinforced by the current tariff structure.

The proposed tariff structure is inconsistent with promoting effective and economically efficient groundwater management. It may in fact provide an economic incentive to increase pumping in wetter years to enhance future supply security for irrigators, which may actually be detrimental to broader natural resource management objectives.

LBW position statement

- The QCA should note that the QCA-proposed proposed tariff structure is inconsistent with promoting effective and economically efficient groundwater management.

Figure 2: Rainfall and LBW pumping rates



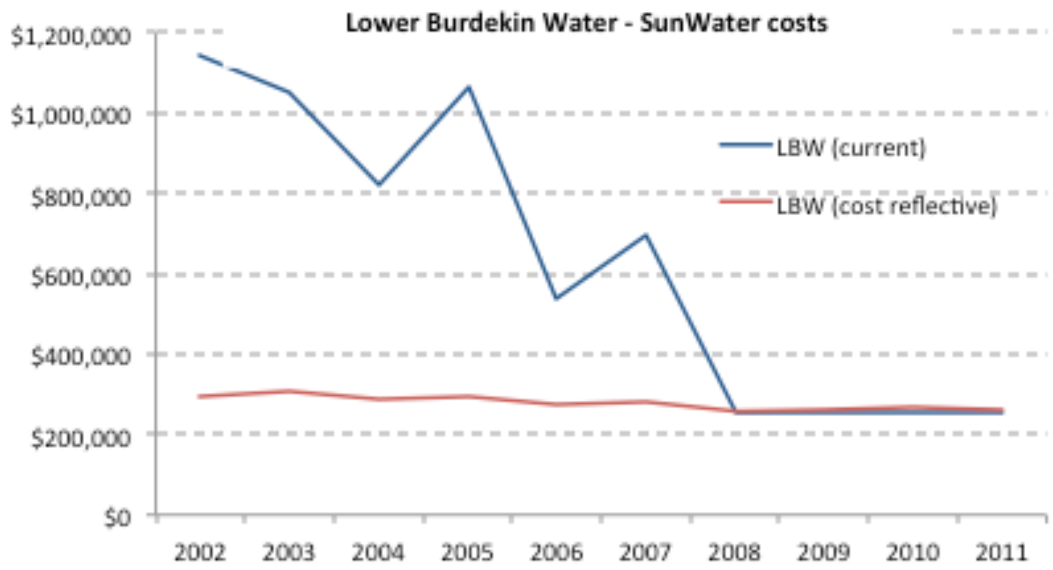
Source: Bureau of Meteorology & LBW

Current costs already significantly above actual lower bound costs

The QCA's Draft Report outlines the actual cost reflective lower bound costs relating to the services delivered to LBW. In effect, LBW has been paying significantly above lower bound costs for several years. This is shown in Figure 3 below.

Our analysis found that on average over the past 10 years, annual SunWater charges have been approximately $350,000 (2.3 times) *above* actual lower bound costs.

Figure 3: Current charges vs. actual lower bound costs



Source: LBW analysis

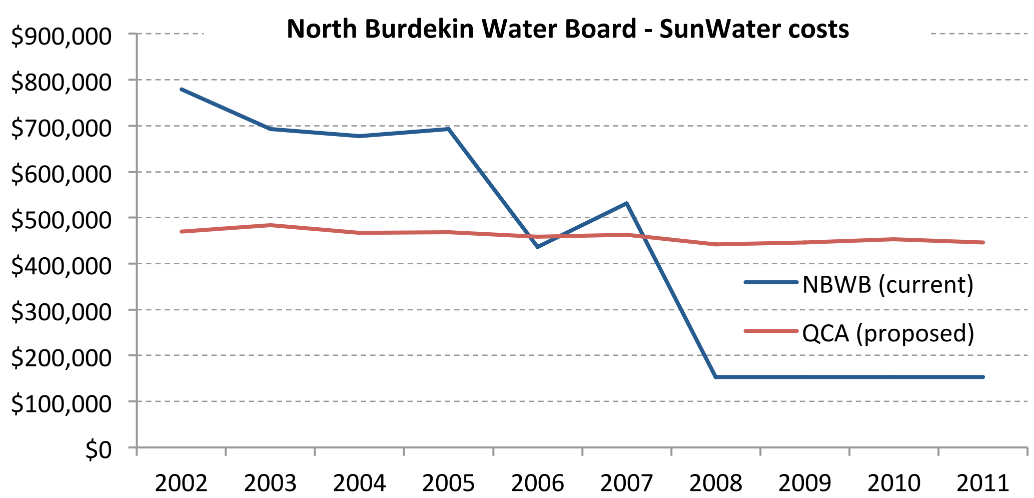
LBW position statement

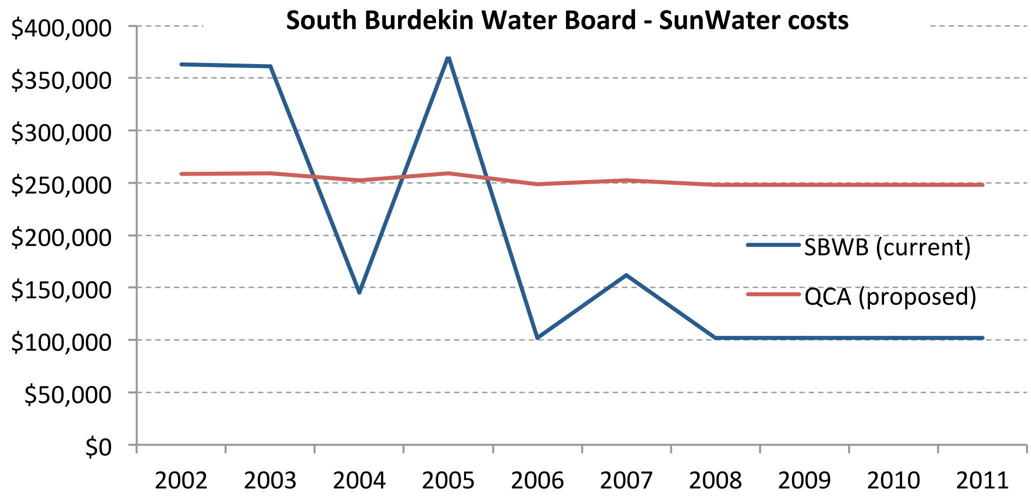
- The QCA should note that the current tariff structure arrangements imposed on LBW have historically resulted in SunWater costs approximately 2.3 times above actual lower bound costs.

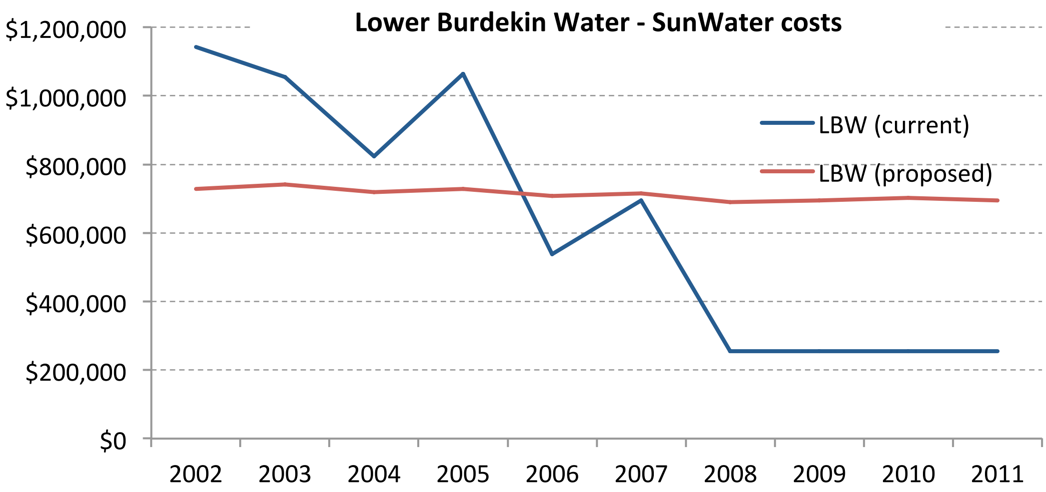
Impact on LBW finances

LBW has developed a cashflow model of our operations that allows the assessment of alternative tariff structures on LBW's finances. We have used this model to assess the potential impacts of the change in tariff proposed by the QCA on the finances of LBW. We have done this by applying the current tariff structure (based on SunWater sales agreements) and the QCA-proposed tariff to the annual water usage for the past 10 years for the NBWB, the SBWB and LBW respectively (Figure 4).

Figure 4: Current vs. QCA-proposed tariffs – impacts on LBW SunWater costs







Source: LBW analysis

The key points to note from the analysis are:

- **Demand risk assignment.** The demand risk is almost entirely shifted to the LBW. As can be seen from Figure 4, the charges under the QCA-proposed tariff are virtually unchanged over time, whereas charges fluctuate significantly under current tariff arrangements reflecting usage and best management practice groundwater management.
- **Significantly higher SunWater costs to LBW.** Despite the fact the actual tariff level has fallen from the current level of $17.00/ML (Part A and Part B combined) to $10.39 (part A and Part B combined), actual SunWater costs borne by LBW will be significantly higher. Based on the water use for the past 10 years, specifically:
  - for NBWB, average annual SunWater charges will increase from around $440,000 to $460,000 (up 4%)
  - for SBWB, average annual SunWater charges will increase from around $190,000 to $250,000 (up 32%)
  - for LBW as a whole, average annual SunWater charges will increase from around $630,000 to $710,000, an real increase in SunWater costs of approximately $80,000, or 12%.

- **SunWater payments above efficient lower bound costs.** LBW estimate that our SunWater costs under the QCA-proposed tariff will be on average $430,000 above efficient lower bound costs. This increases the ratio of our SunWater costs to efficient lower bound costs from 2.3 (currant arrangements) to 2.5 (QCA-proposed tariff).
- **Outcomes inconsistent with ministerial referral notice.** Section 1.1 a) iii) of the amended referral notice states that where charges are already above lower bound (as is the case with LBW), that prices are to be maintained in real terms. However, the QCA proposed tariff structure is likely to result in an effective increase in real SunWater prices of 12%. This is clearly inconsistent with the intent of the Ministers' referral notice.
- **Costs passed onto members.** Because of LBW's structure, we will have no choice but to pass on the additional costs to our members.

LBW position statement

- The QCA should note that their proposed tariff structure would effectively result in a real increase in LBW's SunWater costs of approximately $80,000 (12%) per annum. This is clearly inconsistent with the intent of the Ministers' referral notice.

4. Other key issues

There are a number of other issues that LBW believes the QCA should be aware of in finalising the SunWater pricing arrangements. These are briefly outlined below.

Carry-overs currently enable natural resource management

Under LBW's current sales agreements, LBW has an ability to carry-over unused water between water years for a period up to six months. The ability to utilise the carry-over facility is vital given LBW's broader groundwater management responsibilities. No charge is incurred for this facility – partially reflecting the resource management objectives of the carry-overs and the fact that there is significant underutilisation of Burdekin Falls Dam (i.e. the opportunity cost of carry-overs is negligible).

However, while the QCA's Draft report has covered this issue for other SunWater irrigation schemes, it has not been explicitly addressed in the Burdekin report.

LBW seek clarification from the QCA that carry-over arrangements will continue and will not incur any form of storage rental charges.

LBW position statement

- LBW seek clarification from the QCA that carry-over arrangements will continue and will not incur any form of storage rental charges.

LBW undertaking SunWater administrative responsibilities

There are currently 56 riparian irrigators within the area managed by LBW. Those irrigators have their own entitlements and are actually SunWater customers (paying the current river tariff). However, those irrigators are a reasonable distance from SunWater's other customers and that has created operational inefficiencies for SunWater.

SunWater have proposed to LBW that we assume responsibility for much of the administrative management of those irrigators (i.e. monthly meter reading, billing, and ultimately replacement of meters). If LBW were to assume those responsibilities, it would seek to do so on a cost recovery basis.

The estimated financial impost on LBW to assume those current SunWater responsibilities is shown in the Table 1.

Table 1: Estimated costs of administrative tasks for SunWater

Cost	*Per meter*	*Total*
Meter officer	$35	$1,987
Admin	$24	$1,347
Fuel	$4	$246
Stationery & post	$5	$284
Debt recovery	$19	$1,040
Maintenance	$352	$19,721
Renewals annuity (based on a remaining 10 year economic life for meters)	$1,050	$58,800
Total estimated	$1,490	$83,424

Source: LBW estimates.

If LBW were to assume those responsibilities for SunWater, SunWater's lower bound costs would reduce while LBW's would increase by approximately $83,000 per annum. However, it is administratively inefficient to seek to adjust tariffs to reflect the proposed transfer of duties. Rather LBW will continue to negotiate with SunWater to undertake these administrative duties under a separate commercial agreement.

LBW position statement

- The QCA should note that LBW and SunWater are currently negotiating the transfer of some administrative arrangements relating to 56 riparian irrigators (SunWater customers) from SunWater to LBW. To ensure administrative simplicity, it is our intention to undertake these tasks on behalf of SunWater under a separate commercial agreement.

5. Proposed alternative tariff

The sections above have identified that the QCA-proposed tariff structure:

- Will result in little or no incentive to implement water use efficiency.
- Does not recognise the fact that LBW has significant groundwater resource responsibilities under the OIC and the proposed tariff structure results in perverse incentives for achieving those outcomes (i.e. it is inconsistent with economically efficient groundwater management).
- Is significantly above the QCA's own calculations of actual lower bound costs and will actually result in further real increases in water costs to LBW's members. This is inconsistent with the Ministers' referral notice.
- Does not recognise the fact that LBW has historically had a specific tariff structure (implemented through the sales contract conditions).

Given these potential problems, LBW proposes an alternative tariff specific to our sales contracts that we believe is more consistent with the requirements of the Ministers' referral notice. Key elements of the QCA-proposed tariff and the LBW-proposed tariff are shown in Table 2.

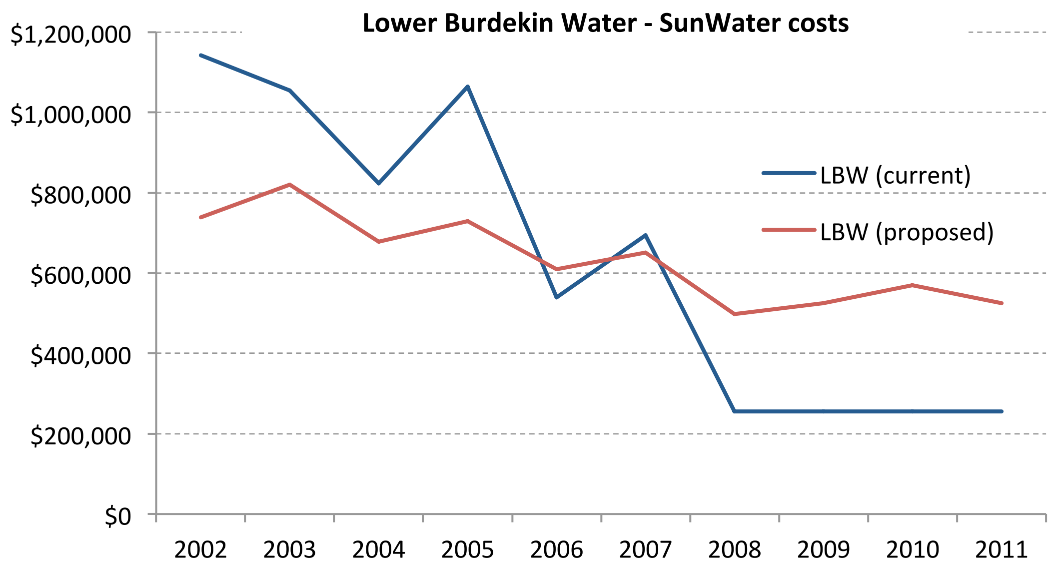
Table 2: Key elements of QCA-proposed tariff and LBW-proposed tariff

Tariff element	*QCA-proposed*	*LBW-proposed*
Pre-dam water allocation charges	No Charge	No Charge
Carry over to enable proactive management of aquifer recharge & management	Not addressed	Carry over for up to 6 months to underpin maintenance of the condition of the aquifers
Part A	$9.92	$7.50
Part B	$0.47	$2.89
Total	$10.39	$10.39
Estimated annual average revenue to SunWater (using past 10 years use to derive average usage)	$712,000.	$635,000 – the same estimated cost as under current tariff arrangements (i.e. LBW maintains estimated average SunWater costs in real terms).
Reference to actual lower bound costs	2.5 times QCA estimated actual lower bound	2.3 times QCA estimated actual lower bound
Annual price indexation	Reasonable measure of inflation	Reasonable measure of inflation
Arrangements for LBW undertaking administrative tasks on SunWater's behalf	Not addressed	Separate arrangements based on actual costs – no impact on tariff

Source: LBW.

The figure below shows LBW's estimated annual SunWater charges under our current tariff and LBW's alternative tariff outlined in Table 2.

Figure 5: LBW current tariff vs. LBW proposed alternative tariff



The LBW-proposed tariff structure would better reflect the intentions of the Ministers' referral notice provided to QCA. Specifically, it would result in the following outcomes:

- **Equitable risk assignment.** Reflect a more equitable distribution of demand risks between LBW and SunWater over the longer term (based on 10 years).
- **Revenue neutrality.** Using LBW water use from the past 10 years as a basis for estimating long-term demand, the LBW-proposed tariff would result in the same real revenue to SunWater as under the current sales agreements. In effect, under the current sales agreement regime, or the LBW-proposed tariff, SunWater charges would result in average revenue of approximately $635,000 per annum.
- **More economically efficient.** The tariff would be more compatible and provide more incentives for water use efficiency and best practice groundwater management.

LBW position statement

- The QCA should consider a more efficient LBW-specific tariff that simultaneously better reflects the circumstances of LBW and maintains SunWater's revenue stream in real terms in the long-term.