EICL submission on RAB vs Renewals Annuity (RA)

Eton Irrigation Co-operative Ltd

GM – Austin Evans 11 Flaherty St, ETON QLD 4741

austin.evans@etonirrigation.com.au 0427 277 906

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1 Introduction

1.1 Eton Irrigation Background

The Eton system was built in the 1980s as a Queensland State Government system to distribute water from Kinchant Dam, 40 km west of Mackay.

Kinchant Dam, built in 1977, gets most of its stored water from the Pioneer River with only a small percentage coming from natural inflows.

Water from the river is pumped from Mirani Weir into an 8 km diversion channel that discharges into the dam, where it is then distributed to the Eton system.

The Eton system delivers up to 51,900ML of irrigation water to 315 customers covering approximately 15,000 hectares of irrigated land using 35km of open channel, 130km of pipeline and 6 pump stations.

A move toward local management of the Irrigation Scheme had been discussed and considered by customers of the Irrigation Scheme and the Queensland Government for over 20 years. Work commenced in 2012 when Government began detailed investigations into the feasibility of Local Management for Sunwater's irrigation schemes.

In late 2016, the Queensland Government set up Eton Irrigation and appointed the Board to negotiate and investigate the local management proposal with the Queensland Government and ultimately, if accepted by the Board and the Customers, to become the owner and operator of the Irrigation Scheme.

In 2019 a proposal put to the members was accepted by over 85% of the Water Allocation holders by volume.

In March 2020, Eton Irrigation Pty Ltd came into being and took over ownership and operation of the system (DOL holder). Note that the Mirani Pump Station, the diversion channel and Kinchant Dam remains owned and operated by Sunwater (ROL holder).

In December 2020, the company converted to a co-operative. It currently has 5 Directors on the Board (3 irrigator members and 2 independents) and 8 employees.

We constantly strive to improve the operational efficiency of the scheme to provide the customers with their desired level of service at the lowest possible cost. A key responsibility in achieving that is to manage the assets that make up the Eton Irrigation System.

EICL is responsible for around $300 million of assets. $250 million of pipelines make up the largest portion of this. The majority of those pipelines are expected to reach end of life in 2060s – 2080s. Although that is a long time in the future, EICL is aware of it and enacting plans now to meet the funding cost of that and all the other assets as they reach end of life.

We have discussed that at a Board level and shared that information at AGMs and in Annual Reports so that members are aware it. Transparency is important.

EICL has a keen interest in the way that Sunwater manages the Eton Bulk System assets and funds their replacement, as the costs are predominantly borne by EICL irrigators.

Irrigators want the necessary work done. They understand that they have to pay for it. They just want the work done in the most efficient way, no unnecessary work done and it funded in the most efficient way.

To all those ends, EICL makes this submission on the QCA Review of RAB-based irrigation prices 2027–29.

2 Executive Summary

- A RAB is deceptively cheaper in the early years, so any short to medium term comparison is misleading.
- The RAB will also generate greater profits (ie greater contributions from irrigators) for Sunwater because it will always be in debt and the irrigators pay interest (artificial WACC) above Sunwater's borrowing cost (QTC)
- The RAB is likely to be lumpy, may need the QCA to smooth any lumps (We don't have confidence in that) and be less disciplined because the major changes will be hidden in with the normal renewals
- A RAB is mainly used by government owned monopolies – most non-government irrigation infrastructure operators use a Renewal Annuity
- The interstate NGIIOs regret the GOMs going to a RAB because the costs are starting to escalate
- For those reasons EICL does not support a RAB
- The current Annuities process can be improved with better consultation processes (especially around major changes to the long-term forecast) – Transparency + Accountability = Discipline
- The consultation process by Sunwater for this review has been less than ideal
- There is no rush to finalise this review – please take your time

3 EICL Modelling of RAB & RA

The key job of the RAB or the RA is to smooth out the lumps that inevitably exist in an asset replacement profile.

To understand the differences between the RAB and the RA in doing this job in the Eton bulk Water System, EICL has built models of both. This has been done by EICL staff based on their understanding. The models have been calculated using a spreadsheet. That spreadsheet is attached. It is unlocked so that all the formulae used are clearly visible and the calculations can be checked.

If there are errors in the calculations, EICL is happy to correct them and have them ticked off by the QCA or Sunwater. EICL is after understanding and clarity – we are not trying to deceive anyone – any errors are unintentional.

The data from this spreadsheet is used in the subsequent sections of this submission.

3.1 Asset Replacement Profile

A key input to the models is the Asset Replacement Profile of the Eton Bulk Water System. This has been sourced from Sunwater literature and also provided by Sunwater staff.

The profile data is only from 2019 to 2057. Beyond 2057, we have been told that the data is not available. To model both methods over a long enough period (out to 2100), EICL believes that a profile out to 2130 is required. For the period beyond 2057, EICL has averaged the period from 2019 to 2057 (actuals to 2025, then forecasts) and then increased that by inflation (2.65%) from 2058 on.

If that method is considered unsatisfactory, EICL is happy to incorporate forecast data if it is available. EICL can calculate a profile if the Eton Bulk asset database can be provided. A profile based on initial asset cost and expected asset life is a good starting point, particularly for the longer term.

EICL accepts that long term asset replacement profiles are not perfect. However, they do provide an order of magnitude that are going to be in the ballpark and should identify any large spikes.

This modelling exercise is not reliant on the long-term asset replacement profile being perfect. The key point is that both the RAB and the RA are modelled using the same asset replacement profile. Any variations or changes can be incorporated to see the impacts of both systems.

3.2 Modelling the RA

The Renewal Annuity is modelled on the **RA Calc using Annuity Formula** tab in the spreadsheet. It shows the Forecast Capex going forward and the Actual Capex up to now. The Average Capex is the average of the Actual Capex up to 2025 and the Forecast Capex from 2026-2058.

The contribution each year from 2026 onward is calculated using a Net Present Value (NPV function) of the 30 years ahead Forecast Capex (starting with the current year) and including the current year opening balance[1]. This figure is then paid off over 30 years using the PMT function and increased by the CPI (2.65%)[2].

Interest is charged on the opening balance at the WACC rate (6.66%). The Opening Balance, the Forecast Capex, the Contribution and the Interest are all added together to give the Opening Balance for next year.

The years 2019 to 2021 are the same on both curves (Actuals) and then are different from 2022 – 2025 with one using the Actual Capex and one using the Forecast Capex. This results in different Opening Balances for 2026 and subsequently different Annuity Balances from 2026 – 2100. These two curves show the impact of a variation in the spending.

The yearly Contributions of the Actual Costs Annuity are plotted in the graph on the **Contributions** tab.

[1] The interest rate used in the NPV function is the REAL WACC (term from the Sunwater spreadsheet). This rate was adjusted so that there was minimal over collecting. Ie the balance in 2100 was closer to zero.

[2] Actually 2.64978112789214% as used in the Sunwater spreadsheet.

A Renewal Annuity was also modelled on the **RA using CPI increase** tab but using a simple CPI increase on the Contribution amount but otherwise the same. Note that this results in significant over collection and an annuity balance of over $240M in 2100.

3.3 Modelling the RAB

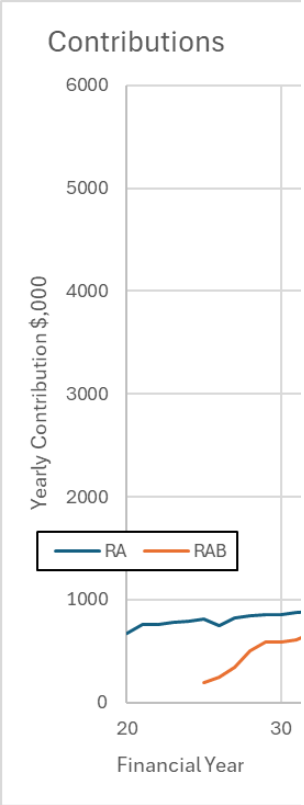
The Regulated Asset Base was modelled on the **RAB** tab in the spreadsheet. It treats each years Capex as a loan, paid off over the life of that year's assets (the opening balance is treated the same over a 50 year term) at the WACC rate (6.66%) – columns K to CH. The payments for each loan are then summed up for each year as more years (assets) are added to the system – column B. Once a loan is paid out, it drops of the summing.

Column C then converts that figure into a $/ML figure for each year based on the total allocation held in Eton (61,000 ML).

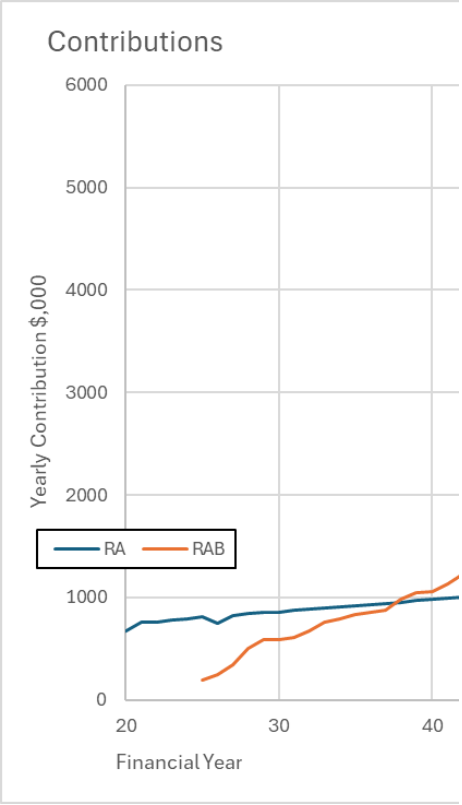
The yearly Contributions from the RAB are plotted in the graph on the **Contributions** tab.

4 Regulated Asset Base (RAB)

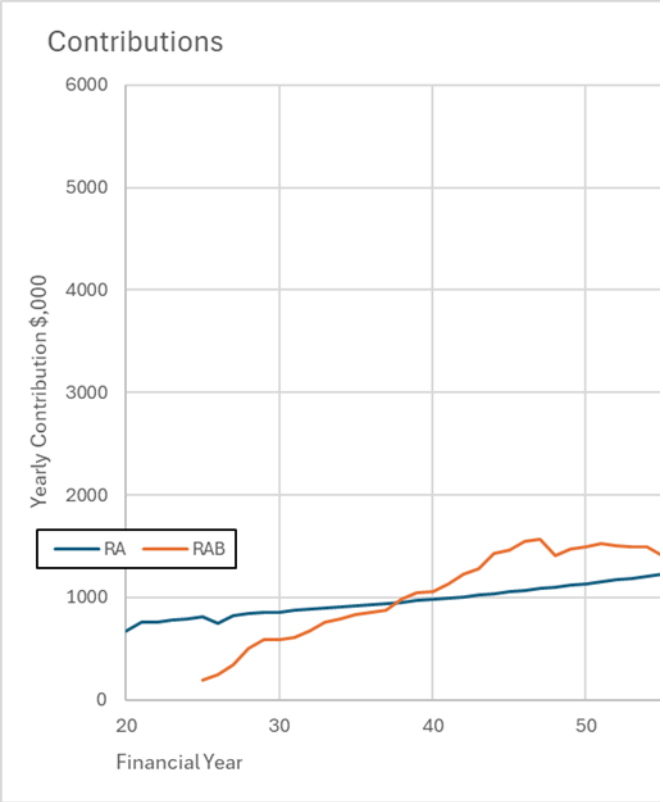
4.1 RAB is deceptively cheaper in the early years



In the first few years of the RAB, it looks to be significantly cheaper. But this is only because a very small portion of the assets are included in the calculations.



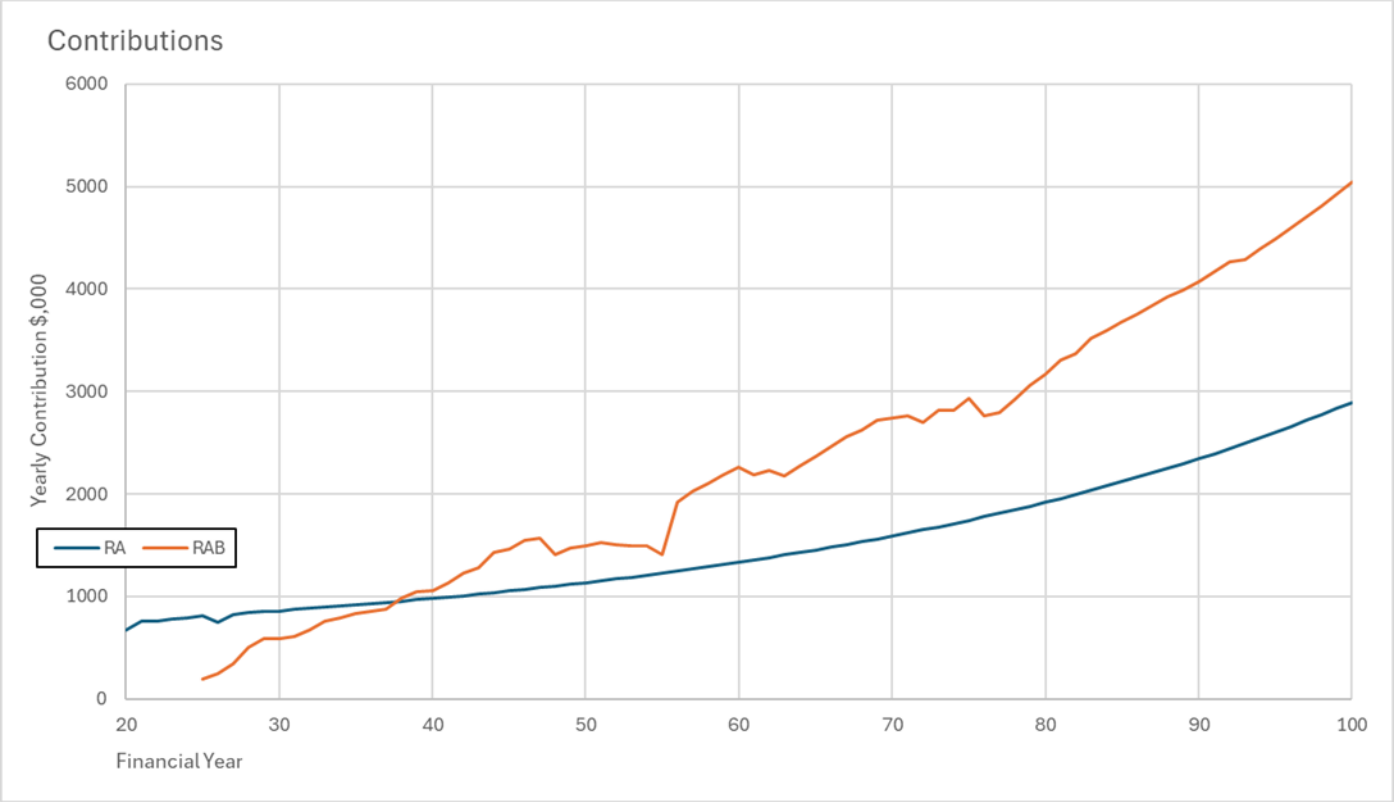
As the years progress and more assets are added into the RAB calculations, the cost of the RAB increases and eventually exceeds the cost of the Renewals Annuity (RA) around 2038.



By around 2055, the RAB has exceeded the RA for nearly 2 decades and the total paid from both methods looks to be similar based on visual inspection.

It may look like the RAB is heading toward equality with the RA, but this is a false dawn.

A large renewal spike in FY56 causes the RAB to jump by 36% in one year and as time progresses, the gap between the two just gets larger and larger.



The RAB is planned to start at zero. Then it builds up slowly as more assets are built/renewed over time. The overall long-term cost is still higher, but any near-term comparisons look cheaper (as acknowledged in Sunwater's report). Only using the near-term comparisons is deceptive.

4.2 RAB = greater contributions from irrigators

The RAB will generate greater profits (ie greater contributions from irrigators) for Sunwater because it will always be in debt and irrigators will pay interest (artificial WACC) above Sunwater's actual borrowing cost (QTC).

This is different to a RA which may be in debt (particularly if poorly managed) but can also be in the positive some of the time and earn returns during those periods (particularly if well managed). Therefore, an RA would result in less contributions over the long term.

Based on our modelling, the total cost for Eton irrigators from 2025 -2100 is $117.392M for the RA and $177.589 for the RAB. That is:

- over $60M extra paid by the farmers over 75 years
- An extra $802K every year for 75 years
- An extra $12.94 per ML every year for 75 years

to achieve exactly the same result.

Sunwater has argued that if the opportunity cost of money is included in the calculations, the RA and the RAB cost exactly the same. That may be true in a theoretical sense by an economics professor following strict economics approaches. However, there are some problems with that:

- Farmers are not economic professors and do not follow strict economic approaches
- If farmers were economics professors following strict economics approaches, most analyses would show that keeping their money invested in farming would not be the best use of their money and they would be better off selling their farms and investing the money elsewhere.
- The timeframes involved in getting an equal result, cross generations. That is, a farmer benefitting from the lower cost in the next decades would be retired and have passed on the farm to their children or sold it before the higher costs would kick in.
- That analysis implies that the current farmer would put the extra money aside (earning a good return) to be used once the costs rise – that isn't going to happen.

The Renewal Annuity is much more aligned with the philosophy of farmers:

- Conservative in their borrowing
- Inclined to put money away and save up for big purchases in the future
- Move as many costs as possible to spread out, even, consistent spending

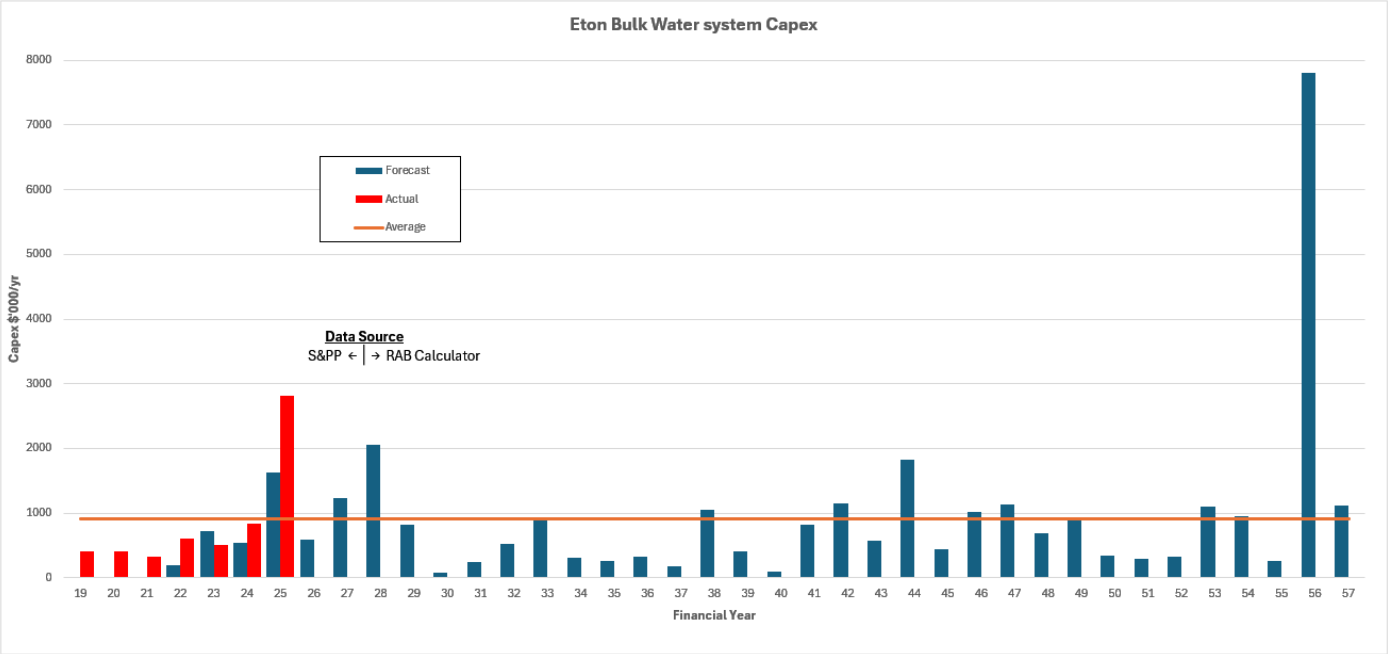
4.3 RAB is more likely to be lumpy

The Synergies report prepared for Sunwater acknowledges in many places that the RAB is more likely to be lumpy than the RA primarily because of its design. This also comes out in the EICL modelling as clearly shown in the Contributions graph at the previous page.

It can be smoothed by the regulator, but that puts extra responsibility on the QCA and EICL is not confident based on past history.

4.4 RAB would lead to even less discipline

Any large, unplanned works or large adjustments (abnormals) would be likely to be less transparent under a RAB because they would be "hidden" amongst the normal long-term forecasts for the next five-year period. In a RA, abnormals should be clearly evident, as they are all the things that were not in the earlier long-term plan. They should be easy to identify as shown in the chart below.



Accountability is more dependent on the approval process, rather than whether it is a RAB or an RA. Suggestions for improvements to the accountability are detailed in section 5.3 & 5.4 below.

Based on the lower transparency EICL believes that a RAB will lead to less discipline than a RA. This could lead to unnecessary/earlier spending, that then costs the irrigators more.

4.5 Non-government IIOs don't use RABs

Overwhelmingly, non-government irrigation infrastructure operators (NG IIOs) in Australia don't use RABs. They predominantly use annuities. Aiming to be like all the other government owned monopolies is not something that Sunwater should aspire to or be a reason to change.

4.6 Interstate NG IIOs are regretting that their GOM IIOs have gone to a RAB

Interstate NG IIOs are regretting that their GOM IIOs have gone to a RAB, because it is starting to bite them financially.

4.7 EICL does not support a RAB

Due to the problems with a RAB that have been identified above, EICL does not support Sunwater changing from a Renewals Annuity to a RAB.

5 Improving the current Renewals Annuity process

5.1 Who pays the bills

The current Annuities process can be improved with better consultation processes (especially around major changes to the long-term forecast) with those that pay the bills (ie Irrigators) – Transparency + Accountability = Discipline

5.2 Abnormals not Renewals

Most of the Renewals Annuity Balances in the Sunwater schemes are negative. From our assessment of Eton Bulk Water (from the limited data that SunWater has shared), this is primarily due to large abnormal extra works that were not in the original long-term forecast (ie unplanned works). These items are typically done within five years of them first being identified on the basis of them being urgent due to some change in standards or great concerns.

For Eton Bulk Water these have included:

- Dam Safety Upgrades – these were not planned for and came about due to changes in the Dam Safety Standards imposed by the government. Paid for by the Government
- Tower access upgrades. These came in at a higher cost than originally anticipated.
- Arc Flash Upgrades - these were not planned for and came about due to changes in the Switchboard Safety Standards imposed by the government. The extra cost also included bringing forward the replacement of the switchboards so that similar work was not done twice in a few years – maybe a sensible decision, but still a major change

These items are not normal renewals. They are abnormals. A renewals annuity process is not designed to manage the funding for those sorts of items. They should be managed by separate processes, depending on the reason for their urgency:

- If it is imposed by the government for the benefit of the whole community (eg downstream flooding risk or worker safety etc) and the government considers it incredibly urgent:
    - Then there should be government grants supplied (on behalf of the whole community) to smooth out the dramatic change caused by them.
- If this item can be shown to not be for the benefit of the whole community (I expect that to be difficult to prove and rare) but is somehow still urgent (ie a failure of planning):
    - Then maybe a RAB type process could be used. This RAB should be for just those items and the interest charged should be at the QTC rate not an artificial WACC (to deal with the urgent nature of the item and smooth its cost). These items also need to be communicated to those that are ultimately paying the bill (irrigators) and have the irrigators approval in some form.

5.3 Better Discipline

The previous section highlights less discipline in the current processes than desired by irrigators. The irrigators are the people that ultimately pay the bill. However, they have limited visibility of these large, unplanned works & the reasons for them (process lacking transparency) and also do not have a significant role in their approval (process lacking accountability).

Combined, this leads to less discipline (Transparency + Accountability = Discipline). If an asset manager (eg Sunwater) does not have to

- explain what they are doing (to the people paying the bills),
- why they are doing it (to the people paying the bills) and
- then get approval (from the people paying the bills),

they can be lot less disciplined.

However, in EICL the GM and staff have to

- explain what they are doing (to the Board - as reps of the people paying the bills),
- why they are doing it (to the Board - as reps of the people paying the bills) and
- then get approval (from the Board - as reps of the people paying the bills).

This brings extra discipline to the way that the GM & staff have to operate. Certain approval amounts are delegated to the GM & the staff – beyond that the Board (as reps of the people paying the bills) have to approve the spending.

The spending on the long-term renewals (as forecasted) is approved by the Board as part of the long-term asset plan. The spending on the other large items that occur regularly is approved by the Board as part of the budget. The spending on small amounts is approved by the Board though delegation to the GM & staff and in the budget.

The only items left are large, unplanned items. Whether they are unforeseen budget items or unforeseen asset management items, they both have to be specifically approved by the Board. The Board would require the GM & staff to explain what and why before the Board approves it. The Board may even require the explanations to be presented to the irrigators, if the unplanned item is significant enough.

Transparency + Accountability = Discipline

5.4 EICL recommends changes to the Annuity

EICL supports the continued use of a Renewals Annuity for managing the long-term renewal costs of the irrigation infrastructure.

EICL believes that the RA can be improved through:

- Better transparency. It should be easy to identify the large abnormals (any large spending that wasn't in the previous long-term plan). This is particularly true in a small system like Eton Bulk Water.
- Better accountability. The abnormals need to be explained to the irrigators and the irrigators need to approve them. For EICL, that would be best done through a representative body like the EICL Board.[3]
- Better Transparency + Better Accountability = Better Discipline.

EICL has been working with Sunwater to improve the processes. We acknowledge the plans that have been proposed and support them as a first step towards making the processes better.

Sunwater needs to keep working with EICL (and other irrigators) as these plans are implemented and understand that they are a first step, not the finished product. EICL commits to keep working with Sunwater to make these processes fit for purpose.

[3] Sunwater has communicated that it cannot devolve the responsibility of the Sunwater Board and management to an external entity – EICL understands that. But an approval process involving the EICL Board could be treated as a preliminary approval/filter that signifies EICL support. For those items that don't get approval from EICL, they can still go to the Sunwater Board/management but would then have EICL reasons and alternative suggestions included for the Sunwater Board/management to consider.

6 Assessment of the Consultation Process

Poor consultation by Sunwater was given as the primary reason by the QCA as to why they rejected the RAB push during the previous price path.

The consultation process during this review has only been marginally better. EICL accepts that Sunwater had a short period of time to consult with irrigators.

However, they could have made better use of the time.

Sunwater's consultation had all the hallmarks of a fob job (in politics when a govt wants to avoid a debate):

- limit info sharing to only what you want to share (that supports your position),
- share info slowly (drip feed so that you can still claim to be sharing info)
- do presentations (one way communication) as opposed to a discussion (two way)
- don't answer questions straight away (take questions on notice)
- delay access to relevant staff (we can give you an appointment in a month's time)
- limit the amount of time you have access to staff (time's up; we have to go to)
- be ignorant, defer to other staff that have even more limited availability
- share answers slowly - first reflex response is always "that info is confidential because ….."[4] even though it is not confidential and is eventually shared later (much later)

The consequences of the decision between an RA and an RAB will have impacts for decades on the irrigation industry. EICL advocates that we should take more time to review this, move slower and keep the discussion going. The main criticisms of the process have been driven by the timeframe – answers not given yet, information gaps unfilled, stakeholders still not understanding the implications of the two methods etc.

Given enough time Sunwater and the QCA should be able to fully answer those questions and fill the information gaps. Given EICL's position as stated in this submission, we do not see the benefits of rushing this decision.

[4] Insert made up reason here.

7 Other thoughts and issues

7.1 Goal not Process

Throughout this review, EICL has got the impression that some of the relevant staff within Sunwater, the QCA and Government understand the processes but not the reasons behind the processes.

For example, some staff give the impression that they understand how to calculate the Annuity using the accepted formula, but not the reason behind the formula. The goal of an annuity is to spread the cost of a lumpy profile as smoothly as possible over time – the formula is a means to that end. If the calculation is dramatically over or under collecting, then the parameters need to be adjusted to give an outcome closer to a zero balance in the long term - even if those parameters don't match the textbook estimates.

The goal has to be kept in sight.

7.2 Playing with the Forecasts

It has been suggested that in previous price paths, that the QCA has been pushing down/out 25-30 year forecasts to keep the present annuity lower. At similar situation occurred at an NGIIO that EICL is familiar with, when an Independent Director from the for-profit, private-sector suggested tweaking the long-term forecasts to give a lower current renewal levy. Thankfully, the Irrigator Member Directors were aware of the risks of that and pushed back. Those Irrigator Member Directors had seen the system assets in the days of Government ownership, being played with in a similar way, resulting in a significant under collection – they did not want to see that happen again.

EICL is seeking an assurance from the QCA that they will not play with the long-term forecast to give a short-term gain – it is ultimately detrimental to irrigators in the long term.