AtkinsRéalis

Update to the Supplementary Report on Seqwater's Meter Program

Queensland Competition Authority

15 January 2025

RURAL IRRIGATION PRICING REVIEW 2025-29

Notice

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This document has 10 pages including the cover.

Document history

Document title: Update to the Supplementary Report on Seqwater's Meter Program

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
0.1	Draft Report for QCA review	AtkinsRéalis Team	DB	GJ	GJ	28 October 2024
0.2	Version 2 in response to initial QCA comments	AtkinsRéalis Team	DB	GJ	GJ	12 November 2024
0.3	Version 3 for updated cost index	AtkinsRéalis Team	DB	GJ	GJ	24 November
0.4	Final Report	AtkinsRéalis Team	DB	GJ	GJ	9 January 2025
0.5	Final Report (table 3.1 update)	AtkinsRéalis Team	DB	GJ	GJ	15 January 2025

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1. Introduction

AtkinsRéalis was engaged by the Queensland Competition Authority (QCA) to undertake an expenditure review in support for the rural irrigation pricing over the 2025-29 price path. This included a review of Seqwater's meter renewals expenditure.

Following the publication of the QCA's Draft Report in July 2024, Seqwater has provided a submission to the draft report.

This document sets out a review of the topics raised in Seqwater's response document.

The structure of the document is as follows:

- Section 2.1 reviews Seqwater's comment on the QCA's view of the efficiency of the meter selection for the program.
- Section 2.2 reviews the updated information provided by Seqwater on the number of meters replaced, to be replaced and the unit cost of those replacements for the irrigation schemes of Logan River, Lower Lockyer, Mary Valley, Morton Vale Pipeline, Cedar Pocket and Pie Creek.
- Section 2.3 provides our view of the revised recommendations for each of the above mentioned schemes

The findings of this report are based on a review of Seqwater's document called "Submission to the draft report" and a number of additional documents provided by Seqwater during this review.

It also builds on the review summarised in our "Supplementary Report- Seqwater meter renewals expenditure review" report in June 2024 and associated data and analysis. References to the June 2024 AtkinsRéalis review report are called "our report" hereafter.

2. Metering program

2.1 Meter selection

QCA Draft Report

In its Draft Report, QCA raised concerns about the efficiency of the meter choice and whether there would be more efficient meters available that met the National Measurement Institute (NMI) Standard NMI M10.

Seqwater response

Seqwater's proposed final position is to maintain the use of the Krohne E Mag flow meter as it is the only meter assessed and tested that:

- meets the existing NMI M10 standards
- future proofs our meters for potential future standards, legislations and codes provided to Seqwater by the Queensland Government
- provides the lowest cost investment with installed with Stainless Steel pipework to meet the pattern approved requirements

Our view

In our report[1] we found Seqwater's choice of preferred supplier, Krohne, to be in accordance with Seqwater's procurement procedures but that Seqwater had not provided sufficient information to support the contention that the preferred supplier's meters are the only meters compliance with the NMI M10 standard.

We have reviewed the post draft report RFI1 provided by Seqwater which shows the pathway undertaken to select Krohne as the preferred meter supplier. We note that whilst an open tender was launched Seqwater only makes mention of three tenders, one of which was discounted as it does not allow for connecting to telemetry in the future, and one whose meters Seqwater had previously installed and experienced some early failures. Seqwater also confirmed its experience with these early failing meters with the Southern Downs Regional Council that confirmed a similar experience with these meters. Seqwater sought two rounds of quotes from both the preferred supplier and the supplier whose meters had previously poorly performed with the preferred supplier providing the better price. Given the lack of options for Seqwater to choose from we consider it would be prudent to further investigate other meters on the market as Seqwater progresses through its meter renewals program.

In post draft report RFI1 Seqwater states "*that it is currently in the process of reviewing the Engineering Specification, M-SPE-STD-007, as many meters have recently been added to the NMI M10 pattern approved meter list. We are currently investigating the recent inclusion of NMI M10 approved paddle wheel meters as an alternative option to the Electromagnetic Flow Meter requirements within the specification even though the pattern approval places demanding straight pipe length and revalidation requirements for paddle wheel meters.*"

We consider that Seqwater has not made a strong enough case that the Krohne is the only meter supplier with the required applications that meet the NMI M10 standards. The meters listed in the NMI M10 are not exhaustive and

[1] "Supplementary Report- Seqwater meter renewals expenditure review" June 2024

the fact that many more meters have recently been added to the list demonstrates that the Krohne meter is not *necessarily* the most efficient selection. On this basis we have not altered our view from our report.

2.2 Meter numbers and unit costs

QCA Draft Report

In its Draft Report QCA noted that, for a number of the metering renewals schemes, whilst the projects appear to be prudent given the legislative driver, in the absence of details such as the number of meters to be replaced or the lack of information to support the step change increase in unit costs, adjustments were appropriate. QCA derived these adjustments by applying an assumed replacement rate and historical average replacement cost per meter.

Seqwater response

In its response Seqwater has provided some additional information regarding the number of meters to be replaced and unit replacement costs by irrigation scheme as below.

Logan River

- Cost of project is $1.18M (nominal)
- Project is to upgrade 60 meters, of which 30 were completed during the current year
- The 30 completed replacement cost an average of $21,441

Lower Lockyer

- Cost of project is $2.19M (nominal)
- Project is to update 116 meters, of which 104 require a minor modification and 12 require a major modification of the meter configuration
- Forecast average replacement cost of $18,890 per meter with assumptions for the build up of costs

Mary Valley

- Cost of project is $0.82M (nominal)
- Project is to update 44 meters (the business case states 60 but incorrectly included 3 for Cedar Pocket and 13 meters for Pie Creek.
- Forecast average replacement cost $18,617 per meter with assumptions for the build up of costs

Morton Vale Pipeline

- Cost of project is $0.425M (nominal)
- Project is to update 54 meters
- Forecast average replacement cost of $7,863 which is lower than other schemes due to not having to do excavation or pipe work as the meters can be simply screwed in.

Cedar Pocket

- Cost of project is $0.06M (nominal)
- Project is to update 3 meters

Pie Creek

- Cost of project is $0.24M (nominal)
- Project is to update 13 meters

Our view

Logan River

We have incorporated the outturn cost of the last 30 meter replacements in our assessment of historical cost of meter replacements. We consider the total number of meters to be replaced (nr 60) to be reasonable.

Lower Lockyer

We consider the number of meters to be replaced to be reasonable on the basis of the total number of meters in the scheme, the age of these meters and the number of meters that have been replaced to date.

Mary Valley

We consider the number of meters to be replaced, 44, to be reasonable on the basis of the total number of meters in the scheme, the age of these meters and the number of meters that have been replaced to date. We note that whilst Seqwater states that the 44 meters will cost a total of $0.82M nominal this value has been split between two years, 2022/23 and 2025/26. Seqwater does not provides a clear explanation of the apparent fact that a number of the 44 meters were replaced in 2022/23 nor why these meters and their respective costs are not reported as historical. We have therefore made our adjustment for the whole Mary Valley renewal project against the 2025/26 expenditure on the assumption that Seqwater spent $289k ($FY24) on meter replacement in 2022/23.

In its submission to the Draft Report Seqwater also stated that when the previous meters were last installed no engineering drawings were completed and this has added to the future cost. As part of our recommended allowance we have therefore allowed for an additional cost of $500 per meter for production of an engineering drawing.

Morton Vale Pipeline

Previously no information was available for the number of meters to be replaced and we assumed a replacement rate of 25% which resulted in 13 meters needing to be replaced.

In its submission to the Draft Report Seqwater states that 54 meters will be replaced. We consider this to be reasonable on the basis that there is no historical expenditure for Morton Vale Pipeline and that there are no records of any replacements since 2019.

Seqwater has included the expenditure for these 54 meter replacements entirely in one year (2026/27). We note that, for Morton Vale, Seqwater states that the lower installation cost relative to other schemes is because the meters can be swapped out without the need for any excavation or pipework, therefore 54 installations in a year is feasible. We note that in previous supporting information seven meters were due to be replaced in FY24 and FY25.

Unit costs for replacement of meters

We note that Seqwater has provided the build-up of **assumed future** unit costs for each irrigation scheme in its submission to the Draft Report with the exception of Logan River where it has used recent historical costs as the basis for the costs of meter replacements. These unit costs appear to be assumed values and Seqwater has provided no information on the basis or validation of these unit costs.

The unit rate costs used in the build up of the replacement rate for each scheme in Seqwater's submission to the draft report is shown in the below table and there are some significant variations between the schemes for project documentation and commissioning. We note that the much lower installation costs for the Morton Vale scheme is because the meters can be swapped out without the need for any pipework or excavation work.

Table 2-1 – Seqwater's assumed unit rates by scheme

	Lower Lockyer	Mary Valley	Morton Vale
Project documentation, investigations and drawings	$4,550	$1,733	Included in planning costs below
Installation and materials	Range $7,928 (minor) to $11,584 (major)	$10,483	$519
Communications, commissioning and handover	$200	$1,000	$200
Planning, business case and Seqwater costs	$2,172	$1,900	$1,822

Whilst the recent outturn costs for the 30 meters replaced in Logan River are higher than the historical average we consider that the number are not sufficient and the case is not strong enough (that simply higher meter, materials and labour increases is driving a future average cost that is significantly higher than the historic average in real terms) to use unit rates that result in future estimates that are more aligned with the 30 recent Logan River installations than all the recent historical installations since 2019. Given the continued uncertainty and lack of evidence that installations for other schemes will face the same requirements as those in Logan River we maintain our approach of applying historical unit replacement costs to the forecast meter renewal numbers.

We have revisited our analysis on historic meter replacement costs that is used for applying to forecast costs by incorporating updated information for historical meter replacement activities. We have excluded the historic average costs for Mary River and Pie Creek as they are not considered representative.

For Logan River for the 30 meters already installed we have allowed the full cost as provided in RFI 4 and have applied the derived average historic cost to the remaining 30 meters to be installed. In applying historical average for Morton Vale in order to account for no pipework or excavation works being required we have applied the following approach:

- Calculated Seqwater's estimated future average installation cost for Morton Vale as a % of the average cost that Seqwater estimated for all other schemes.
- Applied this % to the historical unit cost for deriving the allowed cost for Morton Value.

In reviewing the data provided for the outturn costs of the 30 meters replaced to date in Logan River we note that their average replacement cost appears to be [redacted] rather than the $21,441 stated by Seqwater in its submission to the Draft Report. We have used the former figure in our calculations for deriving a historic average across the schemes.

The updated unit replacement cost for applying to the meter renewal program is [redacted]. This is an increase from our report assumption of [redacted].

Table 2-2 - Historical meter renewals expenditure showing meters replaced, cost and cost per meter ($FY24, 000's)

Irrigation scheme	Meters replaced	Cost	Cost per meter
Central Lockyer	345	4.115	11.927
Warrill Valley	145	2.471	16.322

Logan River	[redacted]	[redacted]	[redacted]
Lower Lockyer	10	92	9.242
Morton Vale	No historical data available		
Mary River	169	536	3.172
Pie Creek	44	51	1.159
Total	[redacted]	[redacted]	[redacted]
TOTAL excluding Mary River and Pie Creek	[redacted]	[redacted]	[redacted]

3. Revised recommended expenditure

The resulting revised recommended expenditure is summarised below.

Table 3-1 – Recommended adjustments to Seqwater's final position – metering renewals program, ($FY24 000s)

Scheme		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	>= FY30
Cedar Pocket	Seqwater	11						54					
	Recommended							40					
	Adjustment							-14					
Logan River	Seqwater	102	367	287			197	833	80	41			
	Recommended						168	711	69	35			
	Adjustment						-29	-122	-12	-6			
Lower Lockyer	Seqwater	72	18	1	2						77	215	1,579
	Recommended										66	185	1,354
	Adjustment										-11	-31	-225
Mary Valley	Seqwater	293	241	2		289			512				
	Recommended								342				
	Adjustment								-170				
Morton Vale Pipeline	Seqwater									390			
	Recommended									337			
	Adjustment									-53			
Pie Creek	Seqwater		51				130	109					
	Recommended						98	82					
	Adjustment						-32	-27					

Note: numbers may not sum due to rounding