

AtkinsRéalis



Supplementary Report

Seqwater meter renewals expenditure review

21 June 2024

5225979-03

EXPENDITURE REVIEW FOR RURAL IRRIGATION PRICING 2025-29

Notice

This document and its contents have been prepared and are intended solely as information for and use in relation to the review of Seqwater's meter renewals expenditure for the 2026-29 irrigation pricing review. For QCA's review

AtkinsRéalisis UK International Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 45 pages including the cover.

Document history

Document title: Supplementary Report

Document reference: 5225979-03

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Initial Draft for QCA's review	AtkinsRéalisis Team	TA	JA	GJ	30-apr-2024
2.0	Draft Supplementary Report (pending final checks)	AtkinsRéalisis Team		GJ	GJ	24-may-2024
3.0	Final Supplementary Report	AtkinsRéalisis Team	TA	JA	GJ	29-may-2024
4.0	Incorporating comments from QCA	AtkinsRéalisis Team	TA	JA	GJ	05-jun-2024
5.0	Incorporate comments from QCA	AtkinsRéalisis Team	TA	JA	GJ	09-jun-2024
6.0	Final report with minor updates	AtkinsRéalisis Team	TA	JA	GJ	21-jun-2024

Client signoff

Client Seqwater meter renewals expenditure review

Project EXPENDITURE REVIEW FOR RURAL IRRIGATION PRICING 2025-29

Job number

Client signature/date



Contents

1.	Introduction.....	6
1.1	Methodology.....	6
1.2	Information sources.....	7
1.3	Price base	8
1.4	Structure of the report	8
2.	Seqwater’s approach to metering renewals	10
2.1	Prudency- justification, scope and timing.....	10
2.1.1	Standard/legislative driver.....	10
2.1.2	Replacement strategy	10
2.1.3	How schemes were prioritised	10
2.2	Efficiency	11
2.2.1	Approach to delivery	11
2.2.2	Overview of historical expenditure	12
2.2.3	Overview of proposed future expenditure	13
3.	Review of Metering Renewals by scheme	15
3.1	Central Lockyer Valley	17
3.1.1	Central Lockyer Valley	17
3.1.2	Morton Vale Pipeline	19
3.2	Logan River.....	21
3.3	Lower Lockyer.....	26
3.4	Mary Valley	29
3.5	Warrill Valley	35
4.	Conclusions and recommendations	39
5.	Summary of recommended meter renewals expenditure	41

Tables

Table 1-1 - Inflation factors used for renewals expenditure	8
Table 2-1 – Historical meter renewals expenditure showing meters replaced, cost, and cost per meter (\$FY24, 000's)	12
Table 2-2 – Proposed meter renewals expenditure showing meters numbers, cost, and cost per meter (\$FY24, 000's)	13
Table 3-1 - Summary of meter renewals expenditure for each scheme (\$FY24, 000's)	16
Table 3-2 – Historical meter renewals expenditure for Central Lockyer Valley (\$FY24, 000's).....	17
Table 3-3 – Central Lockyer historical meter replacement projects change and final cost (\$nominal, 000's)	19



Table 3-4 – Future meter renewals expenditure for Morton Valley (\$FY24, 000's)	20
Table 3-5 – Summary of recommended expenditure for Morton Vale (\$FY24, 000's).....	21
Table 3-6 – Historical meter renewals expenditure for Logan River (\$FY24, 000's).....	22
Table 3-7 – Future meter renewals expenditure for Logan River (\$FY24, 000's).....	23
Table 3-8 – Breakdown of meter replacement cost for Logan River	24
Table 3-9 – Summary of recommended meter renewal expenditure for Logan River (\$FY24, 000's).....	26
Table 3-10 – Historical meter renewals expenditure for Lower Lockyer (\$FY24, 000's).....	26
Table 3-11 – Future meter renewals expenditure for Lower Lockyer (\$FY24, 000's).....	27
Table 3-12 – Summary of recommended expenditure for Lower Lockyer (\$FY24, 000's)	29
Table 3-13 – Historical meter renewals expenditure for Mary Valley (\$FY24, 000's)	29
Table 3-14 – Summary of recommended historical expenditure for meter renewals for Mary Valley (\$FY24, 000's)	31
Table 3-15 – Future meter renewals expenditure for Mary Valley (\$FY24, 000's).....	31
Table 3-16 – Breakdown of meter replacement cost for Mary Valley.....	33
Table 3-17 – Summary of recommended meter renewal expenditure for Marry Valley (\$FY24, 000's)	35
Table 3-18 – Historical meter renewals expenditure for Warrill Valley (\$FY24, 000's).....	35
Table 3-19 – Future meter renewals expenditure for Warrill Valley (\$FY24, 000's)	37
Table 3-20 – Summary of recommended meter renewal expenditure for Warrill Valley (\$FY24, 000's).....	38
Table 5-1 – Summary of recommended meter renewal expenditure for Seqwater across all irrigation schemes (\$FY24, 000's)	42

Figures

Figure 2-1 – Comparison between Seqwater's future, historical, and other irrigation utilities cost per meter (\$FY24, 000s)	14
---	----





1. Introduction

The Queensland Competition Authority (QCA) was directed by the Queensland government to review the irrigation pricing practices of Sunwater and Seqwater (the Businesses). Under the terms of the referral notice, the QCA to recommend prices of services for irrigation customers from 1 July 2025 to 30 June 2029¹.

AtkinsRealis was appointed by QCA to provide expert advice to determine the prudence and efficiency of expenditure. As part of the review, we were requested to undertake a review of Seqwater's meter renewals expenditure. This report provides our view on Seqwater's historical and forecast meter renewals program.

1.1 Methodology

Our methodology for undertaking this review is based on the combined experience of the team in undertaking similar expenditure reviews across Australia and internationally.

The review of Seqwater's meter renewal expenditure commenced on 11 March 2023. Our initial tasks included the review of Seqwater's business proposal and supporting documentation. After that, we sent requests for information (RFI) to fill in any gaps in understanding.

Additionally, we requested an interview with Seqwater to form a better understanding of its approach to meter renewals, scope of forecast meter renewals, and assumptions used to develop the costs. However, due to timing and Seqwater's staff availability, we were not able to hold interviews. Therefore, this report represents a desktop review of documents provided and responses to RFI's by Seqwater.

In undertaking our review of the meter renewals projects, we assessed efficiency and prudence of expenditure in accordance with QCA's definitions as shown in the box below.

¹ Referral notice of the Minister's direction to review Sunwater and Seqwater, Queensland Government, March 2023 ([referral-notice.pdf \(qca.org.au\)](#))

Box 1: QCA's prudence and efficiency assessment of renewals and other capex

QCA's assessment involves assessing the need for the expenditure and the appropriateness of the timing, scope, standard and costs associated with the proposed projects.

QCA considers renewals and other capex is prudent if it can be justified by reference to an identified need or cost driver. That is, the renewals and other capex is necessary to:

- replace, refurbish or upgrade existing infrastructure or build new assets
- meet legal or regulatory obligations
- achieve an outcome that is explicitly endorsed or desired by customers (for example, agreed service levels)
- achieve broadly accepted changes in community expectations in relation to corporate responsibility (such as commitment to climate change mitigation).

In assessing prudence, QCA will consider whether the proposed expenditure timing is appropriate (based on lowest whole-of-life costs).

QCA considers renewals and other capex is efficient if:

- the scope of the works represents the best means of achieving the desired outcomes after having regard to the options available, including non-network solutions, and substitution possibilities between opex and capex
- the standard of the works conforms to technical, design and construction requirements in legislation, industry and other standards, codes and manuals

the cost of the defined scope and standard of works is consistent with conditions prevailing in the markets for engineering, equipment supply and construction.

To be able to form a comprehensive assessment, we reviewed historical and forecast expenditure for each scheme. Throughout our review, we evaluated Seqwater justification for implementing the meter renewal projects and its timing. We have also assessed the projects' efficiency in procurement, delivery, and cost development. For each project we aimed at answering the following questions:

- **Prudence:**
 - Is the project needed to deliver the required services that is agreed with by customers?
 - Is the project required to meet legislative and regulatory obligations and requirements?
 - Does the project need to be delivered in the timeframe proposed? And why?
- **Efficiency:**
 - Does the scope definition represent the required works?
 - Has Seqwater applied a procurement process that is conducive to receive competitive pricing and reflect the market?
 - Is the delivery of the project consistent with the defined scope?
 - Does the cost developed reflect the scope's need?
 - Do cost rates used include support from either market or previous experience?

1.2 Information sources

In undertaking our review we evaluated Seqwater's meter renewals expenditure utilising its irrigation pricing submission and its appendices which provides submission details for each regulated irrigation scheme. Our



methodology included sending requests for information (RFI's) to clarify points in the submission regarding justification of expenditure, drivers, basis of costs, and others.

Our methodology generally benefits from holding interviews with the utilities to fill any gaps in knowledge and better understand delivery approach and reasoning for the expenditure. In this review, we were not able hold interviews with Seqwater due to its relevant staff being unavailable. Therefore, the meter renewal irrigation price investigation was completed as a desktop review and relied fully on documents and data set shared with us as well as responses to RFI's.

It is worth noting, as will be discussed later in the review section, some of the documents and data shared included discrepancies. This required us to make a judgement based on our understanding of Seqwater's approach from information received and our experience in the sector. However, it does reduce the confidence we have in the recommendations we have been able to make.

Our experience in carrying out this review suggests that there may be significant room for improvement in the capturing and management of documentation (both expenditure and outputs) and business cases as set out in Section 4.

1.3 Price base

Unless stated otherwise, all values included in this report are real FY24-dollar terms (\$FY24). Historical costs have been converted to FY24 prices using the ABS CPI All Capital Cities June on June index^{2 3}and future costs have been converted using the inflation assumptions used by Seqwater⁴. The table below shows the inflation factors used for each year.

Table 1-1 - Inflation factors used for renewals expenditure

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Assumpti on for future costs								103.0 %	106.1 %	109.1 %	112.0 %	114.8 %	117.7 %
Multiplier	1.23	1.21	1.21	1.17	1.10	1.04	1.00	1.00 ⁵	0.94	0.92	0.89	0.87	0.85

Source: Seqwater cost escalation for capex.xlsx

1.4 Structure of the report

This report outlines our assessment of Seqwater's meter renewals expenditure. The following summarises the content of each sections:

² Series ID A2325846C downloaded from ABS website on 20 May 2024.

³ 3.8% cost escalation from FY23 to FY24. This is based on the Reserve Bank of Australia, Statement of Monetary Policy, May 2024 ([Statement on Monetary Policy - May 2024 \(rba.gov.au\)](https://www.rba.gov.au/statement-of-monetary-policy/may-2024))

⁴ Seqwater cost escalation for capex.xlsx provided by QCA

⁵ We understand that Seqwater has not applied cost escalation factor to FY25. Since the figures in QCA RFI 39 match the Seqwater's proposal, we have assumed no cost escalation for FY25 across all relevant cost data provided by Seqwater.

- **Section 2 - Seqwater’s approach to metering renewals:** We present our understanding of Seqwater’s approach and its overall alignment with the prudence and efficiency definitions by QCA.
- **Section 3 - Review of metering renewals by scheme:** We outline our review and assessment of prudence and efficiency of historical and future expenditure for each scheme. Where adjustment is recommended, we highlight the impact of the adjustment in relation to the proposed expenditure.
- **Section 4 – Conclusions and recommendations:** Summarises our findings and presents recommendation for improvement.
- **Section 5 - Recommended meter renewals expenditure:** Here we summarise our recommended expenditure for each scheme.



2. Seqwater’s approach to metering renewals

2.1 Prudency- justification, scope and timing

In its proposal, Seqwater noted that it is required to undertake metering activities and associated water accounting. Regulatory requirements are understood to be the main driver for Seqwater’s metering renewals program.

2.1.1 Standard/legislative driver

Seqwater, in its response to a request to clarify the driver for the meter renewal program, stated that:

“The primary driver for metering renewals expenditure is legislative compliance. Seqwater has to comply with National Measurement Institute (NMI) Standard NMI M10. To comply, Seqwater needs to Install and Validate “pattern approved” meters under this NMI standard, which require the validation of meters every 5 years.”

The standard referenced by Seqwater applies to water meters used for surface water and underground water extraction measurements. It requires water meters to allow for interface with a transmission device and/or data logger. It also provides that existing meters can remain in use as long as they are not faulty and do not fail the validation test. If the existing meters are faulty or do not meet the validation test, then they must be replaced with new meters. For new meters, the standard provided examples of meters that can be used and meet the requirements.

We understand that Seqwater used the standard to verify its existing meters.

2.1.2 Replacement strategy

Per the standard, the validation process for water meters entails two key components: the issuance of validation certificates for compliant meters and validation notices for non-compliant ones. When a water meter meets the requirements of the standard, an authorized meter validator must provide a validation certificate within 20 business days of inspection. If a water meter fails to meet the specified standards, the authorized meter validator must issue a validation notice detailing the reasons for non-compliance and suggest potential modifications. Both the relevant person and the meter validator retain the option to submit a copy of this notice to the Department for further action.

Throughout this process, the Department's validation form, denoted as W2F119A Module A – Water meter validation, serves as the official documentation to record and document the validation proceedings accurately.

2.1.3 How schemes were prioritised

The water meters standard also provides that all meters that do not meet the validation requirements must be replaced before the validation due date as shown in Schedule 11 of the Water Regulation 2016, which provides dates for each “part of the state.”

We understand that Seqwater, in its replacement strategy, has considered the dates set in the Water Regulation 2016. This influences the prioritisation of meter renewal projects for each scheme based on the due date provided in the Regulation.



2.2 Efficiency

2.2.1 Approach to delivery

Seqwater has provided information regarding its procurement procedure for the future meter renewal program, which indicated that it follows its procurement policy, procedure, and guideline. This is referenced in the business cases provided for Logan River and Mary Valley. Seqwater's delivery approach as we understand it is summarised below by area⁶:

- **Project Management:** Seqwater stated that the meter renewal projects are managed by the Minor Works team under the Seqwater Maintenance Collaboration Contract (SCMC).
- **Engineering:** Seqwater utilises Wood to undertake the engineering for the meter replacement projects in Central Lockyer, Logan River and Warrill Valley irrigation schemes. Wood's engagement is arranged through the SMCC framework at agreed engineering rates.
- **Meter purchasing:** Following a technical assessment, Krohne, was contracted under the standing offer arrangement (SOA) to supply flowmeters.
- **Piping supply and fabrication:** This is procured through Seqwater's commercial services procedures and works are typically between \$250K to \$1M, which makes it fall under the works and services SOA contract terms.
- **Installation:** The Minor Works Trade team undertakes meters installation. For some meters, civil works might be required and is contracted through Seqwater's works and services SOA at established schedule of rates.

In its response to questions regarding procurement, Seqwater focused on its procurement plans for the future meter replacement projects. We consider Seqwater's general approach to the delivery of the meter renewal projects relating to project management, engineering, piping, and installation to be appropriate and is in line with our industry standard practice.

In terms of the selection of the Krohne meters, Seqwater provided its equipment list with the Krohne meter being listed as a preferred meter for irrigation application. Seqwater stated that:

This preferred equipment list was developed through open market procurement processes for each category of equipment listed. A separate Commercial Services evaluation report, approved by the Commercial Services Manager, details the procurement process and the resultant pre-qualified equipment and suppliers for each category

Therefore, we understand that the Krohne meters selection was completed per Seqwater's procurement procedures. However, in its response to meter supplier selection, Seqwater did not provide additional details regarding the selection of Krohne as the meter supplier. We understand that the meters to be supplied comply with the water meter standard.

We note that Seqwater indicated, in customer reference group meeting notes, that the Krohne meter is the only one that was deemed compliant with the standards⁷. Seqwater has not provided additional information to support this

⁶ QCA RFI 52 Seqwater Procurement Procedures, Seqwater, May 2024

⁷ Warrill Valley WSS Customer Reference Group – Meeting Summary, Seqwater, November 2023.

assessment. In the list of pattern approved non-urban water meters⁸, several suppliers like Siemens, ABB, Aquamonix, and others were included. We also note that Sunwater, the other regulated irrigation water service provider in Queensland, utilises meters from other listed providers.

Therefore, we are not able to conclude if Seqwater's meter purchasing process promotes competitive pricing and reflect market price. However, we have not applied an adjustment to reflect this potential inefficiency in this report as (1) it is difficult to quantify with confidence and (2) it is possible that Seqwater did undertake an efficient procurement exercise and has simply not shared the details of this with us.

2.2.2 Overview of historical expenditure

In its business proposal, Seqwater has included historical meter renewals expenditure of \$8.1M (\$FY24). From the documents received, we identified 764 meters replaced and an average cost per meter of \$11K (excluding Cedar Pocket). This includes historical meter replacement projects from FY19 to FY24 (excluding renewals expenditure that starts in the current price path but is part of the future meter renewal program). The table below summarises Seqwater's historical meter renewals expenditure.

Table 2-1 – 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	12
Warrill Valley*	145	2,471	16
Logan River	51	792	16
Lower Lockyer	10	92	9
Morton Vale	-	-	-
Mary Valley	169	536	3
Pie Creek	44	51	1
Sub-Total	764	8,058	11
Cedar Pocket	Unknown	11	Unknown
TOTAL***	764	8,069	11**

Source: QCA RFI 37 replace meters future price path, QCA RFI 39 Forecasts costs for metering renewal program, and QCA RFI 36 Minor Works Irrigation Meters 2019 to 2024

Note(*): Warrill Valley cost includes the forecast FY24. Meters replaced and cost per meter represent actual up to FY23

Note(**): This was calculated using total cost divided by meters replaced, excluding Cedar Pocket.

Note(***): historical values included in the table above exclude meter renewals expenditure that starts in the current price path but is part of a future meter renewals program. These are assessed as part of the forecast meter renewal assessment.

The average cost per meter across irrigation schemes (excluding Cedar Pocket) falls within the range of irrigation meter replacement costs in Australia. For example, a benchmarking exercise we have carried out suggests an average of \$9K per meter across 20 irrigation schemes in Australia.

⁸ Pattern Approved non-urban Water Meters, Table 1, Department of Agriculture, Water, and the Environment – Australian Government, June 2022 ([Pattern Approved non-urban Water Meters \(agriculture.gov.au\)](https://www.agriculture.gov.au))

2.2.3 Overview of proposed future expenditure

Seqwater has proposed \$5.2M in renewals expenditure relating to the replacement of meters. The table below summarises Seqwater's proposed future meter renewals expenditure.

Table 2-2 – Proposed meter renewals expenditure showing meters numbers, cost, and cost per meter (\$FY24, 000's)

Irrigation Scheme	Meter numbers	Cost	Cost per meter
Central Lockyer	-	-	N/A
Warrill Valley	unknown	225	unknown
Logan River	60	1,172	20
Lower Lockyer	unknown	1,784	unknown
Morton Vale	53*	600	11
Mary Valley	60	1,406	23
Cedar Pocket	-	-	N/A
Pie Creek	-	-	N/A
TOTAL	173+unknown	5,187	18**
TOTAL (Logan River and Mary Valley only)	120	2,578	21

Source: QCA RFI 37 replace meters future price path, QCA RFI 39 Forecasts costs for metering renewal program, and Business Cases for Logan River and Mary Valley

Note(*): The Morton vale forecast replacement was extracted from RFI 37 Meter Register where the scheme column was filtered for Morton Vale. However, we have limited confidence in the figure as discussed further below.

Note(**): This was calculated using the total of Logan River, Mary Valley, and Morton Vales only. (\$3,178K / 173 meters)

Two schemes with proposed expenditure (Warrill Valley and Lower Lockyer) did not include information regarding the number of meters to be replaced during the future price path. Additionally, the number of replacements proposed for Morton Vale was extracted using the meters register shared by Seqwater. However, it is not clear if the number extracted is correct as the cost per meter appear to be lower than that included in the developed business cases for Logan River and Mary Valley. Per correspondence with Seqwater⁹, justification and business case documents are typically developed a year before the projects are due to commence. No additional information was provided to demonstrate the scope of the proposed meter renewals expenditure for these three schemes.

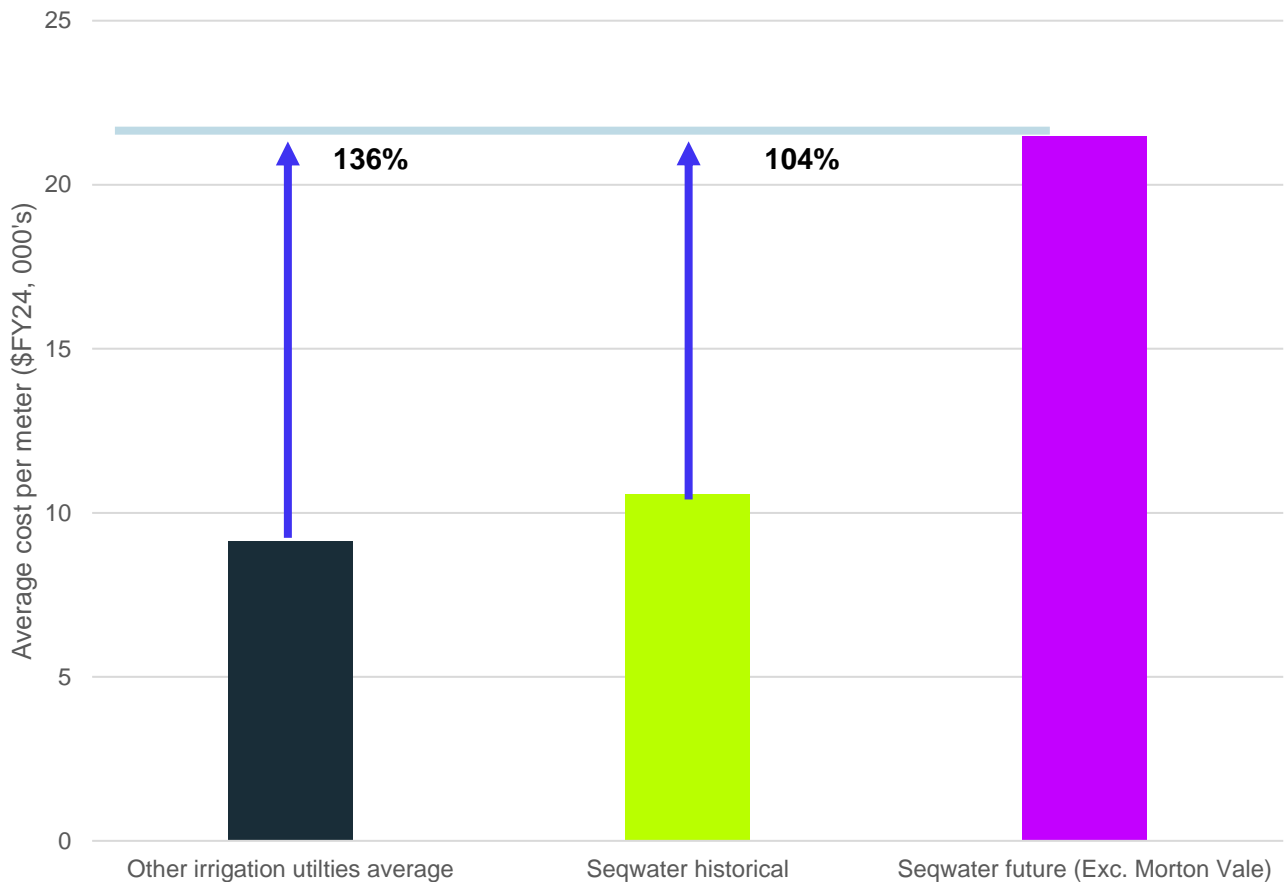
Seqwater provided a detailed business case for Logan River and Mary Valley schemes, which showed a total proposed expenditure of \$2.6M to replace 120 meters (60 meters each scheme). The proposed cost represents a unit cost of \$21K per meter. This is 104% higher than the cost per meter for historical meters expenditure and 136% higher than the average for other irrigation schemes in Australia¹⁰. The figure below illustrates the difference between Seqwater's future and historical cost per meter as well as that of other irrigation schemes in Australia.

⁹ Response to RFI 57, QCA RFI 53,55,57,58 Metering Renewals, Seqwater, May 2024

¹⁰ Based on historical metering renewal information in Australia.



Figure 2-1 – Comparison between Seqwater’s future, historical, and other irrigation utilities cost per meter (\$FY24, 000s)



Source: QCA RFI 37 replace meters future price path, QCA RFI 39 Forecasts costs for metering renewal program, Business Cases for Logan River and Mary Valley, AtkinsRéalis cost data

In its response to RFI 53, which requested an explanation about the increase, Seqwater provided the following explanation:

- The business cases have a +/-30% accuracy
- Requirement to comply with the meter standard in 2018
 - Flowmeters that are compliant with the standard cost \$3K per meter to purchase (depending on the size)
 - Design of the piping to comply with the standards
- Piping materials changed from galvanised mild steel to stainless steel
- Schemes are river-based with existing meters being installed on steep riverbanks and might require re-location

Seqwater’s response suggest that the change in meter standards in 2018 has impacted the cost of meter replacement across schemes. However, we understand that historical meter replacement was completed to comply with the same standards. For example, close out documents for historical meter replacement projects in Logan River, Central Lockyer, and Warrill Valley indicate the use of Krohne Waterflux 3070, which is one of the pattern approved meters. Additionally, Seqwater has not demonstrated that the proposed future meters present installation challenges which were not present in its historical renewals.

Therefore, **we do not consider the proposed increase in unit cost of replacement to be justified.** Based on our assessment of the proposed costs, understanding of the market, and documents provided, we recommend that the cost per meter for future meter replacement projects be in line with historical meter renewal expenditure (\$11K per meter). The following sections discuss our assessment for each scheme.



3. Review of Metering Renewals by scheme

In our review of Seqwater’s meter renewal program, we have evaluated the historical and proposed future renewals expenditure associated with the renewal of meters. This was carried out based on an evaluation for each scheme. The following sections present our assessment.

The table below summarises Seqwater’s historical and forecast renewals expenditure.



Table 3-1 - Summary of meter renewals expenditure for each scheme (\$FY24, 000's)

Scheme	Previous Price Path		Current Price Path				Interim	Future Price Path				Beyond	FY21-24	FY26-30
	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Current Price Path	Future Price Path
Cedar Pocket	11	-	-	-	-	-	-	-	-	-	-	-	-	-
Central Lockyer	170	1,534	1,760	493	159	-	-	-	-	-	-	-	2,411	-
Morton vale	-	-	-	-	-	-	-	-	600	-	-	-	-	600
Logan River	102	367	287	4	32	197	854	80	41	-	-	-	520	121
Lower Lockyer	72	18	1	2	-	-	-	-	-	77	217	1,490	3	294
Mary Valley	293	241	2	-	289	104	499	514	-	-	-	-	395	514
Pie Creek	-	51	-	-	-	-	-	-	-	-	-	-	-	-
Warrill Valley	549	527	3	93	1,195	105	-	75	75	75	-	-	1,395	225
Total	1,197	2,738	2,052	593	1,675	405	1,352	670	716	152	217	1,490	4,725	1,755

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024



We have not commented further on two schemes as their historical and future meter renewals expenditure was deemed to be not material and occurred in the previous price path. These two schemes are:

- **Cedar Pocket:** meter renewals expenditure of \$11K (\$FY24) in FY19
- **Pie Creek:** meter renewals expenditure of \$51K (\$FY24) in FY20

3.1 Central Lockyer Valley

Per the Scheme’s business case¹¹, the Central Lockyer Valley Water Supply Scheme was established to support irrigation in dairy, vegetable, and forage crop sectors. Its infrastructure includes various weirs built between the 1940s and 1980s, Bill Gunn Dam, Lake Clarendon constructed in 1988 and 1992 respectively, and the Morton Vale Pipeline completed in 1995. Releases from the dams are managed manually. Situated in the Clarendon Sub-artesian Area, the Scheme benefits from groundwater resources.

We understand that in 2020, the Scheme's management was updated under the Water Plan (Moreton) (Supply Scheme Arrangements) Amendment Plan 2019. This amendment facilitated the granting of volumetric allocations from existing water licenses and introduced a management framework implemented through new planning instruments like a Resource Operations Licence and Operations Manual. Since 2020, the water year runs from January 1st to December 31st. The Scheme is divided into two tariff groups:

- Central Lockyer Valley and
- Morton Vale Pipeline.

3.1.1 Central Lockyer Valley

3.1.1.1 Historical metering renewal

Seqwater included in its business proposal historical meter renewal expenditure of \$4.1M (\$FY24) for this scheme. The expenditure is spread over the previous and current price path as shown in the table below.

Table 3-2 – Historical meter renewals expenditure for Central Lockyer Valley (\$FY24, 000's)

Scheme	Previous Price Path			Current Price Path		
	FY19	FY20	FY21	FY22	FY23	FY24
Central Lockyer	170	1,534	1,760	493	159	-

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

The scheme submission also indicated that the meter renewal program received \$2.5M in Federal Government Funding, which is accounted for as a contribution.

¹¹ Central Lockyer Valley Water Supply Scheme – Scheme submission to QCA 2025-2029, Seqwater, November 2023



We understand that the meter replacement program was delivered in three projects:

- November 2018: Replace 30 meters
- November 2019: Replace 50 meters
- August 2020: Replace 265 meters (initially labelled as replacing 305 meters)

3.1.1.1.1 Justification

As discussed in prior sections, Seqwater’s main driver for carrying out the meter renewal is the legislative as the meters need to meet the water meter standard referenced earlier.

Additionally, per the documents provided¹², the initiation of the meter replacement project was due to the age and lack of reliability of the old meters. The new electromagnetic meters replaced mechanical meters to support the new hydraulic groundwater model in the Central Lockyer Valley.

3.1.1.1.2 Procurement

Seqwater utilised its Minor Works team for project management activities and Wood, under an ongoing contract with agreed rates, to undertake engineering works. Installation was also delivered by its Minor Works team with civil works and piping fabrication and works completed by contractors.

Krohne was selected as the supplier of the meters. Per response to RFI 52, Seqwater stated that the selection of Krohne followed a technical assessment by Seqwater’s Commercial Services. As mentioned in the procurement section, Seqwater’s preferred equipment list includes the Krohne meters as preferred equipment for irrigation activities. It is understood that the meters have been supplied under a Standing Offer Agreement (SOA) and are understood to be compliant with the new non-urban water meter standards.

Seqwater did not provide additional information relating to the selection criteria and assessment of Krohne proposal. Therefore, we are not able to conclude if the procurement of meters is efficient. We note that other irrigation utilities, specifically Sunwater, have utilised a range of meter suppliers such as Siemens, Aquamonix, ABB, and others. These suppliers are also included in the list of patterned approved meters¹³.

3.1.1.1.3 Delivery

All three meter renewal replacement projects have been completed, with the last replacement project completed in June 2023. Per the information provided, two of the meter replacement projects included change requests after the project initiation.

The first change impacted the first two replacement projects (ICL -30 and 50, shown in the table below) as it was associated with change in meter type to be installed. We understand that the meter type included in the initial business plan is different from that is needed to allow data visualisation. Although the change increased the cost for both projects, only one project needed a budget increase request. For the other project, the cost increase was within the initial budget. The change associated with the third replacement project was triggered by the need to complete “as constructed” drawings which included additional meter location drawings that were not accounted for in the original budget. The table below summarises the three projects showing budget and approved changes in nominal figures¹⁴

¹² RFI20 response by Seqwater, Seqwater, March 2024

¹³ Pattern Approved non-urban Water Meters, Table 1, Department of Agriculture, Water, and the Environment – Australian Government, June 2022 ([Pattern Approved non-urban Water Meters \(agriculture.gov.au\)](https://www.agriculture.gov.au))

¹⁴ QCA RFI 36 Minor Works Irrigation Meters 2019 to 2024 shows aggregate nominal figures. However, expenditure occurs over several financial years. We have not inflated these figures to FY24.

Table 3-3 – Central Lockyer historical meter replacement projects change and final cost (\$nominal, 000's)

Project Name	Meters replaced	Completed on Site	Original Budget	Approved Change	Final Cost	Variance
ICL - 30 Meters	30	Jun-20	374	110	399	85
ICL - 50 Meters	50	Jun-20	553	0	521	32
ICL - 305 Meters	265	Jun-23	2,481	70	2,506	45
TOTAL			3,408	180	3,426¹⁵	162

Source: QCA RFI 36 Minor Works Irrigation Meters 2019 to 2024

The total approved impact of three changes is \$180K (\$nominal). However, it is worth noting that the final variance between the final cost and original budget is \$18K (\$nominal), as some projects were delivered under budget.

The project completed the replacement of 345 meters at a total cost of \$4.1M (\$FY24), which represent a cost rate of \$12K per meter, using total cost and aggregate meters replaced. It is worth noting that almost all old meters were replaced with Electromagnetic meters, which we understand to be in line with the water meter standard¹⁶.

3.1.1.1.4 Assessment of efficiency and prudence

Seqwater undertook the replacement of meters mainly to comply with regulatory requirements. We understand that the costs associated with the replacement include design, procurement, project management, and construction (including pipework).

Per the information provided by Seqwater, the delivery of the project was completed in accordance with Seqwater's procedures and processes, and in line with the non-urban water meter standards. We consider that the approach to delivery of the replacement meter and costs included to be in line with our expectation. However, due to lack of information regarding the selection of Krohne to supply the meters, we are not able to fully conclude on the efficiency of the meter costs.

3.1.1.2 Forecast metering renewal (FY25-29 and beyond)

No metering renewal.

3.1.2 Morton Vale Pipeline

3.1.2.1 Historical metering renewal

No metering renewal.

3.1.2.2 Forecast metering renewal (FY25-29 and beyond)

Seqwater included \$600K (\$FY24) in meter renewals expenditure for Morton Vale. As can be seen in the table below, the expenditure is expected to occur in FY27.

¹⁵ This figure includes cost incurred in FY19.

¹⁶ Queensland interim water meter standard for non-urban metering, Queensland Government - Department of Regional Development, Manufacturing and Water, December 2023

Table 3-4 – Future meter renewals expenditure for Morton Valley (\$FY24, 000's)

Scheme	FY26	FY27	FY28	FY29	FY30	Future Price Path (FY26-29)
Morton Vale	-	600	-	-	-	600

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

3.1.2.2.1 Justification

Per earlier discussions, Seqwater stated that it is required to update its meters to meet regulatory obligations set by the water meters standard.

Seqwater did not provide additional justification for the replacement of meters in this scheme. We also note that there were no detailed business case for this scheme. We understand that this project was developed alongside other projects with more detailed business cases (e.g. Mary Valley water supply scheme)¹⁷.

3.1.2.2.2 Cost

Seqwater has proposed a cost of \$600K to replace meters in the Morton Vale scheme. Seqwater has not provided information regarding the number of meters that are proposed to be replaced. However, we have identified 53 meters related to Morton Vale that were included in a data set shared by Seqwater. The data set was shared in response to our request to provide a list of all meters to be replaced in the future price path and beyond¹⁸.

It is worth noting that this data set is not consistent for other schemes where the business cases were developed. For example, the data set shows Logan River to have 128 meters¹⁹, but the developed business case for the scheme presents 60 meters to be replaced in the future.

Therefore, we are not confident that the proposed meter renewal expenditure for Morton Vale includes the replacement of 53 meters, which would reflect a cost per meter of \$11.3K. This is slightly higher than Seqwater’s historical average cost per meter of \$10.5K, but significantly lower than the average cost per meter proposed for Logan River and Marry Valley (\$21K per meter). It is not clear if the costs included in the Logan River and Mary Valley meter replacement projects inform the build-up of costs for the Morton Vale meter replacement project.

Seqwater has indicated that business cases for projects are developed within a year of the estimated project start time²⁰. Since, the Morton Vale meter renewal placement is projected for FY27, Seqwater has not developed a business case for this project.

3.1.2.2.3 Assessment of efficiency and prudence

We understand that the Morton Vale meter replacement project aims to address the issue of meter compliance with the non-urban water meter standard. Seqwater has also stated that the new meters will improve the accuracy and resolve issues relating to asset conditions and age. In a general response to the delivery approach, Seqwater has stated that the project management and installation will be completed by its Minor Works team, with additional civil and piping works delivered by contractors, as required. Additionally, engineering activities will be undertaken by Wood

¹⁷ Based on response from Seqwater to QCA RFI 40.

¹⁸ QCA RFI37 replace meters future price path

¹⁹ This was determined by filtering out Krohne meters from RFI 37 meter register. This was done to remove any meters that were replaced in the last price path and are assumed to not be included in the business case for future meter replacement in Logan River.

²⁰ QCA RFI 53,55,57,58 Metering Renewals



as part of the Seqwater Maintenance Collaboration Contract (SCMC). This appears to be a reasonable approach to deliver the meter replacement program.

As part of the procurement procedure response²¹, Seqwater stated that it has selected Krohne as the flowmeter supplier following a technical assessment. However, no additional information regarding the selection criteria and costs received from other suppliers were presented in the response. Therefore, we are not able to comment on the appropriateness of the meter purchase costs in relation to the promotion of competitive pricing.

Seqwater has provided minimal support to its planned expenditure for the meter renewal program and has not provided a business case showing the basis of cost and assumptions related to the Morton Vale meter renewal program. The lack of information does not allow for an assessment of efficiency and prudence including the comparison of cost per meter proposed against historical and market information.

In the absence of basic details such as the number of meters to be replaced or of a business case it is challenging for us to recommend including the proposed Morton Vale meter renewal expenditure in the next price path. However, based on our understanding that there is an obligatory requirement to replace meters, we have assumed that 25% of the meters included in the register will be replaced in the future price path (13 meters). We note that our assumption is not based on data and information from Seqwater as figures were inconsistent and no output details were available. Therefore, we recommend an expenditure to cover the replacement of 13 meters using the historical cost per meter of \$11K. This provides a total meter renewals expenditure of \$139K for Morton Vale. The table below shows our recommendation and resulting adjustment.

Table 3-5 – Summary of recommended expenditure for Morton Vale (\$FY24, 000’s)

Price Path Scheme	Current FY24	Interim FY25	FY26	FY27	Future FY28	FY29
Seqwater Proposed	-	-	-	600	-	-
Recommended	-	-	-	139	-	-
Adjustment	-	-	-	(461)	-	-

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

We understand that Seqwater only develops business cases only within one year of projected expenditure. However, we consider it reasonable to expect that robust supporting information and clear justifications should be presented for material proposed renewals expenditure as without this information it is not possible to assess its prudence and efficiency. For example, Seqwater should be able to provide the driver, breakdown of costs, scope and output (e.g. number of meters) included in this expenditure.

3.2 Logan River

The Logan River Water Supply Scheme operates within the Logan River Basin, providing bulk raw water to water allocation holders across nine zones within the Scheme. Stretching along a total length of 101.4 km of the Logan River and 27 km of Burnett Creek, its primary purpose is to supplement natural flows for the fertile alluvial areas along Burnett Creek and the Logan River.

Regulation of the Scheme falls under the Logan River Water Supply Scheme Resource Operations Licence (ROL), initially granted in December 2009 and subsequently amended on February 16, 2023.

²¹ QCA RFI 52 Seqwater Procurement Procedures



3.2.1.1 Historical metering renewal

In its proposal, Seqwater included a meter renewal expenditure of \$792K (\$FY24) over FY19 to FY23 for the Logan River scheme. The profile of expenditure is shown in the table below.

Table 3-6 – Historical meter renewals expenditure for Logan River (\$FY24, 000's)

Scheme	Previous Price Path			Current Price Path		
	FY19	FY20	FY21	FY22	FY23	FY24
Logan River	102	367	287	4	32	197 ²²

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024 and Logan River Scheme Submission 2026-2029, Seqwater, November 2023

3.2.1.1.1 Justification

As discussed in previous sections, we understand that the main driver for the replacement of the meters is legislative. Per Seqwater’s response to RFI 48²³, it was indicated that the old meters are being replaced with pattern approved electromagnetic meters, as at the time of replacement, no mechanical meters were approved. Additionally, Seqwater provided that the replacement of the meters will improve accuracy of reading and address access issues related to meters.

3.2.1.1.2 Procurement

As highlighted in earlier sections, Seqwater’s procurement approach included the delivery and project management of the meter replacement program by its Minor Works team, with any required civil and piping works being completed by contractors. Engineering was undertaken by Wood under the Seqwater Maintenance Collaboration Contract (SCMC).

Seqwater stated that it had selected Krohne as the meters supplier after technical assessment was completed by the Commercial Services team. We also note that Krohne is listed as a preferred equipment for irrigation activities. However, no additional information was provided to demonstrate the criteria assessed by Seqwater for the selection of Krohne as a preferred equipment.

3.2.1.1.3 Delivery

Per information provided by Seqwater, we understand that the replacement of Logan River meters occurred by implementing four projects²⁴. These projects are:

- Aug-19: ILR - 10 - Meters
- Jun-19: ILR - 20 Meters
- Nov-19: ILR - 30 Meters
- Aug-22: ILR/IWV - 67 Meters (Covered replacement in both Logan River and Warrill Valley)

Similar to the changes included for the Central Lockyer scheme, the Logan River meter replacement projects included a change to purchase compliant meters, different from what was originally budgeted for. This change had minimal impact on the projects’ budgets. It is worth noting that the final variance from the four projects was positive, indicating that, collectively, the projects came in under the original budget.

²² Note that this expenditure is part of the future meters renewals program for Logan River which is discussed in the forecast renewals section.

²³ QCA RFI 48 meter validation process

²⁴ QCA RFI 36 Minor Works Irrigation Meters 2019 to 2024.xlsx, Seqwater, March 2024

Over the FY19-23 period, Seqwater replaced 51 meters²⁵ at a total cost of \$781K, which represents a rate of \$15K per meter replaced.

3.2.1.1.4 Assessment of efficiency and prudence

Seqwater undertook the replacement projects to address regulatory, maintenance, and safety issues. The timing of the replacement is understood to be driven by the age of the assets as well as the regulatory requirement to replace the meters prior to the validation due date in Schedule 11 of the Water Regulation 2016. In response to RFI 49, Seqwater stated that:

“In section 12 of this document [Metrological Assurance Framework 2], Replacing a meter, the example for an end-of-life meter replacement schedule for a non-pattern approved mechanical meter is 10 years. The meters in question are non-pattern approved mechanical meters which have been in service for over 10 years.”

The approach used to deliver the meter replacement project regarding installation, project management, and engineering is considered to be appropriate and is in line with our expectations.

However, we are not able to conclude that the process of purchasing the meters was completed to promote competitive pricing. This is due to the lack of information provided by Seqwater relating to this issue.

3.2.1.2 Forecast metering renewal (FY25-29 and beyond)

Seqwater has proposed \$1.2M (\$FY24) in meter renewals expenditure for Logan River. As can be seen in the table below, the expenditure is expected to occur over FY24 to FY27.

Table 3-7 – Future meter renewals expenditure for Logan River (\$FY24, 000’s)

Scheme	FY24	FY25	FY26	FY27	FY28	FY29
Logan River	197	854	80	41	-	-

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024 and Logan River Scheme Submission 2026-2029, Seqwater, November 2023

3.2.1.2.1 Justification

Per communication with Seqwater, the main driver for the replacement of the meters is understood to be legislative, requiring the old meters to be renewed with meters that meet the water meters standard. In the detailed business case for the Logan River meter replacement project, Seqwater stated the following justification²⁶:

- **Age and Composition of Meter Fleet:** The meter fleet primarily consists of old mechanical paddle meters, which are susceptible to wear in the operating environment of raw water. Additionally, a majority of these meters lack pattern approval to meet compliance requirements set by the Federal Government's National Framework, established for non-urban water metering.
- **Inadequate Meter Installations:** Most irrigation meters were installed when accuracy requirements were lower, resulting in installations that may not enable accurate flow measurement regardless of the asset condition.
- **Safety Concerns:** Ensuring operator safety is challenging due to the placement of meters on stream banks. Uneven, steep terrain concealed by grass poses risks of slips, trips, and falls. Moreover, the stream banks

²⁵ QCA RFI 40 Logan River Irrigation scheme Water Meters - Detailed Business Case. Seqwater, March 2024

²⁶ Ibid



serve as favourable habitats for snakes, heightening the risk of snake bites for personnel working in these areas.

- **Deterioration during Dry Period:** The condition of the meter fleet significantly deteriorated during a dry period preceding 2008 when water availability was scarce. Many irrigators abandoned their works during this time, leading to the neglect and disrepair of assets, including meters.

3.2.1.2.2 Cost

Per the detailed business case²⁷ for the Logan River meter replacement, the costs include investigation, design, procurement, and construction. The following table is a snippet from the business case showing a breakdown of proposed cost for the meter replacement program.

Table 3-8 – Breakdown of meter replacement cost for Logan River

Items	Sub-Items	Cost
Project Documentation (PASS, safety plans, inductions)		\$50,000
Investigations	\$400 each meter	\$24,000
Engineering Design and Drafting	\$500 each meter	\$30,000
Mobilisation / Demobilisation	\$500 each meter	\$30,000
Excavation	\$400 each meter	\$24,000
Construction	\$2,000 each meter	\$120,000
Mechanical Assets	Flowmeter (\$3,500 each)	\$240,000
	Valving and pipework (\$2,000)	\$120,000
Mechanical Install Works	\$3,000 each meter	\$180,000
Commissioning and Handover	\$400 each meter	\$24,000
Environmental controls	\$600 each meter	\$24,000
Seqwater Communications Requirements		\$36,000
Deliverables Total	Sub-Total – Contractor costs	\$902,000
Provisional Funds	Refer Risk register	\$155,000
Planning and BC development	Internal resource time / costs (costs to date)	\$15,000
Seqwater Costs *	Project management	\$100,000
	Permits	
	Shutdowns	
	Stakeholder Support	
Project Allocation Costs	Sub-Total – Delivery Budget	\$1,172,000
Contingency (+ 20%)		\$234,000
Total	Business Case Total	\$1,406,000

Note: The final value is different from what is included in Seqwater’s proposal for the Logan River scheme. Per the Logan River Scheme submission, Seqwater agreed with customers to remove contingency from the meter renewal program²⁸.

²⁷ Ibid

²⁸ Logan River Water Supply Scheme Submission 2025-2029, Page 8, Seqwater, November 2023



As can be seen in the table, Seqwater used a meter cost of \$3.5K per flowmeter. In its response to RFI 50 regarding the basis for the cost, Seqwater provided that the cost was developed using values provided by its supplier, Krohne. It stated that the costing for the most standard flow meter (DN100), including a sun cover, sourced from Krohne, amounts to \$3.1K. We understand that during the early business case stage, precise sizing and installation requirements can be challenging. Seqwater presented the following factors that contribute to this uncertainty:

- **Relocation Considerations:** Instances may arise where relocating the meter installation necessitates a change in meter size to align with the new location's main size.
- **Farmer-Driven Changes:** Water level fluctuations, such as drought conditions, may prompt farmers to modify meter sizes. Subsequently, when upgrading meter installations, requests may arise to revert to the original size.
- **Evolving Priorities:** Despite initially identifying a list of meters in the business case, changes in project delivery timelines, sometimes up to a year, can lead to the identification of higher-priority meters, resulting in alterations to the initial list.

Taking into consideration a worst-case costing of \$4K for larger meters and lowest cost of \$2.2K for smaller meters, Seqwater presented a budget estimate of \$3.5K per flowmeter to accommodate the range of flowmeter sizes. However, it appears from the calculation shown in the cost breakdown table above, Seqwater used a cost of \$4K, not \$3.5K as presented, to estimate \$240K ($\$4K \times 60$ meters) for the purchasing of flowmeters.

The Krohne list also includes costs for both "compact" and "remote" meters for each size, where the latter costs around \$700 more.

Overall, the budget includes an estimate to replace 60 meters²⁹, which represents a cost rate of \$20K per meter. This cost rate is 28% higher than the historical cost of meter replacement for Logan River, which was \$15K per meter. Additionally, the proposed cost is 99% higher than the Seqwater's historical average cost per meter of \$11K.

3.2.1.2.3 Assessment of efficiency and prudence

Seqwater provided that its main driver to delivery this meter replacement program is due to legislative requirement. The time of replacement is understood to be influenced by the validation date included in the Water Regulation 2016. Seqwater used values provided by its supplier, Krohne, to develop the budget for the meter replacement project. The total cost proposed includes procurement, project management, construction, and contingency.

Based on our assessment of both the historical (actual) and future renewals expenditure associated with meter replacement, we consider that the proposed increase in cost per meter is not justified by Seqwater. It is not clear to us as to why the costs at Logan River are projected to be increased by almost double per meter. As discussed in section 2.2.3, Seqwater explained that the increase is due to the change in meters and piping specifications due to the standard. However, we understand that the historical meter renewal projects were completed to install meters that are compliant with the non-urban water meter standard so it is not clear why future unit costs would be higher.

Therefore, we recommend adjusting future Logan River meter renewal expenditure using historical average unit costs per meter. Because Seqwater has delivered multiple replacement projects, we consider that it has established knowledge and understanding of the deliverables from historical projects that should allow it to install the meters at the historical average unit cost. Our recommendation assumes that Seqwater has become more efficient with increased understanding of the meter replacement scope across all of its irrigation schemes. This results in a recommendation of \$633K (\$FY24) for the Logan River meter renewal program which includes the replacement of 60 meters. The table below summarises our recommendation.

²⁹ This is 3 more higher than the proposed 57 meters. This is because Seqwater wanted to include allowance to cover unidentified meters per the Logan River Meter Renewal Business Case.

Table 3-9 – Summary of recommended meter renewal expenditure for Logan River (\$FY24, 000's)

Price Path Scheme	Current	Interim	Future			Total	
	FY24	FY25	FY26	FY27	FY28		FY29
Seqwater Proposed	197	854	80	41	-	-	1,172
Recommended	106	461	43	22	-	-	633
Adjustment	(91)	(393)	(37)	(19)	-	-	(539)

Source: AtkinsRéalis analysis using documents provided by QCA and Seqwater

3.3 Lower Lockyer

The Lower Lockyer Valley Water Supply Scheme, situated west of Lowood in the Lockyer Valley of South East Queensland, is centered around Atkinson Dam and serves as a crucial water resource for irrigation purposes. Governed by the Moreton Water Plan and Moreton Water Management Protocol, the Scheme's operations are guided by the Lower Lockyer Valley Water Supply Scheme Operations Manual.

Operating on a water year schedule from July 1st to June 30th, the Scheme adopts a single tariff group known as "Lower Lockyer Valley," establishing pricing structures for water usage within the Scheme.

3.3.1.1 Historical metering renewal

Seqwater included \$92K in meter replacement expenditure for Lower Lockyer, which replaced 10 meters³⁰. The expenditure profile is shown in the table below.

Table 3-10 – Historical meter renewals expenditure for Lower Lockyer (\$FY24, 000's)

Price path Scheme	Previous		Current			
	FY19	FY20	FY21	FY22	FY23	FY24
Lower Lockyer	72	18	1	2	-	-

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

3.3.1.1.1 Justification

As discussed in previous sections, the main driver for the replacement of the meters is legislative, where the current meters are not compliant with the water meters standards.

3.3.1.1.2 Procurement

As highlighted in earlier sections, Seqwater's procurement approach included the delivery and project management of the meter replacement program by its Minor Works team, with any required civil and piping works being completed by contractors. Engineering was undertaken by Wood under the Seqwater Maintenance Collaboration Contract (SCMC).

Seqwater stated that it had selected Krohne as the meters supplier after technical assessment was completed by the Commercial Services team. No additional information was provided to demonstrate the criteria assessed by Seqwater.

³⁰ QCA RFI 36 Minor Works Irrigation Meters 2019 to 2024, Seqwater, March 2024

3.3.1.1.3 Delivery

The replacement of meters for the Lower Lockyer scheme started in FY19 and was completed in FY22. The project had an initial budget of \$150K (\$nominal) but was delivered at 50% of the initial budget. No change requests were initiated during the delivery of the project.

3.3.1.1.4 Assessment of efficiency and prudence

The project was implemented to replace meters in the Lower Lockyer with meters that meet standards. The project was delivered at cost of \$9K per meter.

We consider the approach and delivery of the meter renewal for the Lower Lockyer scheme to be in line with our expectation. However, we are not able to conclude on that the procurement of flowmeters and selection of Krohne was conducive to competitive pricing and cost that reflect the market.

3.3.1.2 Forecast metering renewal (FY25-29 and beyond)

Seqwater has proposed \$1.8M in metering renewals expenditure for Lower Lockyer over the future price path and beyond, with a completion of meter replacement in FY33³¹. However, we note that expenditure information for Lower Lockyer showed a profile of the same expenditure up to 2030, as shown in the table below.

Table 3-11 – Future meter renewals expenditure for Lower Lockyer (\$FY24, 000's)

Scheme	FY26	FY27	FY28	FY29	FY30
Lower Lockyer	-	-	77	217	1,490

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024 and Lower Lockyer Scheme Submission 2026-2029, Seqwater, November 2023

3.3.1.2.1 Justification

Per earlier discussions, Seqwater stated that it is required to update its meters to meet regulatory obligations set by the water meters standard.

Seqwater did not provide additional justification for the replacement of meters in this scheme. We also note that there were no detailed business case for this scheme. We understand that this project was developed alongside other projects with more detailed business cases (e.g. Mary Valley water supply scheme)³².

3.3.1.2.2 Cost

Seqwater has proposed a cost of \$1.8M to replace meters in the Lower Lockyer scheme. Seqwater did not provide information regarding the number of meters that are proposed to be replaced. Using a data set that was provided by Seqwater regarding future meter renewals, we have identified a potential 130 meters³³. The data set was shared in response to our request to provide a list of all meters to be replaced in the future price path and beyond³⁴.

It is worth noting that this data set is not consistent for other schemes where the business cases were developed. For example:

³¹ Lower Lockyer Scheme Submission 2026-2029, Page 14, Seqwater, November 2023

³² Based on response from Seqwater to QCA RFI 39.

³³ Register provides 140 meters for Lower Lockyer. We have assumed that the 10 meters that were replaced in the current and previous price path are not included in the future proposed meter renewal expenditure.

³⁴ QCA RFI37 replace meters future price path

- **Mary Valley:** the scheme shows 236 meters to be replaced³⁵, but the developed business case shows replacement for only 60 meters.
- **Logan River:** the data set shows Logan River to have 128 meters³⁵, but the developed business case for the scheme presents 60 meters to be replaced in the future.

Therefore, we are not confident that the proposed meter renewal expenditure for Lower Lockyer includes the replacement of 130 meters, which would reflect a cost per meter of \$13K. This unit cost is 38% higher than the historical cost per meter for Lower Lockyer (\$9K per meter) and 22% higher than the historical average cost per meter across Seqwater's schemes (\$11K per meter). However, the unit cost is significantly lower than the average cost per meter proposed for Logan River and Mary Valley (\$21K per meter). This indicates that the costs for Logan River and Mary Valley might not have been used to build up the total cost for Lower Lockyer, as was suggested by Seqwater in its response to RFI 39, where it stated that:

“Lower Lockyer is based on the original Business Case, which has estimated costing for Materials and Labour (internal and External).”

It is not clear if the costs included in the Logan River and Mary Valley meter replacement projects inform the build-up of costs for the Lower Lockyer meter replacement project.

Seqwater has indicated that business cases for projects are developed within a year of the estimated project start time³⁶. Since, the Lower Lockyer meter replacement is projected to start in FY28, Seqwater has not developed a business case for this project.

3.3.1.2.3 Assessment of efficiency and prudence

We understand that the Lower Lockyer meter replacement project aims to ensure compliance of meters with the non-urban water meter standard. Seqwater also mentioned that the new meters will enhance accuracy and address issues related to asset condition and age.

In a general response regarding the delivery approach, Seqwater indicated that its Minor Works team will handle the project management and installation, while additional civil and piping work will be performed by contractors as needed. Furthermore, engineering activities will be conducted by Wood under the Seqwater Maintenance Collaboration Contract (SCMC). We believe this approach is appropriate for delivering the meter replacement program.

In response to the procurement procedure³⁷, Seqwater stated that it selected Krohne as the flowmeter supplier following a technical assessment and that Krohne is included in the preferred equipment list. However, the response did not include additional information on the selection criteria or the costs proposed by other suppliers. As a result, we cannot comment on the appropriateness of the meter purchasing process in terms of promoting competitive pricing.

Seqwater has provided minimal justification for its planned expenditure on the meter renewal program and did not present robust supporting evidence outlining the cost basis and assumptions for the Lower Lockyer meter renewal program. The lack of information prevents us from assessing the efficiency and prudence of the expenditure, including a comparison of the proposed cost per meter against historical and market data.

It is challenging to provide a recommendation for the meter replacement expenditure in the absence of basic details such as the number of meters to be replaced or of a business case. However, we understand that due to the legislative

³⁵ This figure excludes Krohne meters, as we assume they are not included in the expenditure for the future price path.

³⁶ QCA RFI 53,55,57,58 Metering Renewals

³⁷ QCA RFI 52 Seqwater Procurement Procedures

obligations, Seqwater will be required to change some of its meters in the future price path. Therefore, we have included expenditure for the replacement of 25% of the meters identified as potential meters to be replaced and used Seqwater’s historical average cost per meter of \$11K. This results in a recommended expenditure of \$346K to replace 33 meters over the period between FY28-FY30. The recommended expenditure follows the same profile of Seqwater’s proposed expenditure. The table below outlines our recommendation and adjustments.

Table 3-12 – Summary of recommended expenditure for Lower Lockyer (\$FY24, 000’s)

Price Path Scheme	Current	Interim	Future			Beyond	Total	
	FY24	FY25	FY26	FY27	FY28	FY29		FY30
Seqwater Proposed	0	0	0	0	77	217	1,490	1,784
Recommended	0	0	0	0	15	42	289	346
Adjustment	0	0	0	0	(62)	(175)	(1,201)	(1,438)

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

We understand that Seqwater only develops business cases within one year of projected expenditure. However, we consider it reasonable to expect that robust supporting information and clear justifications should be presented for material proposed renewals expenditure as without this information it is not possible to assess its prudence and efficiency. For example, Seqwater should be able to provide the driver, breakdown of costs, scope and output (e.g. number of meters) for the proposed expenditure.

3.4 Mary Valley

The Mary Valley Water Supply Scheme was established in 1963 to support irrigation in the sugar, dairy, and horticulture sectors following the construction of Borumba Dam. Water from Borumba Dam supplements flows in the Mary River, while the Pie Creek system is supported by channels and pipes distributing water diverted from the Mary River.

This Scheme operates under the Mary Valley Water Supply Scheme Resource Operations Licence (ROL) issued on September 5, 2011, and the Operations Manual issued in April 2021. Efforts to replace the Mary Basin Water Plan 2006 are underway, with the new plan expected to be finalized before the current plan expires in May 2024.

The water year for the Scheme runs from July 1 to June 30. The Scheme is divided into two tariff groups: “Mary Valley” and “Pie Creek.” This review only considers Mary Valley as the expenditure associated with Pie Creek was minimal.

3.4.1.1 Historical metering renewal

Seqwater included \$536K (\$FY24) in historical meter renewal expenditure over FY19 to FY21 for Mary Valley. The profile of the expenditure is shown in the table below. Note that the below table shows expenditure for FY23 and FY24 which will be discussed as part of the forecast renewal assessment for Mary Valley in section 3.4.1.2.

Table 3-13 – Historical meter renewals expenditure for Mary Valley (\$FY24, 000’s)

Scheme	Previous Price Path			Current Price Path		
	FY19	FY20	FY21	FY22	FY23	FY24
Mary Valley	293	241	2	-	289	104

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024 and Mary Valley Scheme Submission 2026-2029, Seqwater, November 2023



3.4.1.1.1 Justification

As discussed in previous sections, we understand that the primary motivation for replacing the meters is legislative compliance. According to Seqwater's response to RFI 48³⁸, the old meters were replaced with pattern-approved electromagnetic meters because, at the time of replacement, no mechanical meters had received approval. Additionally, Seqwater stated that the new meters will enhance reading accuracy and resolve access issues associated with the old meters.

3.4.1.1.2 Procurement

For the Mary Valley scheme, Seqwater provided that the Northern Operations team had undertaken the project management for the meter replacement projects. This is different from other historical replacement projects where the Minor Works team undertook all project management and installation activities. We have also inferred from information provided by Seqwater³⁹, that the Northern Operations team has delivered the installation of meter. Given that there were no further clarification, we assume that engineering activities was completed by Wood under the SCMC arrangement.

Additionally, Seqwater stated that it had selected Krohne as the meters supplier after technical assessment was completed by the Commercial Services team. We also understand that the Krohne are listed in Seqwater's preferred equipment list. No additional information was provided to demonstrate the criteria assessed by Seqwater.

3.4.1.1.3 Delivery

Seqwater has not provided sufficient information for us to fully review the delivery of the Mary Valley historical meter replacement renewal expenditure. Information regarding budgets, variations, and final costs were presented for all other schemes along with historical expenditure.

Seqwater's response to RFI 36, which requested a list of all meters replaced, presented information regarding all meters that were replaced from FY19 to March 2024. Using this data, we counted that Seqwater has replaced 169 meters between FY19 and FY22. This results in an average total cost of \$3K per meter, which appears low compared with other historical meter projects and compared to the other documents provided for this scheme such as the FY20 Project Plan and FY18-19 project close-out documents as outlined below.

Seqwater provided a Project Plan for meter replacement in Mary Valley developed in FY20 which included information about the replacement of 16 meters within the scheme in FY20⁴⁰. The budgeted cost associated with this replacement project was \$180K (\$FY24) or \$153K in \$nominal terms. The total cost per meter installation included in the project plan was \$13K per meter.

Additionally, Seqwater provided a close-out document for a Mary Valley meter replacement project which took place in FY18 and FY19 and showed 20 meters being replaced for a total cost of \$237K (\$nominal) i.e. approximately \$12k per meter installed (nominal)⁴¹.

It is hard to reconcile historical expenditure with the replaced meter register figures. Because of the low implied average cost of replacement per meter compared with the project plan and close out document provided and the lack of documentation such as plans or close-out documents, we are not confident that the number of meters replaced presented for Mary Valley in RFI 36 is accurate or reflects the historical expenditure included for Mary Valley.

³⁸ QCA RFI 48 meter validation process

³⁹ QCA RFI 46 Project Plan replace meters 19-20 Mary Valley include Pie Creek

⁴⁰ Ibid

⁴¹ QCA RFI 46 Meter replaced 2018-19 and 2022-23.xlsx

3.4.1.1.4 Assessment of efficiency and prudence

Per the information available and provided by Seqwater, we understand that the driver for Mary Valley meter replacement project is the same as that for other schemes, legislative requirements. The meter replacement project is also seen to improve the accuracy of data.

We also infer, from the information provided, that the delivery approach for Mary Valley is similar to that of other historical meter replacement projects, except that project management and installation were undertaken by the Northern Operations team.

The Mary Valley meter replacement project did not include sufficient information to support the expenditure. Seqwater did not present close out documents for all meters replacement projects in the scheme and was not able to demonstrate that the delivery and cost was efficient for the works required. Additionally, the information regarding the flowmeters in the project plan suggests that the flowmeters installed in the historical period might not be the same as the proposed for the future. This could mean that the flowmeters installed under the historical meter renewal expenditure are now non-compliant.

Because of the lack of clarity and insufficient information provided by Seqwater in relation to the Mary Valley meter replacement project, we are not able to provide a definitive recommendation regarding the meter renewal expenditure. We have not recommended adjustments as there is uncertainty around the number of meters replaced during the historical period. The below table summarises our recommendation.

Table 3-14 – Summary of recommended historical expenditure for meter renewals for Mary Valley (\$FY24, 000's)

Scheme	Previous Price Path			Current Price Path		
	FY19	FY20	FY21	FY22	FY23	FY24
Seqwater Proposed	293	241	2	-		
Recommended	293	241	2	-		
Adjustment	-	-	-	-		

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

Note: Recommended expenditure for FY23 and FY24 is discussed in the following section.

3.4.1.2 Forecast metering renewal (FY25-29 and beyond)

Seqwater included \$1.4M (\$FY24) in meter renewals expenditure for Mary Valley. As can be seen in the table below, the expenditure is expected to occur over FY23 to FY26.

Table 3-15 – Future meter renewals expenditure for Mary Valley (\$FY24, 000's)

Scheme	Current		Interim	Future		
	FY23	FY24	FY25	FY26	FY27	FY28
Mary Valley	289	104	499	514	-	-

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

3.4.1.2.1 Justification

The drivers presented by Seqwater for the Mary Valley meter replacement project in its business case is the same for Logan River, which was discussed earlier in Section 3.2.1.2.0. These included:

- Primary:
 - compliance with the non-urban water meter standard
- Secondary:
 - Age and Composition of Meter Fleet.
 - Inadequate Meter Installations
 - Safety Concerns
 - Deterioration during Dry Period

No additional justifications were provided in the reviewed documents.

3.4.1.2.2 Cost

Per the detailed business case⁴² for the Mary Valley meter replacement project, the costs include investigation, design, procurement, and construction. The following table is a snippet from the business case showing a breakdown cost for the meter replacement program.

⁴² QCA RFI 40 Mary River Water Supply Scheme - Flow Meters detailed Business Case

Table 3-16 – Breakdown of meter replacement cost for Mary Valley

Items	Sub-Items	Cost
Project Documentation (PASS, safety plans, inductions)		\$50,000
Investigations	\$400 each meter	\$24,000
Engineering Design and Drafting	\$500 each meter	\$30,000
Mobilisation / Demobilisation	\$500 each meter	\$30,000
Excavation	\$400 each meter	\$24,000
Construction	\$2,000 each meter	\$120,000
Mechanical Assets	Flowmeter (\$3,500 each)	\$210,000
	Valving and pipework (\$2,000)	\$120,000
Mechanical Install Works	\$3,000 each meter	\$180,000
Commissioning and Handover	\$400 each meter	\$24,000
Environmental controls	\$600 each meter	\$24,000
Seqwater Communications Requirements		\$36,000
Deliverables Total	Sub-Total – Contractor costs	\$872,000
Provisional Funds	Refer Risk register	\$155,000
Planning and BC development	Internal resource time / costs (costs to date)	\$15,000
Seqwater Costs *	Project management Permits Shutdowns Stakeholder Support	\$75,000
Project Allocation Costs	Sub-Total – Delivery Budget	\$1,117,000
Contingency (+ 20%)		\$223,000
Total	Business Case Total	\$1,340,000

Note: The business case total in this table is different from the figure in Table 3-15 above, \$1.4M. We assume that the small difference is due to different inflation years used.

Seqwater clarified that the \$3.5K cost per meter assumption is due to the fact that the new meters proposed could be bigger than the current meters in place and that the upper limit for a cost of meters is close to \$4K. As discussed in the Logan River section, the uncertainty in size is due to several factors, including:

- Relocation Considerations
- Farmer-Driven Changes
- Evolving Priorities

Overall, the budget includes estimate to replace 60 meters, which represents a cost rate of \$23.4K per meter. This cost rate is significantly higher than the cost of historical meter replacement for proposed for Logan River. It is also 129% higher than the historical average cost per meter (\$10K).



Seqwater attributed the following reasons for the cost increase for Mary Valley and Logan River⁴³:

- **Specification Compliance:** In 2018, Seqwater issued a new specification for meters to comply with Queensland Water Regulation 2016 and the National Framework for Non-Urban Water Metering. This specification mandated several changes:
 - **Flowmeter Requirements:** The new specification required flowmeters to comply with AS4747.2 and have NMI M10 pattern approval. This necessitated a switch from mechanical to electromagnetic meters.
 - **Piping Design Changes:** The revised specification required changes in piping design (layout, materials, etc.) and subcontracting to comply with Seqwater's engineering and construction procedures.
 - **Material Upgrades:** Pipework material was upgraded from galvanized mild steel to stainless steel for durability and reduced installation risks. Post-COVID material costs further increased.
- **Installation Challenges:** For meters installed on steep or unsafe riverbanks, relocation to the top of the bank was necessary. This involved significant excavation by external civil contractors and ground penetration radar (GPR) to detect underground services.
- **2022 Floods:** Due to floods, access to meters became more challenging and therefore has impacted the cost to increase.

Given that the historical and future meter replacement program is driven by the non-urban water meter standard established in 2018, we are not clear why the cost increases are only incorporated in the future renewals program.

We note that per RFI 36, Seqwater has replaced 17 meters in FY23 for Mary Valley. Seqwater has also included an expenditure of \$289K (\$FY24) for FY23. This results in a cost per meter of \$17K. However, we understand that mobilisation costs and early engineering costs are also included in the FY23 expenditure. So, the cost per meter might not be representative of the actual costs. Additionally, we do not have strong confidence in the data provided in RFI 36 because of discrepancies discussed earlier.

3.4.1.2.3 Assessment of efficiency and prudence

Similar to other projects assessed in this report, the main driver for the replacement of meters is to align with legislative requirements relating to non-urban water meters. Seqwater also provided that the meters are due for replacement to resolve condition and accuracy issues. We consider the justification to replace the meters to be appropriate.

As for the cost, Seqwater included a cost per meter that is significantly higher than previously delivered meter replacement projects. The increase was not clearly justified in the documents supplied and we were not able to identify reasons for the step-change.

Therefore, we recommend using Seqwater's historical average cost per meter (\$11K per meter) to estimate the future meter renewals expenditure. This results in a recommended meter renewal expenditure of \$633K for Mary Valley. In applying our recommendation, we have allowed for actual expenditure in FY23 and adjusted for the total for FY24-FY25. The following table summarises our recommendation showing the associated adjustment.

⁴³ QCA RFI 53,55,57,58 Metering Renewals

Table 3-17 – Summary of recommended meter renewal expenditure for Marry Valley (\$FY24, 000's)

Price Path	Current		Interim		Future		Total
	FY23	FY24	FY25	FY26	FY27	FY28	
Seqwater Proposed	289	104	499	514	0	0	1,406
Recommended	289	32	153	158	0	0	633
Adjustment	0	(72)	(345)	(356)	0	0	(773)

Source: AtkinsRéalis analysis using documents provided by QCA and Seqwater

We also note that we are not able to conclude on the efficiency of the procurement of the flowmeters supplier approach taken by Seqwater. This is due to the lack of information provided in relation to selection criteria and comparative pricing with other potential suppliers.

3.5 Warrill Valley

Established subsequent to the completion of Moogerah Dam in 1961, the Warrill Valley Water Supply Scheme supports irrigation in South East Queensland. Primarily designed to support irrigation across approximately 8,000 hectares of farmland, it also caters to the water needs of urban and industrial users. Oversight of the Scheme falls under the purview of the Moreton Water Management Protocol, with day-to-day operations managed in accordance with the Warrill Valley Water Supply Scheme Operations Manual.

Aligned with the regional water management framework, the Scheme operates on a water year cycle spanning from July 1st to June 30th. To streamline billing and administration, a singular tariff group, “Warrill Valley,” is in place, providing clarity and consistency in water usage pricing across the Scheme. This cohesive approach ensures equitable access to water resources while facilitating sustainable agricultural and economic development within the Warrill Valley region.

3.5.1.1 Historical metering renewal

In its proposal, Seqwater included a meter renewal expenditure of \$2.5M (\$FY24) over FY19 to FY24 for the Warrill Valley scheme. The profile of expenditure is shown in the table below.

Table 3-18 – Historical meter renewals expenditure for Warrill Valley (\$FY24, 000's)

Price path Scheme	Previous		Current			
	FY19	FY20	FY21	FY22	FY23	FY24
Warrill Valley	549	527	3	93	1,195	105

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

3.5.1.1.1 Justification

As discussed in previous sections, the main driver for the replacement of the meters is legislative, where the current meters are not compliant with the water meters standards. Additionally, Seqwater provided that the replacement of the meters will improve accuracy of reading and address access issues related to meters.

3.5.1.1.2 Procurement

As mentioned previously, Seqwater’s procurement strategy involved managing the meter replacement program through its Minor Works team, with any necessary civil and piping tasks outsourced to contractors. Engineering services were provided by Wood under the Seqwater Maintenance Collaboration Contract (SCMC).



Seqwater indicated that Krohne was chosen as the supplier for the meters following a technical assessment conducted by the Commercial Services team. However, no further details were provided regarding the criteria evaluated by Seqwater during this assessment.

3.5.1.1.3 Delivery

Per information provided by Seqwater, we understand that the replacement of Warrill Valley meters occurred by implementing four projects⁴⁴. These projects are:

- Aug-18: IWV – 25 Meters
- Jun-19: IWV - 30 Meters
- Nov-19: IWV – 30 Meters
- Sep-22: IWV – 60 Meters

Only the last projects shown in the list above included a change that impacted the budget by \$81K. All other projects were able to accommodate the change of meters type that are compliant within the original approved budget.

Over the FY19-23 period, Seqwater replaced 145 meters⁴⁵ at a total cost of \$2.3M (excluding forecast FY24), which represent a rate of \$16K per meter replaced (\$FY24).

3.5.1.1.4 Assessment of efficiency and prudence

Seqwater undertook the replacement projects to address regulatory, maintenance, and safety issues. The timing of the replacement is understood to be driven by the age of the assets as well as the regulatory requirement to replace the meters prior to the validation due date in Schedule 11 of the Water Regulation 2016.

The approach to the delivery the meter replacement project by utilising the Minor Works team and Wood, through the SCMC arrangement, for project management, engineering, and installation is considered to be appropriate and is line with our expectation.

We note that the cost per meter of \$16K is the highest among historical meter replacement projects. Seqwater explained the reasons for Warrill Valley being a more challenging replacement project by stating that⁴⁶:

Warrill Valley irrigation scheme is river based with some of the existing meter installations installed on the riverbank that can be steep and difficult or unsafe to access. For these sites the flowmeter installations must be relocated to the top of the bank, that requires significant excavation performed by an external civil contractor with ground penetration radar (GPR) completed to identify any underground services (eg. Electrical, telecommunications, utilities) that adds significant cost to the installation. In addition, surface water meters are on average larger than bore meter installations (up to 200mm).

We consider that it is reasonable for the cost per meter to vary across the different schemes and that some schemes might have more challenges than others as highlighted by Seqwater above. Therefore, we conclude that the approach taken by Seqwater to delivery of the Warrill Valley meter replacement projects appears appropriate.

However, due to the lack of information provided regarding the procurement of the flowmeters supplier, Krohne, we are not able to conclude that the process taken by Seqwater was efficient or was conducive to competitive pricing that reflect the market.

⁴⁴ QCA RFI 36 Minor Works Irrigation Meters 2019 to 2024.xlsx, Seqwater, March 2024

⁴⁵ Ibid

⁴⁶ RFI 58 in QCA RFI 53,55,57,58 Metering Renewals

3.5.1.2 Forecast metering renewal (FY25-29 and beyond)

Seqwater included \$225K (\$FY24) in meter renewals expenditure for Warrill Valley. The table below shows the proposed profile of the expenditure starting in FY26.

Table 3-19 – Future meter renewals expenditure for Warrill Valley (\$FY24, 000’s)

Scheme	FY26	FY27	FY28	FY29
Warrill Valley	75	75	75	-

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

3.5.1.2.1 Justification

Per Seqwater’s overall response to the justification for the meter renewal, we understand that this meter replacement project falls under the same justification that was provided for other schemes, discussed in earlier sections.

However, information provided by Seqwater, including the submission for the scheme and Scheme Performance Reports, do not state a clear justification for the forecast meter replacement project. The scheme submission classifies the proposed expenditure as “metering spend” with no further explanation.

3.5.1.2.2 Cost

Per Seqwater’s response to RFI 39, the Warrill Valley expenditure was developed as an allowance using costs from delivery of other schemes. Additionally, Seqwater stated that “Customers in the Warrill Valley explicitly sought additional \$x in future meter replacement costs⁴⁷.” The Customer Reference Group (CRG) meeting referenced by Seqwater states⁴⁸:

“Seqwater have added a price stabilisation amount in the metering renewals of the ARR to maintain fixed Part A to the current Part A price. Customers happy with the stabilisation but don’t want the outer years of the price path to increase by inflation, the price to stay constant for the duration. (Fixed Part A)”

Although this was agreed with the customers, Seqwater did not provide supporting information relating to this cost estimate, such as cost breakdown (project management, engineering, etc.), number of meters to be renewed over the proposed period, or status of current meters.

Seqwater stated that it only develops business cases for projects within a year of their start date. Because this replacement project is not due to start until FY26, Seqwater has not developed a business case that highlights the projects alignment with goals and evaluates proposed costs.

3.5.1.2.3 Assessment of efficiency and prudence

We understand that the overall meter renewal program across all schemes is driven by the water meter standard’s requirement to replace non-compliant meters. Additionally, per the information provided, the expenditure was discussed and agreed with customers.

However, Seqwater has not provided any additional information regarding the basis of the costs proposed or the scope, including the number of meters to be renewed. There were no supporting evidence that current meters are non-compliant and will require replacement in the next price path.

In the absence of basic details such as the number of meters to be replaced or supporting information, it is not possible for us to recommend including the proposed expenditure in the future price path. We note that we have not applied the assumption that 25% meters might require replacement as the expenditure appears to be an allowance and that

⁴⁷ Seqwater response to QCA RFI 56

⁴⁸ Warrill Valley WSS Customer Reference Group– Meeting Summary, Seqwater, November 2023



proposed cost is relatively low compared to meters included in the RFI 37 meter register. The table below summarises our recommended expenditure for Warrill Valley's future expenditure.

Table 3-20 – Summary of recommended meter renewal expenditure for Warrill Valley (\$FY24, 000's)

Price Path Scheme	Interim		Future			Total
	FY25	FY26	FY27	FY28	FY29	
Seqwater Proposed	-	75	75	75	-	225
Recommended	-	-	-	-	-	-
Adjustment	-	(75)	(75)	(75)	-	(225)

Source: QCA RFI 39 Forecasts costs for metering renewal program, Seqwater, March 2024

We understand that Seqwater only develops business cases only within one year of projected expenditure. However, we consider it reasonable to expect that robust supporting information and clear justifications should be presented for material proposed renewals expenditure as without this information it is not possible to assess its prudence and efficiency.



4. Conclusions and recommendations

Seqwater was not able to meet for interviews to discuss some elements of the proposal in details, which required the completion of the review entirely based on the responses to RFIs and other supporting documents. These responses, while informative, have proven insufficient for a thorough analysis. The business cases and documents that Seqwater provided do not clearly and robustly establish the justification for prudence and efficiency in a structured manner. Specifically, these documents lack detailed articulation of the efficiency costings and do not adequately explain the necessity for the proposed timelines.

We understand that the main driver for both the historical and future meter renewal program is to comply with legislative requirements set out in the non-urban water meter standard. Specifically, Seqwater's meter fleet required and continues to require upgrades to move to pattern-approved meters⁴⁹. The justification provided in the document for the need and timing of replacement is not clear. However, we have taken the general view that because of the non-urban water meter standard requirement, Seqwater has needed (and will continue to need) to change its meters to comply with the standard.

However, we note that, from the information provided, Seqwater has not included meter renewal expenditure in the period beyond the price path (2030-58) to replace the meters that were already replaced in the current price path. There appears to be no clear plan for meter renewals program in relation to asset health management. We expect a significant expenditure like that proposed for meter renewals to include robust long-term plans.

In delivering its meter renewal program, Seqwater utilises its internal Minor Works team to manage and install the meters. Under the Seqwater Maintenance Collaboration Contract, Wood delivers the engineering activities required for this program. We also understand that any other activities required such as civil works or piping fabrication is completed through contractors assigned using Seqwater's procurement policies and procedures. We also note that for the Mary Valley, the Northern Operations team at Seqwater delivers the meter replacement program. In general, we view the approach taken to deliver these activities to be reasonable.

Per responses to RFI's, we understand that Seqwater selected Krohne as the flowmeters supplier after a technical assessment that was undertaken by the Commercial Services team. We understand that the meter type included in the standing offer agreement with Krohne is a pattern approved meter which comply with the non-urban water meter standard. We also note that the Krohne meters are included in the preferred equipment list for metering irrigation activities. However, Seqwater has not demonstrated the selection criteria assessed in its selection process and has not provided prices received from other potential suppliers.

Additionally, Seqwater has indicated in one of its customer reference group meetings⁵⁰ that the "only meter that they deem to be compliant with the standards at this time, is the Krohne." However, the pattern approved meters list includes numerous other suppliers. Several of the suppliers listed have been used by Sunwater, the other regulated irrigation service provider in Queensland. Seqwater has not provided further information to demonstrate that the selection of Krohne is efficient.

Because of the lack of supporting information from Seqwater in relation to the selection of Krohne as a supplier, we are unable to conclude that Seqwater's meter supplier procurement process was conducive to competitive pricing or reflect the market.

In several cases, Seqwater did not provide basic supporting evidence for its proposed meter renewal expenditure. For historical expenditure, Seqwater did not provide close-out documents or additional information for Mary Valley to enable assessment of approach, cost per meter, and other evaluation criteria. The project plan for the Mary Valley

⁴⁹ A list of pattern approved meters

⁵⁰ Warrill Valley Customer Reference Group Meeting Summary, Seqwater, November 2023

meter replacement project included information that contradicts with what we understood to be the driver for spend, compliance with the non-urban water meter standard. For example, the cost of meter included in the project plan is \$800, which is significantly lower than the cost of meter included in the future proposed replacement projects (\$3.5K). Additionally, the cost/budget included in the project plan was lower than what was included in the current price path. Due to lack of supporting information, we were not able to provide a definitive conclusion and have not recommended any adjustment to the historical meter renewal expenditure for Mary Valley.

The lack of supporting information also affected future meter renewals expenditure. The Morton Vale, Lower Lockyer, and Warrill Valley schemes included future meter renewal expenditure, but with no detailed business cases developed to support the expenditure. For Morton Vale and Lower Lockyer, we have included expenditure to replace 25% of the meters identified as potential meters to be replaced. This assumption is based on the understanding that Seqwater will likely require replacement of some meters due to legislative requirement. We have not recommended including the Warrill Valley future meter renewal expenditure as it appears to be an allowance and is relatively low compared to meters included in the register.

In our assessment of the meter renewals expenditure for Logan River and Mary Valley, we found that the full replacement cost per meter was significantly higher than Seqwater's historical average cost per meter (+104%) and other irrigation schemes in Australia (+136%). In its response to our request to clarify the reasons for the increase compared to historical average, Seqwater explained that this was mainly due to the need to comply with the non-urban water meter standard where more expensive flowmeters, piping materials, and design is required. This explanation does not align with our understanding that the historical meter renewals were also undertaken to comply with the non-urban water meter standard. Therefore, we have not been able to recommend accepting the proposed increase in unit costs and have recommended assuming that the cost per meter should be within the range of historical figures. We have applied an adjustment to Logan River and Mary Valley to reflect Seqwater's historical average cost per meter.

Based on our assessment of Seqwater's meter renewals program, we recommend the following:

- Seqwater should maintain an organised documentation of its procurement for certain activities such as the selection of the meters supplier. We expect that utilities should be able to present trail of supporting information to demonstrate that the process and selection represent best value for cost. Thorough documentation allows for better auditing and review, helping to verify that procurement decisions are made based on sound criteria and competitive pricing. It also facilitates internal and external stakeholder confidence, supports compliance with regulatory requirements, and enhances the overall efficiency and integrity of the procurement process.
- We recommend that Seqwater routinely develop comprehensive business cases for all significant proposed renewals expenditures, supported by robust information and clear justifications. This practice would enhance transparency, ensure careful evaluation of cost-effectiveness, align projects with strategic goals, and improve resource allocation. Additionally, it would minimize project execution risks, boost stakeholder confidence, and provide a clear framework for assessing financial, environmental, and operational impacts.



5. Summary of recommended meter renewals expenditure

The below table summarises our recommendation for Seqwater's meter renewals expenditure



Table 5-1 – Summary of recommended meter renewal expenditure for Seqwater across all irrigation schemes (\$FY24, 000's)



	Price path	Previous		Current				Interim	Future				Beyond
Scheme		FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Central Lockyer													
	Seqwater Proposed	170	1,534	1,760	493	159	-	-	-	-	-	-	-
	Recommended	170	1,534	1,760	493	159	-	-	-	-	-	-	-
	Adjustment	-	-	-	-	-	-	-	-	-	-	-	-
Morton Vale													
	Seqwater Proposed	-	-	-	-	-	-	-	-	600	-	-	-
	Recommended	-	-	-	-	-	-	-	-	140	-	-	-
	Adjustment	-	-	-	-	-	-	-	-	(460)	-	-	-
Logan River													
	Seqwater Proposed	102	367	287	4	32	197	854	80	41	-	-	-
	Recommended	102	367	287	4	32	106	461	43	22	-	-	-
	Adjustment	-	-	-	-	-	(91)	(393)	(37)	(19)	-	-	-
Lower Lockyer													
	Seqwater Proposed	72	18	1	2	-	-	-	-	-	77	217	1,490
	Recommended	72	18	1	2	-	-	-	-	-	15	42	291
	Adjustment	-	-	-	-	-	-	-	-	-	(62)	(174)	(1,200)
Mary Valley													
	Seqwater Proposed	293	241	2	-	289	104	499	514	-	-	-	-
	Recommended	293	241	2	-	289	32	153	158	-	-	-	-
	Adjustment	-	-	-	-	-	(72)	(345)	(356)	-	-	-	-
Warrill Valley													
	Seqwater Proposed	549	527	3	93	1,195	105	-	75	75	75	-	-



	Recommended	549	527	3	93	1,195	105	-	-	-	-	-	-
	Adjustment	-	-	-	-	-	-	-	(75)	(75)	(75)	-	-
Total													
	Seqwater Proposed	1,186	2,687	2,052	593	1,675	405	1,352	670	716	152	217	1,490
	Recommended	1,186	2,687	2,052	593	1,675	243	614	202	162	15	42	291
	Adjustment	-	-	-	-	-	(163)	(738)	(468)	(554)	(137)	(174)	(1,200)



AtkinsRéalis



Graydon Jeal
AtkinsRéalis UK International Limited
Level 22
215 Adelaide St
Brisbane
QLD 4000
Australia

Tel: +61 07 3002 1000
graydon.jeal@atkinsrealis.com

© AtkinsRéalis UK International Limited except where
stated otherwise