



Irrigation pricing proposal

1 July 2025 to 30 June 2029

November 2023

Our First Nations Commitment Statement

Sunwater's First Nations Commitment Statement frames our recognition of Aboriginal and Torres Strait Islander peoples as the First Peoples of this country and the Traditional Custodians of the land and waters we rely on.

The statement articulates our commitment to the Aboriginal and Torres Strait Islander community, including those who work at Sunwater and those who Sunwater customers, that we recognise their sacred connection to culture and Country and our intention to work together to achieve mutually beneficial outcomes.

Sunwater acknowledges Aboriginal and Torres Strait Islander peoples as the first peoples of this country and Traditional Owners and Custodians of the land and water we rely on. We respect and value their continued sacred connection to Country, including the diverse rich traditions, languages and customs that are the longest living in the world. We acknowledge their resilience in the face of significant and ongoing historical, cultural and political change within Australia.

We recognise and value the importance of truth-telling today, and our role to listen and learn. Our vision for reconciliation is that we are a nation of unity and fairness for all; a nation that owns its history and acknowledges its First Nations peoples, their strength and their living culture.

Our goal is to work together to realise mutual benefits with First Nations peoples through authentic relationships and respect for cultural value; fostering a sense of belonging and pride in our people, community, customers and stakeholders. We can learn so much from Traditional Custodians, who have cared for Country for thousands of years, in the way we sustainably manage water and land. Going beyond compliance and embedding reconciliation into core business practices and decision making brings to life our purpose of Delivering Water for Prosperity through Valuing People, Working Together and Taking Responsibility.

An appropriate citation for this paper is:

Irrigation pricing proposal 2025-26 to 2028-29 (November 2023)

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Legal and financial

This pricing proposal has been prepared to meet the Queensland Government's Notice of Referral to the Queensland Competition Authority (QCA) and the QCA's Guidelines for Pricing Proposals.

Expenditure data is presented in nominal dollars, as at 30 September 2023 unless otherwise stated.

All statistical data is accurate as at 30 September 2023.

Glossary

Term	Definition
2020 Review	The Queensland Competition Authority (QCA) review of the pricing practices for monopoly business activities of Sunwater and distribution systems for the period 1 July 2020 to 30 June 2024.
Part A price	A fixed price per mega litre of entitlement, intended to recover the fixed costs associated with operating, maintaining, administering and renewing the bulk water supply schemes.
Part B price	A price per megalitre of annual usage, intended to recover the bulk variable costs associated with the actual delivery (usage) of water in relation to bulk water supply schemes.
Part C price	A fixed price per megalitre of entitlement, intended to recover all distribution system fixed costs
Part D prices	A price per megalitre of annual usage, intended to recover the distribution system variable costs associated with the actual delivery (usage) of water.
Part E prices	A fixed price per megalitre of entitlement, intended to recover all electricity fixed costs incurred by Sunwater in the previous quarter. This price only applies to customers under the proposed Electricity Cost Pass-Through (ECPT) mechanism.
Part F prices	A variable price per megalitre of quarterly usage, intended to recover all variable electricity costs incurred by Sunwater in the previous quarter. This price only applies to customers under the proposed Electricity Cost Pass-Through (ECPT) mechanism.
Access charge	This charge comprises an annual fixed amount per customer and recognises that some costs vary per customer, rather than by entitlements. Mareeba-Dimbulah is the only water supply scheme (scheme) with an annual access charge.
Announced Allocation	A water allocation (see also water access entitlement) is an authority that entitles a Sunwater customer to a percentage of the water in a water supply scheme's dams, weirs or barrages, depending on the water that is available. The percentage of water allocation available to a customer can be as high as 100 per cent or as low as zero per cent, depending on the level of water storages.
Annuity	Refer to renewals annuity.
Annuity contribution (renewals annuity contribution)	<p>This is the annual revenue allowance to recover the forecast cost of asset renewal and rehabilitation calculated using the renewals annuity funding methodology.</p> <p>Typically (for Sunwater) calculated from a 30-year forecast of renewals expenditure.</p>

Term	Definition
Building blocks/building blocks method	<p>A method of determining the revenue a regulated business can earn for the services it provides. It is based on the costs to provide the services and a reasonable return on the investment required to provide those services.</p> <p>The “building blocks” currently used to calculate the revenue Sunwater should earn are reflective of the recovery of lower bound costs and comprise an operating expenditure (opex), and an annuity allowance (less any revenue offsets). It does not include any allowance for the cost of building the original scheme capital infrastructure (these allowances would be included in an upper bound context).</p>
Bulk Water Supply Scheme	Supplies bulk water services that involve storing, and delivering raw water to, customers in accordance with their water access entitlements.
Customer and Stakeholder Project (CASPr)	The purpose of the project is to implement a new, integrated solution for customer and stakeholder relationship management, water accounting and billing.
Capex	Shorthand term for capital expenditure, which is defined as expenditures incurred in acquiring or maintaining capital assets, such as land, buildings, and equipment.
Capital returns	<p>Capital returns are applicable to capital assets, such as land, buildings, and equipment, and comprise:</p> <ul style="list-style-type: none"> • A return on assets - this is defined as the annual return to the owner of the assets to compensate for the opportunity cost of funds invested. • A return of assets – this is defined as return of the initial cost of the capital assets in the form of an annual depreciation allowance.
Charge	The price applied to a specific tariff component.
Community Service Obligation (CSO)	A payment from the Queensland Government to Sunwater to cover the shortfall in revenue recovery that arises when the prices paid by customers is less than the level required to recover the lower bound costs of regulated service provision.
Cost pass through mechanism	A regulatory pricing concept that allows specific actual costs incurred by the regulated business to be passed through to customers during the price path period, rather than through prices based on a forecast cost allowance determined by the Regulator as part of the irrigation pricing review.
Consumer Price Index	A measure of inflation produced by the Australian Bureau of Statistics (ABS) based on changes in the price of a fixed basket of goods and services acquired by households in the eight Australian States and Territories.
Customer Advisory Committee	This committee provides customers and stakeholders with a forum for collaboration and consultation on a range of strategic matters relating to Sunwater’s innovation, management and maintenance of assets to ensure the reliable and efficient delivery of service.

Term	Definition
Declining block	The declining block refers to a tariff structure where the marginal price level declines as customers increase their usage or entitlement. Sunwater only applies this form of price structure to certain customers in the Mareeba-Dimbulah distribution system.
Depreciation	In regulatory terms, depreciation is the allowance a business receives from its customers (via prices) to pay off the principal component of its original capital investment. Typically calculated as the value of the original investment divided by the life of the asset.
Distribution service	Service provided to customers involving the operation, maintenance and renewal of assets (see distribution system) to convey water from a water storage or watercourse to a customer offtake.
Distribution system	Distribution systems generally consist of pumps, open channels and/or pipes designed to deliver water to customers not located on a river. All distribution system customers must also hold bulk water supply entitlements
Distribution losses	Losses of water incurred in the delivery of water in distribution systems. Many factors are responsible for distribution losses, including pipe leakage, evaporation, storage seepage, overflows and drainage for maintenance.
Direct costs	Costs which are directly attributable to either an asset or a service contract, e.g., maintenance or insurance of an asset or the electricity and other operations costs for a service contract.
Electricity cost pass through (ECPT) trial	Sunwater undertook a three-year trial to evaluate the merits of applying a cost pass-through mechanism to electricity costs.
Electricity cost pass through (ECPT) mechanism	A permanent mechanism designed to pass through to customers the actual (rather than forecast) electricity costs incurred by Sunwater during the price path period.
Existing assets	In a regulatory context are capital assets that exist at the beginning of the financial year for costing purposes.
Irrigator Advisory Committee (IAC)	The key purpose of these committees is to represent the interests of irrigation customers by providing advice and recommendations to Sunwater.
Irrigation customer	A holder of water access entitlement(s) that uses water supplied by Sunwater for the purpose of irrigation.
Irrigation price	In general, a reference to "price" in this document (and its associated supporting documents) is a reference to prices associated with an irrigation service. Irrigation prices can either be "cost reflective" prices or "transition" prices.

Term	Definition
Lower bound cost	<p>Include efficient operational, maintenance and administration costs, and prudent and efficient expenditure on renewing existing assets.</p> <p>Note that under the Referral, the value of existing rural irrigation assets (as at 1 July 2000) and dam safety upgrade capital expenditure are excluded from the calculation of allowable costs. Refer to Referral.</p>
Meter to cash system (M2C)	This system relates to the process of collecting revenues from customers, which typically involves core functions such meter reading, billing and bill payments.
Miscellaneous fees and charges	Sunwater applies miscellaneous fees and charges that relate to specific services such as drainage, drainage diversion and water harvesting. The forecast revenue from these services is deducted (offset) against the forecast revenue requirement from irrigated water charges to avoid double counting this revenue.
Opex	Shorthand term for operating expenditure which is all expenses required to run a business' operational activities. Opex is recovered from customer prices dollar for dollar in the year expended, compared with capex which is recovered over the life of the asset.
Price path period	The period over which prices are set by Government following a review and recommendations by the QCA. The price path period for this report is 1 July 2025 to 30 June 2029.
Queensland Competition Authority (QCA)	The economic regulator in Queensland tasked with ensuring monopoly businesses do not abuse their market power. They do this through price setting or monitoring roles across naturally monopolistic industries like water, rail, energy and ports, ensuring prices are competitive and access is fair.
QCA guidance	The formal guidance issued by the QCA that sets the parameters and expectations for a price proposal.
Referral	This is the referral notice issued by the Queensland Treasurer to the QCA under Section 23 and 24 of the <i>Queensland Competition Authority Act 1997</i> (Qld) for it to investigate irrigation pricing practices related to bulk water supply and water distribution undertaken by Sunwater and Seqwater.
Regulated asset base (RAB)	Represents the capital investment a business has made to provide a regulated service. It is different to the accounting asset base which represents the replacement costs of the assets – not what the assets owe the business over their life. Used as the basis for recovery of capital costs under a building block methodology.
Relift	A relift is a pump station and related infrastructure used to lift or divert water within a scheme or distribution system.
Renewals annuity	This is a funding method that recovers sufficient income (through prices) to fund the necessary asset renewal and rehabilitation works to maintain the serviceability and integrity of existing infrastructure assets. The annuity contribution recoveries will, over a long-term period, provide the cash requirements needed to renew a system of assets.

Term	Definition
Renewals expenditure	<p>Costs associated with extending the life of long-term assets.</p> <p>It's usage, for the purposes of this proposal, has been extended to include preventative maintenance and/or the building of assets for purposes other than renewal.</p>
Renewals funding methodology/renewals cost recovery	<p>The method to calculate the way renewals costs are recovered from customers.</p> <p>Sunwater currently applies an annuity methodology and is proposing a regulated asset base (RAB) methodology for the price path period.</p>
Revenue offset	<p>This component of the revenue requirement calculation relates to the revenue forecast to be recovered from miscellaneous fees and charges. The revenue from these fees and charges is deducted from the building block costs used to set irrigation water charges to avoid double counting this revenue.</p>
Ringfence	<p>The accounting and functional separation of the provision of regulated services from the provision of other services by a regulated business or by their affiliated entities.</p>
Service Contract	<p>This is a contract between Sunwater and customers that imposes obligations on Sunwater, as owner of the service infrastructure, to release or divert water in accordance with a customer's water access entitlements, pursuant to the <i>Water Act 2000</i> (Qld).</p> <p>Sunwater has water supply and distribution service contracts within the 22 in-scope schemes.</p>
Service and Performance Plan	<p>Formerly known as a network service plan (NSP). Each year, Sunwater prepares a Service and Performance Plan for each Sunwater irrigation service contract. These plans detail a range of actual and forecast costs and activities. Performance against the QCA's recommendations is detailed in these reports for each irrigation service contract area.</p>
Shareholding Ministers	<p>Sunwater has two shareholding Ministers – currently they are The Honourable Cameron Dick MP, <i>Treasurer and Minister for Trade and Investment</i>, and The Honourable Glenn Butcher MP, <i>Minister for Regional Development and Manufacturing and Minister for Water</i>.</p>
Smoothed target price or prices	<p>Target prices that have been smoothed so that the annual price increase over the next price path aligns with forecast CPI.</p>
Supply service	<p>Service provided to customers involving the operation, maintenance and renewal of water supply scheme assets to capture, store and periodically release water from a water storage to a watercourse.</p>
Support costs	<p>Costs that are not directly attributable to an asset or a service contract. These costs are allocated to a service based on the extent to which they support activities in accordance with an accepted cost allocation methodology.</p>
Supporting documentation	<p>The key documents Sunwater will provide alongside the pricing proposal to support its positions.</p>

Term	Definition
Taxation allowance	This is the annual revenue allowance to recover the forecast tax payable (if applicable) by the regulated business.
Tariffs	<p>A tariff is typically structured to comprise the following tariff components:</p> <ul style="list-style-type: none"> • The fixed tariff component is designed to recover fixed costs from customers based on water access entitlements. • The volumetric tariff component is designed to recover variable costs based on actual water usage of the customer.
Tariff group	A tariff arrangement where a subset of customers in a bulk water supply scheme or distribution system are assigned to a specific tariff or tariffs.
Target price or prices	The price applied to a tariff component consistent with lower bound cost reflectivity.
Transition price	<p>Where an irrigation price is below the cost reflective price, it is referred to as a “transition price”.</p> <p>Proposed transition prices are calculated in accordance with the pricing principles set out in the Notice of Referral.</p> <p>Both cost reflective and transition prices are shown for tariff groups where historical or proposed price increases trigger application of the pricing principles. Where the principles are not triggered irrigation prices are said to be cost reflective and no transition price applies.</p>
Water access entitlements (WAE)/ entitlements	<p>An authority to take water, and an entitlement to a share of the available water resource in a catchment.</p> <p>A water access entitlement has a title separate from a land title and can be bought and sold independently in a similar way to land. This enables entitlement holders to buy water to expand their operations or sell water they don't need.</p> <p>The priority assigned to an entitlement is a measure of the reliability of water that can be taken by the entitlement holder on a year-to-year basis.</p> <p>Medium priority water entitlements are less reliable than high priority entitlements and are typically used for irrigation use. Risk priority entitlements have the lowest level of reliability.</p> <p>Related to announced allocations which refer to the volume of water able to be taken each year in accordance with scheme operating rules.</p>
Weighted average cost of capital (WACC)	A method of determining the rate of return a business should earn on its investments.
Water supply schemes (schemes)	<p>A water supply scheme (scheme) is established by a Resource Operations Licence under the <i>Water Act 2000 (Qld)</i> and sits within a water plan area – Queensland has 23 water plan areas.</p> <p>Schemes have defined water infrastructure and provide the authority to interfere with the flow of water and to use watercourses to distribute water.</p>

Abbreviations and acronyms

Term	Definition	Term	Definition
ABS	Australian Bureau of Statistics	KBR	Kellogg Brown and Root
AER	Australian Energy Regulator	kWh	Kilowatt hours
AMP	Asset Management Policy	kW	kiloWatt
ANCOLD	Australian National Committee of Large Dams.	M2C	Meter to Cash system
ACSC	Australian Cyber Security Centre	ML	Megalitre
BPIC	Best Practice Industry Conditions	MP	Medium priority
BOM	Bureau of Meteorology	NWGF	National Water Grid Fund
CAC	Customer Advisory Committee	Opex	Operational expenditure
Capex	Capital Expenditure	OT	Operational Technology
CPI	Consumer Price Index	PMF	Probable Maximum Flood event
CEO	Chief Executive Officer	QCA	Queensland Competition Authority
COVID	Coronavirus disease	QCA Act	<i>Queensland Competition Act 1997 (Qld)</i>
CRA	Critical Risk Assessment	QLD WPI	Wage Price Index in Queensland
CSO	Community Service Obligation	QPP	Queensland Procurement Policy
CSAT	Customer Satisfaction Score	RAB	Regulated Asset Base
DIP	Dam Improvement Program	RBA	Reserve Bank of Australia
DRDMW	Department of Regional Development, Manufacturing and Water	SAMP	Strategic Asset Management Plan
ECPT	Electricity Cost Pass Through	SCADA	Supervisory Control and Data Acquisition
EBA	Enterprise Bargaining Agreement	URA	Utilities Regulation Advisory
ESM	Ethical Supplier Mandate	VCW	Variable Counter Weight
FTE	Full Time Equivalent	WACC	Weighted Average Cost of Capital
GIR	Government Index Rate	WAE	Water Access Entitlement
GST	Goods and services tax	WSS	Water Supply Scheme
HP	High priority		
HUF	Headworks Utilisation Factor		
ICT	Information and Communications Technology		
IT	Information Technology		

Irrigation pricing proposal

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1 Introduction

This section introduces Sunwater and the services we provide and establishes the context and scope for this irrigation pricing proposal.

1.1 About us

Sunwater is a Queensland Government-owned corporation that owns, operates and builds water infrastructure in regional Queensland. Sunwater supplies about 40 per cent of the water used commercially in the state, supporting more than 5,000 customers in the agriculture, local government, mining, power and industrial sectors. **Figure 1** provides a high-level snapshot of who we are and what we do.

Sunwater supplies its irrigation, urban and industrial customers across 23 water supply schemes, including the distribution of water via four irrigation channel (distribution) systems and 18 pipelines. This involves the safe and effective operation and maintenance of \$13.9 billion of water infrastructure assets, including:

- 19 dams
- 64 weirs and barrages
- 595 kilometres of water channels
- 70 major pumping stations
- 1,951 kilometres of pipelines
- six water treatment plants.

Figure 2 shows that Sunwater's total customer base¹ (across regulated and non-regulated schemes) has declined from 7,144 in 2011-12 to 5,196 in 2022-23. Over this period, this equates to a three per cent year-on-year decline (compound annual rate) in the number of irrigation customers and 1.9 per cent year-on-year decline in non-irrigation customers. Sunwater's irrigation customers are consolidating, meaning average water access entitlement (entitlement) holdings are increasing. This aligns with a growing number of corporate owners of irrigation entitlements.

Sunwater delivers on its purpose of delivering water for prosperity through five strategic goals (**Figure 3**). These guide the work we do and the way we do it – they are an integral part of this proposal.

1.2 Proposal structure

In preparing this pricing proposal, Sunwater has sought to clearly address the criteria set out in the Queensland Competition Authority's (QCA) guidelines.

In addition to the standard regulatory framework matters, key features of this proposal include:

- an insurance review event for current period insurance costs
- an electricity cost pass through (ECPT) mechanism in some schemes
- a regulated asset base (RAB)-based funding model for recovery of renewals expenditure.

¹ This number reflects a single customer per service type per water supply scheme, regardless of the number of accounts held. This excludes Sunwater or Queensland

Government held accounts, as well as carryover and trade accounts where these customers do not hold another account type.

Figure 1 – Sunwater at a glance

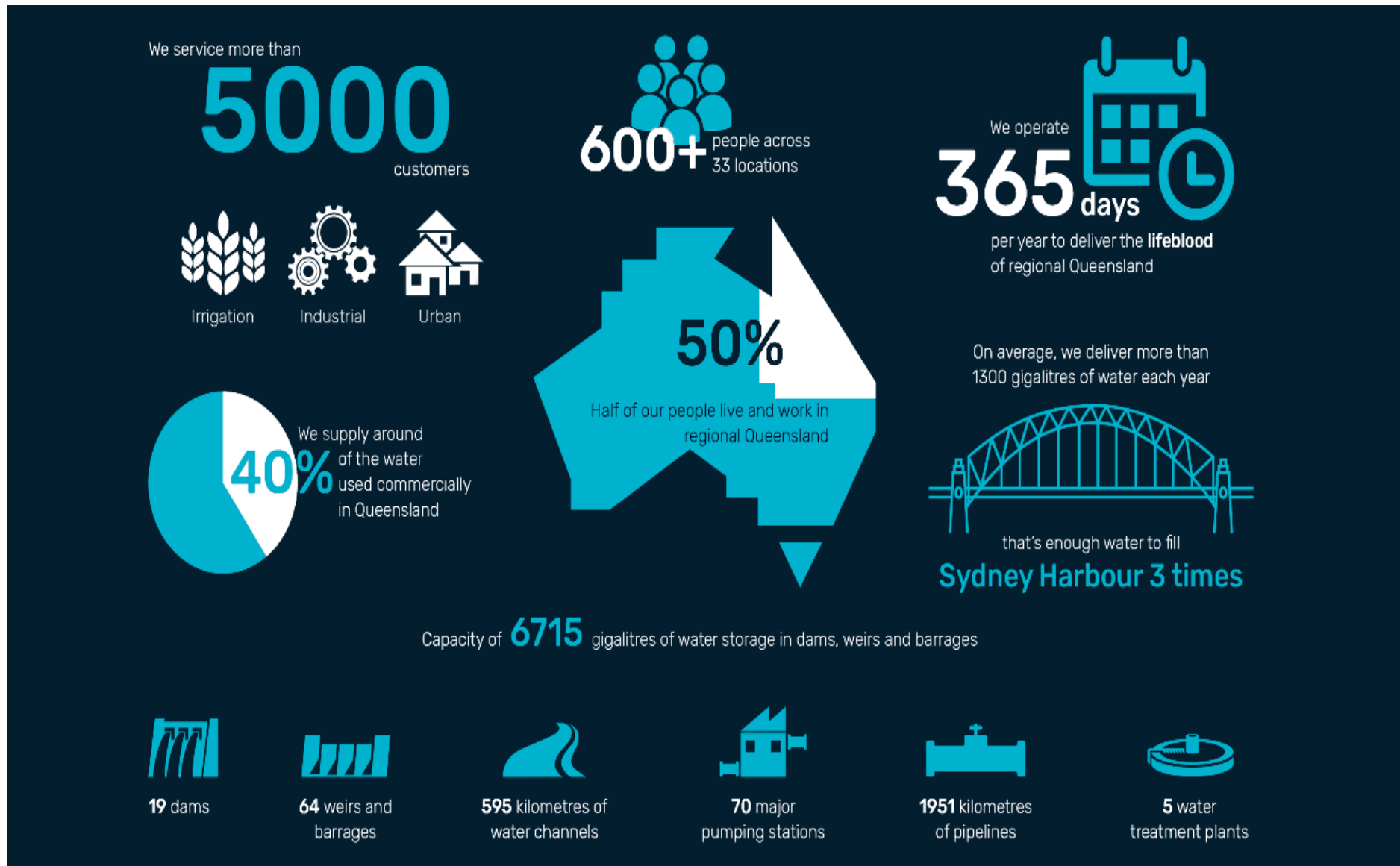


Figure 2 – Customer numbers over time (irrigation and non-irrigation services)

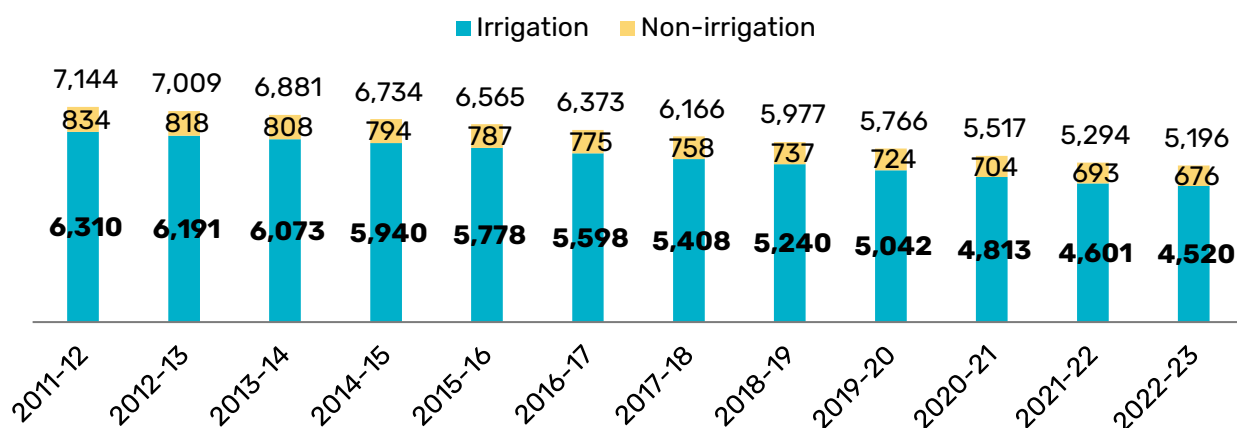


Figure 3 – Sunwater's strategic goals

Safe and engaged people	Building a culture that cares for and supports the health and wellbeing of our people and the communities in which we operate, to meet or exceed customer and stakeholder expectations and ensure everyone goes home safely each day.
A sustainable business	Remaining reliable, resilient and adaptable by effectively managing assets, reducing environmental impact and nurturing relationships to meet the changing demands of our customers, communities and business.
Stakeholder-centric business	Actively working with all stakeholders – including customers, shareholders, industry groups and traditional custodians – to minimise the impact of our operations and projects and create opportunities for best value outcomes that go beyond water delivery.
Operational excellence	Developing a skilled workforce along with contemporary systems, processes and technology to efficiently and safely manage and maintain our assets and ensure optimal service value to our customers.
Water infrastructure leader	Leveraging internal and external capabilities to successfully plan, design, construct and commission quality bulk water infrastructure solutions that drive economic growth and jobs in regional communities and make best use of our valuable water resource.

Table 1 sets out the location of these and other key issues relevant to Sunwater's pricing proposal for the 2025-26 to 2028-29 period (price path period).

1.3 Legal and regulatory framework

Sunwater was established on 1 October 2000 under the *Government Owned Corporations Act 1993* (Qld) (GOC Act), administered by Queensland Treasury.

Sunwater is a water service provider under the *Water Supply (Safety and Reliability) Act 2008* (Qld) (WSSR Act), and a resource operations licence holder under the *Water Act 2000* (Qld) (Water Act). Both acts are administered, and overseen by, the Queensland Department of Regional Development, Manufacturing and Water (DRDMW).

Table 1 – Pricing proposal overview

Section	Content
Introduction	Outlines the context and scope of this review, while setting out our goals and how we approached development of this proposal.
Customer engagement	<p>Sunwater’s approach to customer engagement is established here. It covers the ongoing focus we place on our customers (and other stakeholders) as well as our efforts to engage effectively with customers as we prepared this pricing proposal between March and November 2023.</p> <p>This section introduces the two main price-influencing choices we presented to customers during our proposal development – a RAB-based approach to renewals expenditure recovery and an ECPT mechanism.</p>
Pricing framework matters	This section introduces our approach to key inputs to the pricing proposal, including the treatment of inflation, cost review events and demand and distribution losses. It provides further detail on the proposals to introduce a RAB-based approach to renewals expenditure recovery and the ECPT mechanism.
Operating expenditure (opex)	The central revenue building block, Sunwater’s opex forecasts are set out in this section, starting with an overview of our proposed base-step-trend approach to the development of our forecast. Whole of Sunwater forecasts are presented along with an explanation of key drivers of activity and cost.
Renewals expenditure	Sunwater’s renewals expenditure in the current period is outlined here along with forecasts for the price path period and beyond (out to 2057-58).
Revenue requirement	This section sets out Sunwater’s overall revenue requirement, detailing the key building blocks, including proposed revenue transfers and the treatment of positive annuity balances under the proposed RAB-based approach.
Proposed prices	<p>Sunwater’s approach to tariff reform and the calculation of prices is outlined along with cost reflective and transition prices for all relevant tariff groups.</p> <p>Prices presented reflect a RAB-based recovery of renewals costs. Alternate prices under the annuity-based approach are presented in Appendix A.</p>
Scheme summaries	Scheme summaries have been prepared to summarise Sunwater’s pricing proposal, as it affects individual schemes. These summaries contain important scheme level information and input parameters as well as scheme-specific customer feedback and pricing matters.

Sunwater operates under a legal and regulatory framework of more than 69 pieces of primary legislation, which sets out its roles, responsibilities, and obligations, including:

- Competition and Consumer Act 2010 (Cth) and Queensland Competition Authority Act 1997 (Qld)
- Right to Information Act 2009 (Qld)
- Crime and Corruption Act 2001 (Qld), Public Interest Disclosure Act 2010 (Qld) and Integrity Act 2009 (Qld)
- Human Rights Act 2019 (Qld)
- Financial Accountability Act 2009 (Qld)
- Environmental Protection Act 1994 (Qld)

- Work Health and Safety Act 2011 (Qld) and Electrical Safety Act 2002 (Qld)
- Security of Critical Infrastructure Act 2018 (Cth)
- Privacy Act 1988 (Cth) and Information Privacy Act 2009 (Qld)
- Planning Act 2016 (Qld), Land Act 1994 (Qld), Land Title Act 1994 (Qld), Property Law Act 1974 (Qld) and State Development and Public Works Organisation Act 1971 (Qld)
- Aboriginal Cultural Heritage Act 2003 (Qld), Native Title (Queensland) Act 1993 (Qld), Native Title Act 1993 (Cth)
- Fair Work Act 2009 (Cth)
- Queensland Government Sponsorship Policy
- Government-Owned Corporations Wages Policy 2021 (GOC Wages Policy).

Corporate governance practices and frameworks comply with legislative requirements, including the GOC Act, the *Financial Accountability Act 2009 (Qld)* and the Queensland Government’s Corporate Governance Guidelines for Government Owned Corporations.

Sunwater is periodically reviewed by the QCA at the direction of the Queensland Treasurer. A Notice of Referral typically requests that the QCA examine Sunwater’s proposed costs and revenue for upcoming price path periods, and recommend future irrigation prices to the Queensland Government.

1.4 Irrigation Pricing Review

Irrigation services provided by Sunwater in 22 price-regulated water supply schemes (schemes) are independently reviewed by the Queensland Competition Authority under a Notice of Referral from the Queensland Government.

In early 2023, the Queensland Government directed the QCA to recommend prices for *irrigation services* for the period, **1 July 2025 to 30 June 2029** for the water supply schemes and services outlined in **Table 2**. This excludes services provided by Burnett Water Pty Ltd in relation to Paradise Dam and Kirar Weir.

An *irrigation service* is defined as “*the supply of water or drainage services for irrigation of crops or pastures for commercial gain*”. The term “irrigation customer” refers to a customer receiving an irrigation service from Sunwater.

Prices for non-irrigation services are agreed by contract.

Sunwater is committed to helping our customers thrive by:

- working with them to make the most of the available water supply
- ensuring our resources are geared towards timely and cost-efficient water delivery
- understanding their needs and adapting to changes in their environment.

Sunwater also provides a range of ancillary services consistent with the operating rules of each scheme. The nature of these services is outlined in **Table 3**.

Table 2 – Customers¹ receiving a price-regulated water service (30 June 2023) by scheme

Scheme	Service	Abbreviation	Customers	
			Sub-total	Total
Mareeba-Dimbulah	Water supply	MBM	133	1,106
	Distribution	MIM	973	
Bundaberg	Water supply	BBB	208	1,015
	Distribution	BIG	807	
Burdekin Haughton	Water supply	ABB	69	312
	Distribution	AIE	243	
Nogoa Mackenzie	Water supply	LBN		308
Eton	Water supply	KBE		302
St George	Water supply	IBS		175
Lower Mary	Water supply	BBL	86	160
	Distribution	BIC	74	
Barker Barambah	Water supply	BBR		150
Bowen Broken Rivers	Water supply	KBB		7
Boyne River and Tarong	Water supply	BBY		49
Callide	Water supply	LBC		127
Chinchilla Weir	Water supply	IBH		23
Cunnamulla	Water supply	IBN		22
Dawson	Water supply	LBD		94
Lower Fitzroy	Water supply	LBF		7
Macintyre Brook	Water supply	IBT		86
Maranoa	Water supply	IBM		4
Pioneer	Water supply	KBP		1
Proserpine	Water supply	ABP		83
Three Moon Creek	Water supply	LBT		88
Upper Burnett	Water supply	BBU		141
Upper Condamine	Water supply	IBU		112
Total				4,372

Note 1: Excludes Burnett Water Pty Ltd customers

Table 3 – Services provided within Sunwater’s price-regulated water supply schemes

Service	Nature of service
Bulk water supply service (supply service)	<ul style="list-style-type: none"> • Bulk water supply schemes supplement natural water resources with dams and weirs to increase the yield and reliability of watercourses such as rivers and streams. Dams and weirs can also be used to recharge groundwater. • Sunwater’s bulk water supply schemes store and deliver raw water to irrigation customers in accordance with their entitlements. DRDMW determines the entitlements available within a scheme, which are held by customers. Entitlements are a form of legal title that is held separate to land titles. Announced allocations (AA) specify the portion of a customer’s entitlement available for use (by priority group).
Distribution service	<ul style="list-style-type: none"> • Customers in four regulated schemes receive a distribution service, providing them access to water via networks of Sunwater owned and operated channel (supported by pump and pipe infrastructure) distribution systems. • Sunwater’s distribution systems support a greater geographical spread of irrigation away from the source rivers and can facilitate common infrastructure such as mills and processing facilities. • Distribution service customers are also supply service customers.
Drainage services	<ul style="list-style-type: none"> • For customers in the Burdekin Haughton, and Mareeba-Dimbulah distribution systems, Sunwater provides drainage services to remove excess or run-off water from customer properties and dispose of it via a system of drains that Sunwater maintains.
Drainage diversion services	<ul style="list-style-type: none"> • Customers in the Burdekin Haughton distribution system can extract tail water, and rain and storm run-off from the drainage network (drainage diversion services). Customers supply their own pump and other infrastructure, such as sumps and weirs, to access this water.
Water harvesting	<ul style="list-style-type: none"> • In some schemes, such as Burdekin Haughton, customers also hold water harvesting entitlements. During naturally occurring high river flow events, Sunwater facilitates the extraction of additional river water to supplement the water available under the customer entitlements.

1.4.1 Scope of the review

Under the Notice of Referral, there are two costs that cannot be recovered from irrigation customers:

- Any capital expenditure incurred before 1 July 2000 to build existing assets.
- Any dam safety upgrade capital expenditure.

All costs, revenue and prices contained in this pricing proposal are exclusive of these items.

This means that Sunwater’s cost reflective prices are set to recover a lower bound level of revenue.

Revenue Sunwater derives from cost reflective prices is set to cover the cost of operating, maintaining and renewing our assets in order to deliver services in line with legal, regulatory and customer service requirements. The customer service standards that apply to each scheme are set out in the scheme summaries that support this pricing proposal.

The cost of non-capital activities such as comprehensive risk assessments (CRAs), and any resulting activities that do not result in a capital project are “allowable costs” and have been included in our proposal.

The review process is a propose-respond methodology, where Sunwater proposes costs, key inputs, tariff groups and prices (both cost reflective and transition) for its irrigation services, and the QCA responds via an assessment of our proposal.

The QCA’s recommendations at the end of the process will inform the Shareholding Ministers’ decision-making in relation to the final prices to be adopted for the price path period.

1.4.2 Dam safety management

Capital projects are one possible outcome of Sunwater’s robust Dam Safety Management Program. This section outlines clearly what is included under the banner of dam safety upgrade capital projects, as well as explaining the context for non-capital activities (such as the additional investigations outlined above).

Legislative context

Sunwater operates 23 referable structures (19 are dams) throughout Queensland, 22 of which we own as shown in **Table 4**. Paradise, Julius and Glenlyon dams are not shown as these assets are outside the scope of this review/proposal.

In Queensland, referable dams are subject to the WSSR Act. Under the WSSR Act, the Chief Executive (also known as the Regulator) is nominated as the party responsible for reviewing and making recommendations about standards and practices under the WSSR Act, and for monitoring compliance.

The Regulator has published a series of guidelines applicable to the management of dams. Sunwater as a dam owner must comply with the WSSR Act and the following guidelines:

- Dam Safety Management Guideline (DNRME, 2020).
- Emergency Action Plan for Referable Dam Guidelines (DNRME, 2021).
- Guidelines on Acceptable Flood Capacity for Water Dams (DNRME, 2019).
- Guideline for Failure Impact Assessment of Water Dams (DNRME, 2018).

The Dam Safety Management Guidelines (DNRME, 2020) prescribes the required elements of an owner’s dam safety management program.

As a dam owner, Sunwater is also responsible for maintaining its dam assets under the Guidelines on Safety Assessments for Referable Dams (DRDMW, 2021). These guidelines specify the level of societal risk and individual risk tolerable to dams and provide a framework to judge current dam assets. Dam assets which exceed these guidelines are in breach of regulatory requirements and require dam improvement works.

Table 4 - Referrable structures operated and managed by Sunwater

Scheme	Structure
Mareeba-Dimbulah	Tinaroo Falls Dam
Bundaberg	Fred Haigh Dam Isis Balancing Storage Woongarra Balancing Storage
Burdekin Haughton	Burdekin Falls Dam
Nogoa Mackenzie	Fairbairn Dam
Eton	Kinchant Dam
St George	EJ Beardmore Dam
Barker Barambah	Bjelke-Petersen Dam
Bowen Broken Rivers	Eungella Dam
Boyne River and Tarong	Boondooma Dam
Callide	Callide Dam Kroombit Dam
Dawson	Moura Offstream Storage
Macintyre Brook	Coolmunda Dam
Pioneer	Teemburra Dam
Proserpine	Peter Faust Dam
Three Moon Creek	Cania Dam
Upper Burnett	Wuruma Dam
Upper Condamine	Leslie Dam

This work is aimed to ensure that the risk associated with dam assets are:

- below the pertinent limit of tolerability (LoT)
- eliminated or reduced to as low as reasonably practicable (ALARP)
- identified for critical review if the number of fatalities due to dam failure exceeds 1,000.

Sunwater context

Sunwater targets a level of risk deemed ALARP with reference to the most current version of the Australian National Committee on Large Dams (ANCOLD) *Guidelines on Risk Assessment 2022* with some differences required to be consistent with specific Queensland legislative purposes and decisions. The pursuit of ALARP safety risk aligns with Sunwater's commitment to delivering safe water assets for its employees and stakeholders.

Sunwater's dam assets include different structural designs and as such are managed with reference to specific guidelines.

Dams within Sunwater's portfolio are each exposed to different risks. Sunwater has historically measured the tolerable risk of its assets through completion of CRA's with a standard approach across the portfolio. The CRA's for individual dams are reviewed every five years, or more frequently where changes in inputs studies indicate that the risk profile of the dam may have changed or where current practice or guidance is updated.

CRA's are considered industry best practice and are delivered generally in accordance with ANCOLD Guidelines for Risk Assessment.

Within this context, Sunwater is mandated to ensure that all referable dams meet the LoT and / or satisfy the ALARP principle by 2035. Sunwater's approach to the meeting this requirement is governed by its Dam Safety Management Framework (DSMF).

Dam Safety Management Framework

The DSMF sets out the process that Sunwater follows to determine what (if any) actions are necessary to meet these requirements. Actions can include non-capital activities such as further risks assessments, technical investigations and changes to operations, maintenance and asset management practice, as well as capital expenditure interventions.

Figure 4 shows key elements of the DSMF with an overlay of which elements are non-capital, capital renewal, and capital upgrade expenditure activities and therefore allowable or non-allowable costs under the Referral Notice.

Capital projects with a safety driver that are not related to a referable structure, and where the safety driver is unrelated to the framework outlined above are **not** considered dam safety upgrade capital projects and are allowable costs.

1.5 A challenging delivery environment

Since the last QCA irrigation pricing review, which concluded in January 2020 (2020 Review), the operating environment has changed markedly. The emergence of the COVID-19 pandemic coincided with the conclusion of the last review, impacting Sunwater in a number of ways:

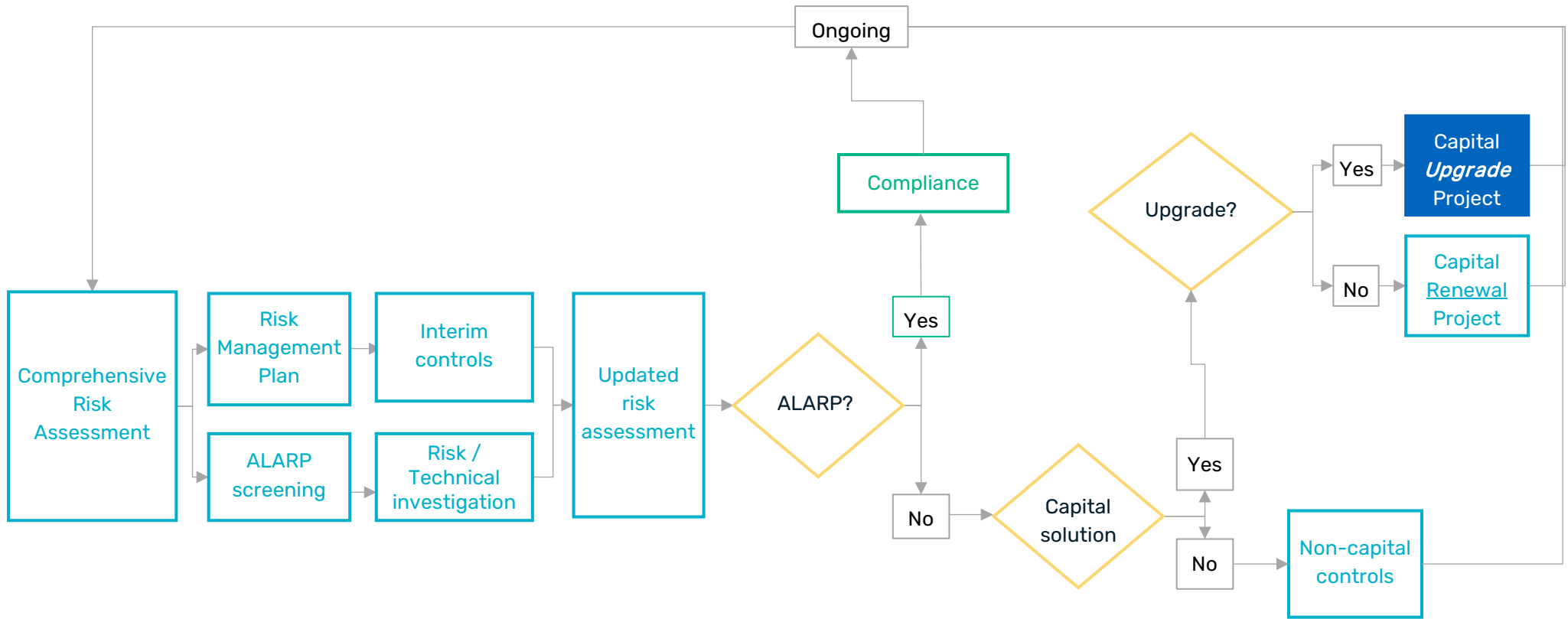
- It challenged us to keep our people and customers safe, while continuing to provide valued and vital water supply services.
- It raised the cost of many input goods and services and contributed to the current high inflation environment.
- It impeded our ability to obtain goods and services in a timely manner, necessitating innovative actions, including reprioritisation of activities.

The lasting effect of the pandemic and the ongoing situation in Ukraine (and other global supply side shocks such as oil prices) will be felt by Sunwater and our customers over the price path period in the form of higher input prices. Prices are higher than expected today as we prepare our pricing proposal, and they are expected to be higher throughout the period.

Figure 5 compares general inflation assumptions used in the 2020 Review for the setting of current period prices with actual inflation outcomes².

² Source: Australian Bureau of Statistics 6401.0 Consumer Price Index, Australia. March to March values.

Figure 4 – Dam Safety Management Framework – with irrigation pricing overlay



- Current and future funding through lower bound prices – *included in scope of irrigation prices*
- Dam safety **upgrade** capital expenditure – *out of scope of irrigation prices*

Capital **upgrade** projects are those driven by a change in the stage of knowledge or performance requirements for a referable structure. Changes to hydrology, population-at-risk and/or regulatory standards are examples of such changes.

Figure 5 - How actual inflation has differed from 2020 Review assumptions

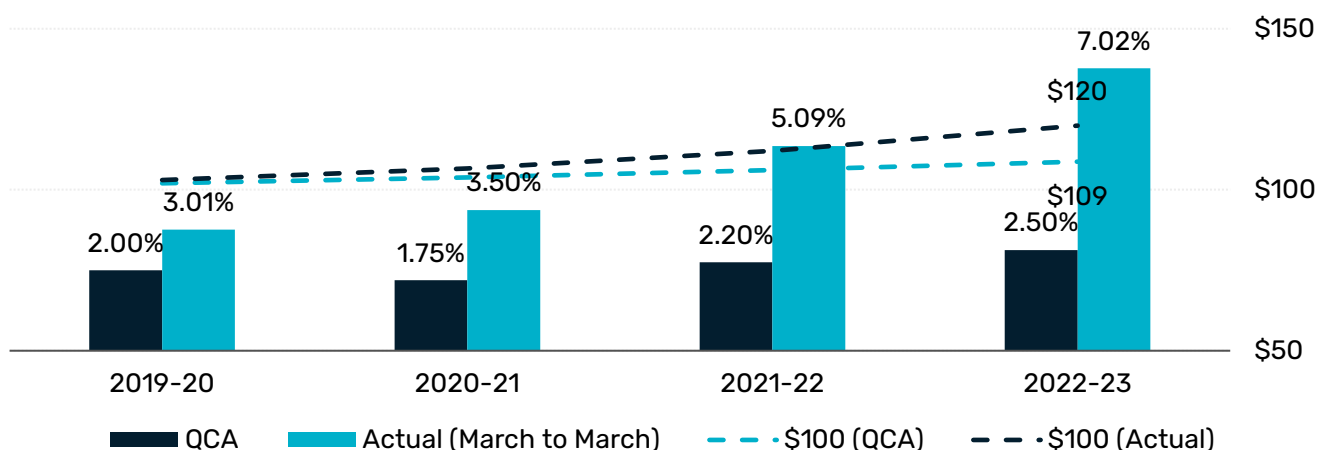


Figure 5 shows that a \$100 allowance for the 2018-19 base year grew to \$109 in 2022-23 using inflation forecasts from 2018-19. Using actual inflation however, the same \$100 would be \$120, approximately 10 per cent higher.

This analysis is presented to highlight the scale of the inflationary challenge Sunwater has faced during the current period. The impact of rising input costs is discussed in **Section 4 – Operating expenditure**. This includes a focus on insurance, which have been subject to considerable upward pressure throughout the price path period, largely because of global and national natural disaster events.

Key challenges (current and price path period) for Sunwater include:

- *Aging workforce* – while not a new issue, Sunwater’s aging workforce has been a focus over the period, with a significant cohort approaching retirement, and a tight regional labour market making replacement of skills an ongoing challenge.

- *Safety focus* – Our shareholders, Board and customers all have high expectations when it comes to safety. Significant flooding events across the past decade, and the COVID-19 pandemic have impacted our work priorities and the way we operate, maintain and renew our assets in order to comply with rising regulatory expectations.
 - Dam safety has been given greater focus by shareholders and regulators and continues to drive renewals investment in this proposal.
 - A strong operational focus on keeping our people safe as we managed the challenges the COVID-19 pandemic presented continues, ensuring our people can do their work safely, as we right-size our teams and their capabilities, as well as reducing risks appropriately through operational and asset investment decisions. The Arc Flash program is a good example of this and is detailed in **Section 5 – renewals expenditure**.

- *Aging assets* – Sunwater’s assets continue to age, with upward pressure on maintenance and renewal effort – most of Sunwater’s regulated schemes were developed between 1950 and the mid 1980’s. Some bulk water assets, for example in the Dawson Valley, are up to 100 years old. This means, a significant proportion of our assets are due to reach the end of their useful life in the next decade. Significant investment is required to renew these assets to maintain water security and safety.
- *Electricity costs* – increases wholesale market volatility and rising medium to long term costs expectations.

1.6 Meeting customer expectations

Customer service expectations have not changed materially over the past four years, however irrigation customers told Sunwater they are hurting as their input costs have also risen across the board.

Customers expect us to provide a reliable water supply, control our costs and keep prices as low as possible, while acknowledging that we must continue to comply with our legislative and regulatory obligations. Customers do not want our service levels to drop and continue to value our local presence and the ability to speak to an Australian-based contact centre.

We have listened to our customers and continue to prioritise cost control and the pursuit of opportunities to lower costs, while maintaining existing customer service standards.

This pricing proposal focuses on renewing infrastructure where necessary and controlling opex in a high-inflation environment (on multiple fronts) to maintain services for customers at the lowest price possible.

Customer service standards for each scheme are set out in the supporting Scheme Summaries. These were tested as part of Stage 2 of Sunwater’s engagement program and validated in Stage 3. Sunwater’s pricing proposal is built around delivering these levels of service for customers, within the legal and regulatory framework, at the lowest possible cost.

Key features of this proposal that attest to Sunwater’s desire to continue to meet customer expectations include:

- The continuation of reliable irrigation services.
 - Investing \$147 million in our assets over the four-year price path period to maintain the security, availability and reliability of services to irrigation customers.
- Personal customer services and ongoing engagement.
 - Investing \$38.6 million³ to replace an aged (no longer supported) customer billing and contact management system to ensure Sunwater can continue to provide the personalised service customers expect. This necessary investment is expected to help us deliver improvements to timeliness and accuracy of customer information.

³ This value (in 2022-23 dollars) is based on the approved business case with inflation of internal labour costs reversed. The approved \$38.6 million covers ALL schemes

and has been inflated to \$42.4 million allowing for a 1 July 2025 commissioning date.

- Investing \$2.9 million per annum and an additional 21 full-time equivalent roles in the customer engagement and stakeholder relations space since 2018 to ensure we can engage in a meaningful, timely and responsive way with customers.
- This investment supports both regulated and non-regulated activities such as investigations into new water opportunities and growth projects such as Rookwood Weir in Central Queensland.
- Cost control.
 - Lifting our annual efficiency target from 0.2 per cent (embedded in current period prices) to 0.5 per cent and applied to opex from the base (2022-23) year.
 - By 30 June 2029, this amounts to more than \$2.5 million in savings.
 - Lowering our 2022-23 base year by \$2.2 million through robust identification and removal of non-recurrent expenditure.

1.7 Preparing a customer-focused proposal

This proposal plays a critical role in helping Sunwater “*deliver water for prosperity*”. A poor-quality proposal has the potential to directly impact the sustainability of our business and our relationship with our stakeholders. These, in turn, may impede our ability to achieve our strategic goals relating to safe and engaged people, operational excellence and being a water infrastructure leader.

Recognising this, we set out to deliver a high-quality proposal that aligned with our purpose and strategic goals, both in the way we went about it and in its outcomes.

The formal Notice of Referral (issued in March 2023) set the terms and scope of the review. It established a nine-month window for Sunwater to identify matters pertinent to the terms of the review and engage with customers in the development of this pricing proposal.

After establishing a project team, steering committee and governance structure, Sunwater set some clear objectives for this proposal at a workshop attended by senior leaders and executives from across the business:

- Ensure customers are meaningfully engaged and able to influence the pricing proposal, aware of the process, and provided information and context to actively engage on matters of importance to them.
- Customers (and representative groups) are not surprised by the process or final proposal.
- Provide a robust, well supported, transparent, fair and reasonable pricing proposal to the QCA that requires little to no change.
- Demonstrate we are committed to continual improvement for our customers and other stakeholders, including through past feedback from the QCA is addressed.
- Deliver a pricing proposal that represents value for money for customers, in providing the services they want and need.

Delivering on these customer-centric objectives, we placed customers at the heart of our proposal development process. Building on our business-as-usual approach to ongoing engagement, we developed a bespoke program to tackle key regulatory and expenditure issues that would inform this pricing proposal.

This engagement program is discussed in **Section 2** and included:

- a multi-layered approach that sought to provide each irrigation customer with multiple opportunities to understand and engage with our proposal development process
- leveraging the skills and experience of key industry bodies in the form of a Consultative Committee that met monthly throughout 2023.

To deliver on our customer and quality ambitions, Sunwater stood-up a project team and governance structure that would continue to challenge and test the prudence and efficiency of the proposal as it developed.

Key features of the proposal development process included:

- Integrated customer engagement, business planning and regulatory processes.
- Executive leadership and Board oversight.
- A bespoke project steering committee and tactical working group with executive membership to provide regular and ongoing support and direction to the broader project team.
- A commitment to robust, external reviews of key elements of the pricing proposal that could impact the customer and quality outcomes – this included a review of project governance, the prudence and efficiency of early opex and renewals forecasts, the final proposal, and a quality assurance review to ensure accuracy and completeness.

1.7.1 A balanced risk approach

Sunwater recognises that risk, or uncertainty, is a key focus of the regulatory review process. In preparing this proposal, we sought to take a more proactive approach to appropriately balancing risk between customers and Sunwater.

In doing this, we have adopted the approach that Sunwater, not customers, is best placed to manage revenue and cost risk in most situations.

To ensure this proposal adequately reflected this position, Sunwater implemented the following principles and rules in its proposal development processes:

- Risk review and management in line with Sunwater's enterprise risk management framework.
- Risk to be borne and managed by Sunwater unless outside of our control.
- Expenditure forecasts must reflect Sunwater's approach to risk allocation and not be risk averse in nature.
- Quality management and audit processes will be utilised to monitor and manage risk during the price path period.
- Projects will be appropriately managed to prevent cost and timing risks.
- Strong governance will exist around all expenditure (monitoring and management).

Some of the key risks Sunwater considered are set out in **Table 5** including the way in which we propose to manage and allocate them.

Table 5 – Key risks relevant to this proposal

Risk	Risk mitigation strategy/allocation
<p>COVID-19 pandemic</p> <p>Sunwater’s ability to efficiently and prudently deliver bulk water services to irrigation customers may be impacted in the future by occasional outbreaks of COVID-19.</p>	<p>Sunwater proposes to retain the measures we put in place to protect its employees, customers and the community from illness and service disruption during the current price path period, which are recognised by QLD WorkSafe as being best practice.</p> <p>Sunwater has made no further opex allowances for managing the risks of COVID-19 going forward, considering the 2022-23 base year appropriate to reflect the way any residual pandemic risks will be managed in the next four-year price path period.</p> <p>Sunwater has no evidence that COVID-19 has materially impacted the demand for irrigation services.</p>
<p>Economic pressures, inflation and rising materials costs</p> <p>Sunwater’s cost to serve, may continue to be adversely impacted by factors outside its control, such as COVID-19, war in Ukraine and other macroeconomic factors.</p>	<p>To mitigate these risks, Sunwater will continue to focus on delivering bulk water services to irrigation customers in the most efficient and prudent way possible.</p> <p>In terms of risk allocation, Sunwater has taken a fair, balanced approach to cost escalation assumptions which are set out in Section 3.2.</p>
<p>Uncertain capital projects/a renewals forecast that over forecasts expenditure</p> <p>Forecasting error associated with Sunwater’s long-term renewal program used under an annuity approach to cost recovery.</p>	<p>To mitigate this risk, Sunwater proposes to change the recovery of renewals costs to a RAB-based approach, which only requires a forecast of renewals expenditure in the next price path period.</p> <p>In the event that the renewals annuity approach is retained, Sunwater has mitigated forecasting risk by engaging an independent consultant to review forecasts and accepting recommendations to adjust time and costs assumptions, resulting in a lower forecast across the annuity period.</p>
<p>Business resilience</p> <p>Delivery of services may be adversely impacted by business resilience issues associated with aging assets, an aging workforce and increasingly volatile climate events.</p>	<p>To mitigate this risk, Sunwater proposes to continue to develop the resilience of its business to ensure that it addresses challenges arising from its ageing workforce and the need to retire/replace aging assets in the most efficient and effective way possible.</p>
<p>Demand and distribution losses</p> <p>Customer prices do not reflect efficient levels of demand (variable tariffs) or distribution loss entitlements.</p>	<p>Consistent with the 2020 Review, an historical averages approach is used to calculate water demand.</p> <p>Distribution losses are discussed in detail in Section 3. Sunwater’s approach is in line with the approach taken in the 2020 Review, except for a reduction in the volume of loss entitlements held in the Mareeba-Dimbulah scheme.</p>
<p>Changing compliance obligations</p> <p>Unanticipated changes in compliance obligations may result in unforeseen costs.</p>	<p>Sunwater proposes to bear the full cost risk associated with unanticipated changes in compliance obligations in the next price path period.</p>

Risk	Risk mitigation strategy/allocation
<p>Electricity</p> <p>There is a risk that actual electricity costs incurred by Sunwater in the delivery of bulk water to irrigation customers in accordance with its regulatory and legal obligations exceed the QCA forecast allowance for electricity costs.</p>	<p>Sunwater undertakes a range of activities to mitigate this risk during the price path period, such as:</p> <ul style="list-style-type: none"> • Ensuring that pumps and related infrastructure are operated in an efficient and prudent manner. • Pumping station sites are assigned to the 'least cost' electricity retail tariff given the available tariff options and expectations of electricity usage at these sites. • Exploring opportunities to further reduce electricity costs by replacing ageing pumps, installing monitoring technology, investing in power factor correction and pursuing energy efficiency initiatives. <p>Sunwater is seeking to retain the ex-post review mechanism under the existing regulatory framework that provides an opportunity to Sunwater to propose an end of period adjustment to address a material change in actual electricity costs.</p> <p>Sunwater is also proposing an ECPT mechanism for the largest electricity using schemes where there is clear evidence that customers are supportive of this approach and that Sunwater would be accountable to customers for continuing to deliver efficient electricity costs – this is discussed in Section 3.6.2.</p>
<p>Insurance</p> <p>Actual insurance costs materially exceed the QCA forecast allowance for insurance costs.</p>	<p>Sunwater undertakes a range of activities to mitigate this risk during the price path period, such as:</p> <ul style="list-style-type: none"> • Ensuring that insurers have a sound understanding of Sunwater's bulk water infrastructure and the nature and extent of the insurable risk. • Exploring opportunities to self-insure where efficient and prudent to do so. • Ensuring that it has effective policies and procedures in place to limit the insurance exposure of emergency events. • Managing assets in a way that reduces the risk of asset failures. <p>Sunwater is seeking to retain the ex-post review mechanism under the existing regulatory framework that provides an opportunity to propose an end of period adjustment to address a material change in actual insurance costs.</p> <p>Sunwater has absorbed considerable insurance cost risk during the current period. As outlined in Section 3.3, Sunwater proposes a review event to balance this risk between itself and customers.</p>

2 Customer engagement

This section:

- *Demonstrates how Sunwater has, since 2020, implemented a strategy of regular, planned engagement activity to better understand and service our customers, and in doing so addressed elements of the 2020 Review feedback.*
- *Demonstrates the steps we took to ensure customers were fully informed of the price review process and given every opportunity to understand and influence Sunwater's pricing proposal.*
- *Presents the outcome of Sunwater's engagement efforts and how these have influenced our pricing proposal.*

Sunwater aims to be a stakeholder-centric organisation, through:

- building relationships with stakeholders based on trust
- actively working with customers, communities, Traditional Owners, shareholders, and industry groups
- minimising the impacts of our operations and projects
- creating opportunities for benefits beyond water delivery wherever possible.

To advance this strategic goal over the past four years, Sunwater has:

- stepped up activity aimed at building and strengthening relationships with customers
- become more targeted and considered in the way we engage, and more deliberate about utilising customer feedback and insights in decision-making.

Customers in this context includes existing customers, potential customers, communities, and industry groups, where relevant.

In doing so, we have also addressed recommendations contained in the 2020 Review Final Report, including where the QCA recommended that Sunwater:

- Engage with customers on an ongoing basis, to keep a strong focus on what is important to customers over the course of the price path period and to provide a better understanding of customer requirements prior to the next price review.
- Draw a clearer link for customers between proposed expenditure and both prices and service level outcomes for customers.
- Engage with customers prior to the next price review to develop a pricing proposal that incorporates proposed prices for all irrigation tariff groups.

Table 6 provides examples of where Sunwater has addressed the QCA's feedback from the last review.

Table 6 – How Sunwater has addressed feedback on engagement practices

Recommendation	Examples of actions taken
<p><i>Engage with customers on an ongoing basis, to keep a strong focus on what is important to customers over the course of the price path period and to provide a better understanding of customer requirements prior to the next price review</i></p>	<ul style="list-style-type: none"> • Introduced six Customer Advisory Committees (CAC) in the Burdekin Haughton, Chinchilla, Nogoia Mackenzie, Dawson Valley, Lower Mary and Upper Condamine schemes. • Continued Irrigation Advisory Committee (IAC) meetings. • Conducted annual and mid-year customer surveys and identified opportunities for improvement. • Implemented portal chat, a Sunwater app, and a Water Trading Board as tools to enhance customer experience. • Rolled out a Customer Experience and Regional Tour Program for employees to connect with customers.
<p><i>Draw a clearer link for customers between proposed expenditure and both prices and service level outcomes for customers</i></p>	<ul style="list-style-type: none"> • Delivered annual scheme-specific Service and Performance Plans (S&PPs) and notified all irrigation customers. • Discussed S&PPs at IAC meetings and CACs. • Planned for price path engagement – content included customer education on how prices are developed, operational and renewals expenditure inputs (and renewals cost recovery methodology) and value for money considerations.
<p><i>Engage with customers prior to the next price review to develop a pricing proposal that incorporates its proposed prices for all its tariff groups with irrigation customers</i></p>	<ul style="list-style-type: none"> • This pricing proposal (and the engagement activities that have informed it) address this recommendation – more detail is provided in Section 2.2.

2.1 Our improvement journey

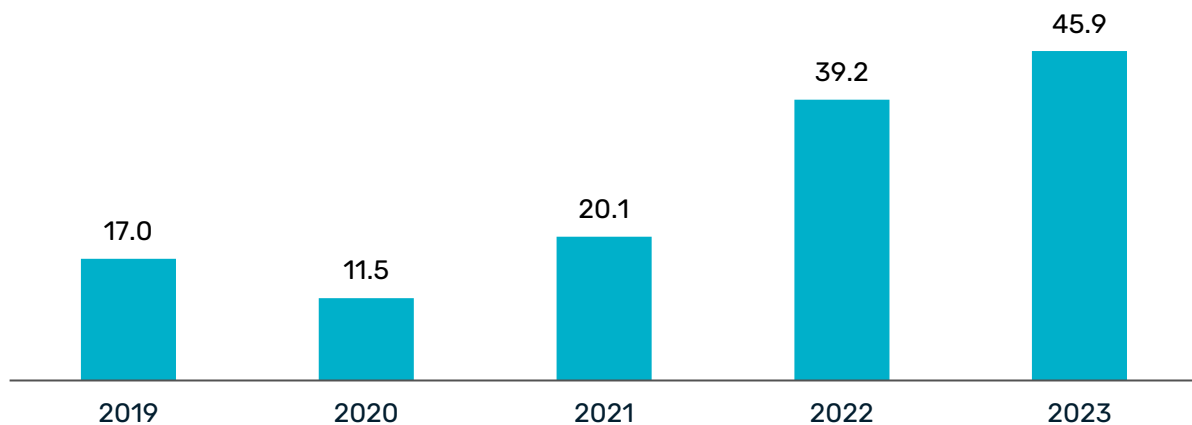
Sunwater has implemented a series of structured, strategic initiatives to close identified gaps, improve customer experience, and improve employee understanding of customer needs and expectations. These initiatives have worked to:

- embed an organisational culture that values excellence in customer experience
- ensure we have the right organisational structure, the right leadership and clear engagement principles in place
- build customer trust and achieve mutually beneficial outcomes.

These changes have resulted in Sunwater:

- developing a better understanding of customer needs
- focusing engagement on matters that customers value and can influence
- ensuring ongoing engagement occurs within timeframes to influence decision-making
- ensuring engagement informs business planning and decision making
- improving hands-on customer service and customer experience
- achieving year-on-year improvements in customer satisfaction (**Figure 6**) and other key indicators.

Figure 6 – Sunwater's Customer Satisfaction (CSAT) scores 2019-2023



Sunwater's broad customer engagement improvement journey since the 2020 Review is paying dividends. Our targeted approach to improving customer experience has seen CSAT scores trend upwards over the past four years.

Overall, customers feel that Sunwater is very responsive to their questions and concerns and understands their business, and they hold Sunwater's operational team in high regard. The survey also revealed some key areas where customers think we perform well, as well as areas to improve. These included providing helpful customer service, and effective billing and payment processes.

Sunwater's 2022 annual survey of customers revealed:

- 75 per cent of irrigation customers believe Sunwater understands their business somewhat to extremely well
- 90 per cent of irrigation customers feel Sunwater is somewhat, to extremely responsive and provides great customer service.

Relevant to this pricing proposal is the feedback that customers continue to feel the service they receive is too expensive and/or feel frustrated about having to pay for fixed costs even if water cannot be delivered.

In response to this, Sunwater ensured engagement activities for this pricing proposal included an education component for customers to learn more about how prices are developed including key inputs into a prudent and efficient cost base.

Feedback from CAC members remains positive, reflecting that these forums:

- "create a better connection" between customers, regional and corporate teams
- "create trust"
- "give customers a platform to feel their voices are heard"
- "improve knowledge"
- help to "identify and work toward solutions that deliver real value".

Sunwater's 2023 customer survey recorded the highest satisfaction score to date, with over 81 per cent of irrigation customers believing Sunwater understands their business somewhat to extremely well. Through the ongoing engagement and survey programs Sunwater has been able to gain a detailed understanding of what irrigation customers value, and how they like to engage with Sunwater.

Our employee culture around customer experience has also shifted in line with these external results. In 2022, 81 per cent of Sunwater employees were clear about how their roles connected to delivery for customers. One of the activities that has helped foster this connection is our customer experience program, which takes employees out of the office to meet customers in a region. Participants reported their understanding of how their role contributes to a positive customer experience has “somewhat” or “greatly” improved.

Sunwater’s deeper understanding of our customers directly influenced the development of our engagement activities for this pricing proposal.

2.2 Proposal engagement strategy

Leveraging strong foundations laid over the past four years, Sunwater engaged with customers through a bespoke, three stage program that aimed to:

- better understand matters of importance to customers
- discuss and explore these matters with customers
- identify and present opportunities for customers to influence our proposal
- increase the transparency of our proposal development process, providing opportunities to see and discuss the costs and initiatives proposed.

We knew that to successfully implement this program we needed to effectively apply the customer feedback and insights we had already gathered, which told us that our customers value:

- proactive communication
- openness and transparency

- engaging on the bigger picture
- facilitating genuine two-way engagement
- face-to-face communication
- a responsive Sunwater.

More detail about these principles of engagement is outlined in **Figure 7**.

Sunwater’s pricing proposal engagement strategy is set out in **Table 7**.

2.2.1 Clear customer choices

Early in the proposal development process, Sunwater identified three key opportunities (other than on cost inputs) for customer feedback. In presenting these choices to customers, we made it clear that we would not be including these in our final proposal without evidence of support for the proposed changes.

The three proposals were changes to the way Sunwater:

- recovers renewals expenditure through irrigation prices – from an annuity to a RAB-based approach
- recovers electricity through irrigation prices – from electricity costs embedded in irrigation prices, to an ECPT mechanism for irrigation prices in up to seven schemes
- reports to irrigation customers on its performance against operating and renewals expenditure allowances, revenue, prices, and service standards.

These choices were presented to customers during Stage 2 (see **Section 2.2.5**) and feedback captured and incorporated into Sunwater’s decision-making.

Figure 7 - Sunwater overarching principles of engagement

Proactive	We are proactive and visible in managing Sunwater's corporate footprint. We engage early and maintain contact with our stakeholders, even during periods of limited activity.
Open and transparent	Our engagement is based on what can be achieved and opportunities to improve outcomes. Open communication means our stakeholders can provide informed comment. Transparency means we accurately evaluate and report on our activities.
The big picture	We engage with stakeholders in a way that considers the social environment in which we operate. We work towards understanding the interconnections between our communities and our activities.
Two-way communication	We listen to all our stakeholders and validate their ideas and look for ways to collaborate to find solutions.
Responsive	We continually track our stakeholders' needs and expectations and ensure their insights inform our actions. All of our contact has purpose, and we act on the feedback we receive and deliver on the commitments we make.

Table 7 - Sunwater's pricing proposal engagement strategy

Goal	<p>Demonstrate Sunwater is an organisation that respects our customers, understands our business, and involves stakeholders to achieve sustainable, commercial outcomes.</p> <p>Understand what Sunwater can do to deliver on customer's key values through its pricing proposal.</p> <p>Deliver on those commitments for our customers.</p>		
Key strategies	Provide multiple opportunities and channels for irrigation customers to engage with Sunwater as the irrigation pricing proposal is developed.	Early engagement with customers to outline the proposal development process and test engagement opportunities and channels (three stage engagement strategy).	The formation of a committee with representatives from key organisations (Terms of Reference found in Appendix B Customer Engagement Report).
Objectives	<ul style="list-style-type: none"> • Raise and sustain awareness of the review and its impacts. • Ensure customers understand Sunwater's proposal and can give feedback. • Promote understanding of the approach Sunwater has adopted to specific feedback. • Foster agreement between Sunwater and customers, where possible. • Protect long term relationships. 		
Desired outcomes	<ul style="list-style-type: none"> • Price path activities complement and build on business-as-usual and project engagement. • Customers agree that Sunwater's process provided the opportunity to give direct feedback and that feedback was responded to. • Customers and other stakeholders are not surprised by the content of Sunwater's proposal. 		

2.2.2 Multiple channels, multiple opportunities

We knew from feedback already gathered that our irrigation customers generally prefer face-to-face engagement. We also sought advice from a Consultative Committee (see **Section 2.2.3**) and chairs of groups such as IACs as we designed our engagement approach.

This anchored our thinking as we designed our approach and was validated by customers in our engagement sessions. For example, one customer in Barker Barambah voiced appreciation for Sunwater engaging in person, face-to-face. Similar feedback was received verbally in Three Moon Creek, St George, Bundaberg, and Upper Condamine.

Recognising that the times chosen for face-to-face sessions may not suit all customers, we included online sessions in our engagement activities.

Throughout the process Sunwater ensured customers were notified of all opportunities to engage directly with us, whether face-to-face or online.

In Stage 1, Sunwater set up dedicated project webpages and emailed customers to advise them of upcoming engagement activities. Customers were also advised that the Sunwater website would be the hub for all available materials during the process, accessible for ongoing reference.

Sunwater prepared 25 scheme-specific fact sheets and 22 scheme-specific presentations (combining water supply and distribution service information for customers so they could engage in one session) for each stage of engagement. Fact sheets were available in hardcopy at face-to-face meetings.

Sunwater visited 19 schemes for face-to-face in-scheme customer forums and held one online forum for all-schemes during Stage 1, noting the following:

- We did not offer face-to-face forums for Pioneer, Maranoa and Cunnamulla because they have a small number of customers who we were able to contact directly about the process and opportunities to provide feedback. They were included in invitations to all online forums; notified of the GoVote process; and were sent scheme level summaries in Stage 3.
 - Note that Maranoa scheme customers neither receive nor pay for an irrigation service due to long-standing issues with the condition of the scheme's weir.
- No customers attended the face-to-face forums for Lower Fitzroy and Bowen Broken in Stage 1. Given the small number of customers in these two schemes, Sunwater attempted to contact each customer individually prior to the Stage 1 meetings to encourage them to attend. While some interest was noted during these conversations, no customers attended. As a result, Sunwater made the decision to only offer online meetings for Stage 2 and 3 for these schemes. Customers were subsequently invited to the online forums going forward; notified of the GoVote process; and were sent Stage 3 Scheme Summaries.
- A total of 21 face-to-face forums were held in Stage 1 as a second forum was offered in two schemes.

During Stage 2, three additional fact sheets were developed and provided to customers in sessions and online about the changes being proposed.

As one way of evaluating preferences for the three proposals, Sunwater activated an online voting system – GoVote – to capture de-identified, quantitative customer feedback.

All Sunwater irrigation customers were invited to lodge preferences about the renewals recovery and Service and Performance Plan proposals; and customers within eligible tariff groups (in the seven schemes where an ECPT mechanism was proposed) were invited to lodge their preference about that proposal. Hundreds of customers took the opportunity to engage in the GoVote system with:

- **369** customers providing feedback on the RAB-based approach and reporting refresh proposals
- **178** customers providing feedback on the ECPT mechanism specific to their scheme.

Overall, this reflected a **nine** per cent engagement rate. The response rate of nine per cent was considered excellent by the platform supplier (they consider above five per cent a sound response rate).

Further, Sunwater did not receive complaints or feedback from customers that they had wanted to engage with GoVote but either could not access the platform or did not know the process was occurring. Given the response rate and evidence that the process was sound, Sunwater feels confident that GoVote was a robust measurement of customer preferences.

Sunwater visited 17 schemes visited for face-to-face in-scheme customer forums and held one online forum for all-schemes during Stage 2, noting:

- we did not schedule in-scheme meetings for Lower Fitzroy and Bowen Broken based on feedback received from customers contacted in Stage 1.

During Stage 3, scheme summaries and supporting presentations were developed and provided to customers in sessions and online.

Sunwater visited 17 schemes for face-to-face in-scheme customer forums and held one online forum for all-schemes during Stage 3 continuing to reflect demand and the pattern of participation.

In total, over the three stages, 58 fact sheets and 77 presentations were prepared and delivered; 4,372 customers were informed; and 371 customers attended Sunwater forums.

2.2.3 Consultative Committee

In March 2023, Sunwater, in conjunction with the Queensland Farmers' Federation, established a Consultative Committee comprising representatives from the Queensland Farmers' Federation, Canegrowers Queensland, Cotton Australia and Queensland Fruit and Vegetable Growers.

One of the first things we did with the Consultative Committee was test our thinking around the planned three stages of engagement. The committee continued to meet throughout the engagement program – a total of eight times – in an advisory and assurance role.

The Consultative Committee played a co-design role in the development of the proposed ECPT mechanism, reviewed and challenged our costs and forecasts and helped to shape our engagement approach and materials throughout the process.

2.2.4 Stage 1 - Summary

Stage 1 engagement commenced in March and concluded in May 2023 with a final online forum.

The objective of Stage 1 was to educate and inform customers on the price review process and how we would be developing our pricing proposal. Customers were introduced to key dates and the process that Sunwater would be following to identify issues, present material and seek customer views. Stage 1 also provided an overview of the role of the QCA.

Supporting material prepared for the stage included fact sheets and presentations, which provided details on current tariffs and a flowchart showing how prices are calculated.

2.2.5 Stage 2 - Summary

Stage 2 engagement occurred over June and July 2023. Engagement was supported by updated fact sheets and presentation materials.

This stage included engagement on:

- what customers value in their irrigation service
- service standards by scheme
- initial operating and renewals expenditure costs
- preliminary cost reflective and transition prices for each scheme
- three proposals for customer consideration and feedback:
 - changes to S&PPs
 - changes to the way renewals expenditure is recovered through irrigation prices
 - in seven schemes, a permanent, symmetrical ECPT mechanism.

We explained the challenging operating environment; cost impacts – inflation (higher than QCA expected when it set allowances that underpin current prices), labour (to meet emerging risks and obligations) and insurance; the cost allocation process; operating expense forecasts methodology; indirect costs; and renewals expenditure forecasts. We outlined Sunwater’s approach to minimising costs and how, at scheme level, customer service standards drive the work we do and influence our operations and maintenance costs.

An innovative tool Sunwater introduced during Stage 2 was an online customer bill calculator ([Irrigation Price Path - Irrigation Customer Invoice Calculator - Sunwater](#)).

Using the calculator (which is still online and has been updated for our final proposal), a customer can enter their entitlement holding and expected usage and see their annual bill under both a RAB- and an annuity-based approach.

This was important for customers to understand the expected pricing impact of moving to a RAB-based approach. The tool was downloaded more than 1,000 times during its first month live on the Sunwater website, and customer feedback was overwhelmingly positive.

An online voting process (GoVote) was activated in Stage 2 and provided a key data point for Sunwater’s consideration of whether customers supported the proposals.

Scheme level feedback received during Stage 2 (and how we responded) is outlined in the Scheme Summary documents. Common themes raised by customers (via face-to-face sessions and written correspondence) included:

- general comfort with existing service levels and Sunwater’s understanding of what customers value about their irrigation service:
 1. price, affordability and value for money
 2. trust that Sunwater is managing the business responsibly on their behalf, controlling costs, managing assets responsibly and keeping prices as low as possible for them
 3. water security and availability
 4. service reliability and minimal interruptions
 5. water quality and fit-for-purpose services
 6. sustainability for the future
 7. personal customer service – not automated, not computerised but actual people to talk to when customers need something.
- a desire for more detailed scheme-specific information on operational and renewal expenditure, indirect support costs and controls
- an understanding of how to provide feedback on the pricing proposal
- appreciation of Sunwater’s transparency on costs and investment priorities
- concerns around rising (general) prices.

These themes align with Sunwater’s understanding from business-as-usual engagement activities and the work we do to deliver our services daily.

Sunwater responded by including more scheme-specific detail in Stage 3 engagement materials and by reiterating the many channels available for the provision of feedback. We also emphasised the prudence and efficiency review work we were undertaking to help keep downward pressure on our costs.

2.2.6 Stage 3 - Summary

Stage 3 engagement commenced in August and concluded in late November 2023. During this stage, Sunwater committed to continuing to capture and respond to customer feedback on its pricing proposal.

Our engagement materials included a Draft Final Scheme Summary document – our intention was that these reflected the final proposal we put to each scheme, pending receipt of any material Stage 3 feedback.

A presentation was also prepared that talked through the process Sunwater followed to adjust and finalise our Stage 2 cost estimates for Stage 3, as well as talk through the feedback received from customers at the end of Stage 2.

Responding to Stage 2 feedback we presented more granular views of both our opex and renewals forecasts. Our renewals forecasts included both the four-year price path period (relevant to a RAB-based approach) and an additional 29-year period (relevant to an annuity-based approach).

Scheme level revenue requirements and prices were presented reflecting a RAB-based recovery of renewals expenditure in line with Stage 2 feedback.

For schemes eligible to participate in the ECPT mechanism, customers were also presented with a final view of prices where electricity was treated as a pass-through.

Final prices presented in Stage 3 included indicative Part E (fixed electricity charges) and Part F (consumption-based electricity charges) alongside Part A/C and Part B/D charges. In some instances, presenting this material to customers led to them raising concerns that adopting a pass-through would not be in their best interests, contrary to their earlier feedback.

This was most apparent in schemes with a service on a transition price. The removal of electricity from the base price in these circumstances tended to show customers would pay a higher overall bill for their irrigation service under this proposal.

As a result of our Stage 3 engagement activities customers in the Upper Condamine, Mareeba-Dimbulah, Lower Mary, Bundaberg and Burdekin Haughton either wrote to Sunwater (correspondence has been appended to the Scheme Summaries) or provided verbal indications that they no longer supported the ECPT proposal.

Bundaberg and Burdekin Haughton customers suggested they were supportive of an ECPT concept but may put forward an alternative proposal during the review phase.

Sunwater has committed to work with customers in Bundaberg and Burdekin Haughton and will keep the QCA informed of developments. Consistent with our position throughout our engagement with customers, Sunwater does not wish to pursue an ECPT mechanism in the absence of customer support.

2.3 Engagement outcomes

Throughout the process, customer feedback was continuously captured in our online engagement database to provide a record of activity and commentary.

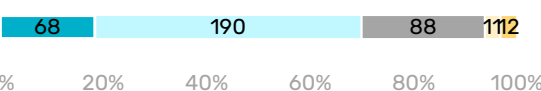
We responded to customer and peak body feedback throughout all three stages of the engagement program and redesigned and adapted our approach accordingly before the next stage was rolled out. All activity is described in the Customer Engagement Report (**Appendix B**).

As a result of our pricing proposal engagement process customers have:

- been afforded every opportunity to participate in, and respond, to Sunwater's pricing proposal
- had time to review and inform the service standards, opex, renewals expenditure, and pricing for to their scheme
- elected to support changes to the way Sunwater does things that relate to them and their scheme (such as a transition to a RAB-based renewals cost recovery approach, and an update to S&PPs)
 - **Table 8** summarises the proposal to refresh the S&PPs
 - Sunwater's final positions on our RAB and ECPT proposals are discussed in detail in **Section 3.6**.
- a better understanding of the emphasis Sunwater has placed on ensuring its cost forecasts represent only prudent and efficient spend in order to address customer concerns about rising prices – refer to **Section 4** and **Section 5** for an overview of the key actions we took to keep our costs as low as possible.

Sunwater is proud of the engagement process we have undertaken in the development of this proposal. We have sought to lift the bar in terms of transparency and trust and are heartened by the feedback we have received from customers on this journey.

Table 8 – Proposal to refresh Service and Performance Plan (S&PP) content

Proposal	Future S&PP content to have a greater focus on comparison of actuals against QCA allowances with earlier (pre-Christmas) publication as a key performance indicator.										
Scope	All schemes – a whole-of-Sunwater change										
Informed customers	<p>Prior to taking this proposal to customers, Sunwater engaged with the Consultative Committee to test and refine its engagement material.</p> <p>We then presented material to customers outlining the reason for our proposal, its benefits, how the methodology would work / be applied and its impact on timing of publication.</p> <p>Presentation materials were also uploaded to our project website. Prior to casting preferences, customers also needed to view a short video about the proposal.</p>										
Customer feedback	<p style="text-align: center;">All responses</p> <p style="text-align: center;"> ■ Strongly Agree ■ Agree ■ Neutral ■ Disagree ■ Strongly Disagree </p> <p>There is benefit in refreshing the Service and Performance Plans</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>68</td> </tr> <tr> <td>Agree</td> <td>190</td> </tr> <tr> <td>Neutral</td> <td>88</td> </tr> <tr> <td>Disagree</td> <td>112</td> </tr> </tbody> </table> <p style="text-align: center;">0% 20% 40% 60% 80% 100%</p> <p>Customers were overwhelmingly supportive of this proposal, with 70 per cent responding “agree” or “strongly agree”.</p>	Response	Count	Strongly Agree	68	Agree	190	Neutral	88	Disagree	112
Response	Count										
Strongly Agree	68										
Agree	190										
Neutral	88										
Disagree	112										
Sunwater’s position	<p>GoVote platform administrators suggest a response rate above five per cent is good for surveys of this nature.</p> <p>On the basis that the customer turnout was strong, and that customer feedback was overwhelmingly supportive of this change, Sunwater proposes to refresh the content of its S&PPs.</p> <p>Sunwater has developed and published a refreshed S&PP for each scheme addressing 2022-23 actuals (and otherwise aligned with the content of this pricing submission).</p> <p>We remain open to further changes to the content / layout of this document in response to further customer feedback.</p> <p>We remain committed to the timely publication of meaningful scheme-level performance data and near-term investment priorities going forward.</p>										
Source materials	Materials from all three engagement stages are available for download from www.sunwater.com.au/projects/price-path/										

3 Pricing framework

This section deals with a range of important inputs to the regulatory framework and revenue and pricing process. It:

- *Outlines the way Sunwater allocates costs to each scheme.*
- *Describes how Sunwater has escalated costs across the price path period.*
- *Includes a proposal to trigger a cost review event mechanism relating to material changes in insurance premiums.*
- *Outlines our approach to demand forecasting and distribution losses.*
- *Details two customer proposals that affect prices.*

3.1 Allocation of costs to schemes

Sunwater allocates costs to its business activities, including major projects, regulated and non-regulated service contracts using a documented cost allocation methodology which has been the subject of multiple reviews (discussed below).

Sunwater's cost allocation methodology:

- Charges costs directly to services and projects where practical. We do this for:
 - electricity
 - insurance (charged based on the proportion of Declared Asset Value)
 - materials
 - contractors
 - direct labour (where a direct link to a service contract or project exists).
- Charges support costs to the service or project, based on the proportion of direct labour to reflect effort.

Sunwater's cost allocation methodology reflects the agreed outcomes of the 2012 and 2020 Reviews.

At the 2020 Review Sunwater foreshadowed a reallocation of motor vehicle and fleet costs from non-direct to direct charging to schemes. This change has been adopted and is reflected in this proposal and the Scheme Summaries.

3.2 Inflation

In line with the regulatory framework set by the QCA, Sunwater applies expected cost escalation factors across major opex categories to inflate its regulated opex forecast from real (using a 2022-23 base year) to nominal dollars.

For this price review, Sunwater adopted the same major cost categories as the 2020 Review and applied the QCA's cost escalation methodology set out in the *QCA Final Position Paper – Inflation Forecasting*⁴ (Inflation Paper). We deviated from the Inflation Paper where contract cost increases are already known (or, in the case of insurance, highly likely).

⁴ QCA, Final Position Paper – Inflation Forecasting, Oct 2021

All adopted methodologies are described with supporting data and evidence in the Cost Escalation Paper provided (**Appendix C**).

Key features of Sunwater’s approach to cost escalation include use of:

- Contracted (known) price escalation factors where contracts extend beyond the base year (such as labour), and respected industry forecasts for 2023-24 for insurance.
- RBA short-term inflation forecasts⁵ for 2023-24 and 2024-25 where no other forecast exists.
- A year five anchor point (coinciding with the 2027-28 year).
- The midpoint of the RBA’s target range (2.5 percent) for 2028-29 for **all** cost categories.
- Queensland Treasury forecasts for labour.

Where possible, Sunwater has sought to align with good regulatory practice and not pass on unreasonable price risk to customers.

Sunwater has sought to simplify the overall cost escalation approach, noting that the current inflationary environment is significantly different to the one that existed at the time of the 2020 Review.

Sunwater’s cost escalation indexes as applied to opex categories are built on base input indexes for general inflation, insurance and labour.

3.2.1 Labour

Sunwater is bound by the GOC Wages Policy and is required to gain approval of a bargaining framework from the Queensland Government before commencing negotiations relating to any Enterprise Agreement (EA). This includes justification of how productivity gains will be achieved to offset, or self-fund through savings, at least half of any wage increase agreed and within the wage increase cap.

Crucially, this offsetting requirement is **not** tied to Sunwater’s labour cost category.

Sunwater gained approval of the bargaining framework for the EA 2022-25 in September 2021. During negotiations, on 9 November 2022, an addendum to the GOC Wages Policy was received to provide a rise in the wage increase cap and an increase in superannuation with productivity gains again to offsets half the wage increase.

Sunwater provides regular updates and reporting to all relevant stakeholders, including Shareholding Ministers throughout the life of an EA.

Productivity commitment

Sunwater committed to achieve productivity offsets of 2.25 per cent (year 1), 2.25 per cent (year 2) and 1.75 per cent (year 3).

During the prior EA period, Sunwater delivered on similar commitments via the Value Improvement Program (VIP), a dedicated program focused on continuous improvement and innovation across all domains (financial and non-financial).

⁵ Reserve Bank of Australia (2023) August Statement of Monetary Policy, [Forecast table – August 2023 | RBA](#), 22 August 2023

The VIP sets improvement targets across key areas of opex, capex and revenue growth. Over the course of the new EA, employees will continue to participate in and contribute to this program with the necessary support, mentoring and recognition to identify initiatives that generate real cash value to Sunwater. These initiatives are currently centrally monitored and reported on to ensure sufficient rigour and consistency.

Sunwater continues to identify, implement and achieve savings managed through the VIP. The program is delivering on a range of initiatives:

- energy efficiency
- more favourable insurance costs
- finding better ways to balance customer and stakeholder expectations on engagement
- improving our systems to better support the business in meeting engagement expectations.

The current efficiency program is targeting higher cost savings per annum, as part of a broader drive that encompasses employee-led productivity initiatives. The business has a high level of confidence in its ability to find ways to incrementally improve performance.

The following principles apply to our productivity initiatives:

- Genuine organisational improvements and/or changes to business practices and operations that deliver benefits to the business.

Table 9 - Derivation of general inflation index

2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
RBA forecast ↓	RBA forecast ↓	Glidepath ↓		Anchor year ↓	RBA mid-point ↓
3.60%	3.10%	2.98%	2.87%	2.75%	2.5%

- All parties are committed to implementing these initiatives.
- Savings from the initiatives will be sufficient to fund at least half of the minimum salary rate increases to be paid over the term of this EA.

Sunwater’s EA was approved by the Fair Work Commission on 9 October 2023.

Sunwater’s EA process and outcome (inclusive of the commitment to self-fund half of the wage uplift) is an efficient labour cost outcome that has been delivered within Sunwater’s regulatory framework.

Self-funding during the price path

As outlined above, Sunwater’s productivity commitments associated with the EA are **not** tied to labour.

So that customers receive the benefit of this commitment, Sunwater has increased the general efficiency factor (**Section 4.5** which is applied under its base-step-trend opex forecast (**Section 4**).

The efficiency factor uplift described in **Section 4.5** includes the realisation of the productivity commitments that accompany the EA. Importantly, it does so without artificially lowering Sunwater’s labour cost base for future years.

3.2.2 Base cost inflation

The derivation of the general inflation index adopts the methodology set out in the *QCA Inflation Paper* as outlined in **Table 9**.

Sunwater has applied RBA forecasts⁶ for June 2024 and June 2025 on the basis that these represent the best available forecasts for the full year effect of general inflation for the first two years of our base-step-trend forecast.

The derivation of the insurance and labour indices are in strong alignment with the methodology set out in the *QCA Inflation Paper*, and past regulatory practice, and are outlined in **Table 10** and **Table 11**.

The application of contracted (via its agreed and approved EA 2022-23 to 2024-25) labour price increases is consistent with the accepted approach for other non-labour cost categories such as insurance and electricity.

It is accepted that throughout the review process (prior to issuing its final report in January 2025), the QCA will continue to monitor actual and forecast inflation expectations and adjust forecasts for forward years accordingly.

3.2.3 Inflation of costs

Cost escalation factors applied to Sunwater’s component cost categories is set out in **Table 12**.

An example of Sunwater’s choice to balance price risk in favour of customers is the decision to apply only a general index to contracted services costs. Sunwater notes that these services include significant labour elements (particularly in the operations space) and that labour costs will be subject to the same wage pressures.

The approach adopted for the 2020 Review, to create a composite index (comprising general inflation and labour inflation components) for contracted services, remains sound and we may seek to re-introduce a composite index in future reviews.

Cost forecasts for contracted services have adopted a general inflation index only across the entirety of Sunwater’s contracted services portfolio.

3.2.4 Inflation for revenue and price setting

The *Inflation Paper* sets out the preferred approach to the setting of inflation for the purposes of calculating interest / returns on capital (under either an annuity or a RAB-based approach) as well as price smoothing.

Table 13 shows how we have derived our forecast for expected inflation for capital returns under a RAB-based approach and price smoothing (four-year geometric mean) and capital returns under an annuity approach (ten-year geometric mean).

Table 10 - Derivation of insurance index

2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Contract ↓	Industry forecast ↓	Revert to general index (see Table 9 above) ↓			
21.00%	10.73%	2.98%	2.87%	2.75%	2.5%

⁶ Reserve Bank of Australia (2023) August Statement of Monetary Policy, [Forecast table - August 2023 | RBA](#), 22 August 2023

Table 11 - Derivation of labour index

2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Sunwater EA ↓		Queensland Treasury / RBA forecast ↓	Glidepath ↓	10-year simple average for Queensland WPI all sectors ↓	
4.50%	3.50%	3.50%	2.98%	2.47%	2.47%

Table 12 - Proposed cost escalation factors by cost category

Cost category	Basis	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Electricity (default)	1 July 2023 price changes and General inflation index	Known price increases	3.10%	2.98%	2.87%	2.75%	2.50%
Electricity (seven schemes)	Bespoke scheme-by-scheme forecasts	Refer to electricity model and technical appendix					
Insurance	Insurance index	21.00%	10.73%	2.98%	2.87%	2.75%	2.50%
Operations and maintenance	Weighted average of labour and general inflation indices	Calculated separately for operations, preventative maintenance, and corrective maintenance according to the respective proportions of labour and non-labour costs					
Labour	Labour index	4.50%	3.50%	3.50%	2.98%	2.47%	2.47%
Contracted services	General inflation index	3.60%	3.10%	2.98%	2.85%	2.75%	2.50%
Materials							
Other							
Support costs	50:50 labour and general inflation index	4.05%	3.30%	3.24%	2.93%	2.61%	2.49%
Renewals	Applied renewals expenditure cost components (labour, contracted services, materials, other non-labour, plant) in line with the above labour cost escalator for the labour costs and general inflation for materials, contracted services, other non-labour and plant						

Table 13 - Derivation of expected inflation for capital returns and price smoothing

2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
RBA forecast ↓	RBA forecast ↓	Glidepath ↓		Anchor year ↓	RBA mid-point ↓
3.60%	3.10%	2.98%	2.87%	2.75%	2.5% ^A
Four-year geometric mean		2.77%	2.77%	2.77%	2.77%
Ten-year geometric mean		2.60%	2.60%	2.60%	2.60%

Note: A 2.5 per cent is assumed beyond 2028-29 – relevant to calculation of ten-year geometric mean

3.3 Review events

During the 2020 Review, the QCA established review events that would give rise to Sunwater recovering revenue not allowed for in their recommended prices.

These were:

- material changes in electricity prices during the price path period
- material changes in insurance premiums during the price path period
- material changes in regulatory requirements
- other unforeseen events.

Sunwater proposes maintaining these review events for the upcoming price path period.

Despite Sunwater’s best management efforts to keep insurance costs down during the current price path period, insurance costs have been materially higher than forecast. At the same time, Sunwater has incurred materially lower electricity costs as a result of procurement decisions to place a number of eligible sites on a whole-of-government tariff.

Sunwater has not identified any other material changes in regulatory requirements.

Where they have been incurred, unforeseen costs related to extreme weather events are proposed to be addressed via the ex-post review of prudent and efficient costs.

3.3.1 Material changes in electricity costs

Sunwater does not propose that a review event be applied to the materially *lower* electricity costs on the basis that it has already returned these savings to customers via the three year electricity cost pass-through trial that commenced in 2020-21 (**Table 14**).

3.3.2 Material changes in insurance premiums

Sunwater has incurred insurance costs above QCA allowances over the past three years and expects that to continue in 2023-24 and 2024-25 based on current market conditions. Sunwater expects total insurance cost to be \$7.9 million (real, \$2022-23) above the allowances for the 2020-21 to 2024-25 extended price path period (**Table 15**).

Table 14 – Total monies returned to irrigation customers during the trial (\$'000s)

Scheme	Tariff group(s)	2020-21	2021-22	2022-23
Barker Barambah	Redgate relift	-	-	7.1
Bundaberg	Bundaberg Channel	1,913.4	695.2	732.2
Burdekin-Haughton	Burdekin Channel Glady’s Lagoon – Other than natural yield Giru Groundwater Area	1,140.3	2,636.7	1,506.1
Lower Mary River	Lower Mary Channel	46.8	-	2.0
Mareeba-Dimbulah	Channel – relift	38.3	91.2	-
Upper Condamine	North Branch – Medium priority North Branch – Risk A	24.0	6.8	18.2
Total		3,162.8	3,429.9	2,265.7

Table 15 – Insurance cost comparison 2019-20 to 2024-25 (actual and forecast), real \$2023

Financial Year	Whole-of-Sunwater		Regulated service contracts only		
	Declared Asset Value (\$b)	Total Insurance Cost (\$m)	Insurance Cost (\$m)	QCA 2019 (\$m)	Under-recovery by year (\$m)
2020-21 (actual)	13.1	13.2	9.2	7.6	1.6
2021-22 (actual)	11.8	13.2	8.3	7.6	0.6
2022-23 (actual)	12.6	14.4	9.2	7.7	1.5
2023-24 (forecast)	14.3	16.6	9.1	7.4	1.8
2024-25 (forecast)	14.3	17.9	9.8	7.4	2.4
Total		75.3	45.6	37.7	7.9

How Sunwater has sought to control these costs for customers is explained in **Section 4** along with efficient forecasts for the next price path period. Our insurance strategies have saved an additional \$2.24 million over the period that would have been incurred if we were not acting to constrain these costs.

We are confident that we are managing insurance costs as effectively as possible for customers in the current environment. We propose that the under-recovered amounts be included as a revenue adjustment as part of this pricing proposal.

The insurance revenue adjustment of \$7.9 million (real, \$2022-23) is allocated based on each schemes' asset value (consistent with the 2020 Review). This adjustment is reflected in Sunwater's proposed revenue requirement (**Section 6.5**).

Sunwater also proposes the mechanism be retained for future price reviews on the basis that it represents a fair sharing of risk between Sunwater and customers and prevents inefficient upfront costs to customers through risk-adverse cost forecasting.

3.4 Demand and losses

3.4.1 Entitlements and usage

In addition to their use in calculating prices, entitlements are also used to allocate some fixed costs between medium and high priority tariff groups in each scheme.

Consistent with previous reviews, Sunwater has sourced entitlement data from our system (30 June 2023) and reconciled these, where possible, with information published on the Queensland Government's website⁷.

⁷ www.business.qld.gov.au/industries/mining-energy-water/water/water-markets/current-locations

Sunwater has maintained adjustments for costing and pricing purposes that were adopted in the previous QCA Review except for:

- a new adjustment for risk priority entitlements held in Eton (refer to Eton Scheme Summary and **Section 7.1**)
- conversion of 11,508 ML of entitlements from “loss” to “any” purpose in Mareeba-Dimbulah (refer **Section 3.4.2** for further detail on this change).

Scheme Summary documents include a detailed breakdown of total scheme entitlements and any adjustments for cost or pricing purposes. Adjustments (other than losses which are discussed in **Section 3.4.2**) are set out in **Table 16** and final entitlements adopted for this review are contained in **Table 17**.

Sunwater proposes to apply long-term (20-year) averages to forecast demand consistent with the 2020 Review. Proposed values are presented in **Table 17** including a comparison of changes to the usage percentage since the 2020 Review.

Historical water use for each scheme is set out in the demand report provided as **Appendix D**. This report has been prepared independently by Kellogg Brown and Root (KBR) using the same method applied by the QCA in the last review (a 20-year average).

3.4.2 Distribution losses

Sunwater holds distribution loss entitlements across several schemes. These are entitlements that cannot be used for any purpose other than accounting for losses. Distribution loss entitlements are established in schemes in recognition of the higher volumes of water that need to be stored and released to account for water that is lost to the environment as it is transferred via distribution (channel or pipeline) systems.

Only the Bundaberg, Burdekin-Haughton, Lower Mary, and Mareeba-Dimbulah schemes hold losses relevant to this review. Other losses held by Sunwater relate to water supplied via pipelines to non-irrigation customers.

As distribution service customers are the ultimate beneficiaries of losses, the water supply costs associated with distribution loss entitlements are transferred from the water supply to distribution customers. That is, an equal share of water supply service costs are applied to all entitlements, including loss entitlements, with loss entitlement costs then transferred to distribution service customers.

During the 2020 Review, the QCA recommended that:

- Prudent and efficient bulk costs associated with necessary distribution loss entitlements should be recovered from distribution system customers.
- Bulk holding (fixed) costs of distribution loss entitlements not required to service distribution system customers should be borne by Sunwater.
- Sunwater should review its distribution loss entitlements and develop a strategy for their future treatment prior to the next price review.

We have commenced a process to analyse the volumes of distribution loss entitlements historically utilised across water years in each scheme to confirm the total volume required to run our distribution systems in the long term.

Table 16 – Adjustments to Entitlements

Scheme	Service	System Type
Burdekin-Haughton	Distribution	Removed 110,000 ML of medium priority entitlements that Sunwater holds on behalf of the Townsville Thuringowa Water Supply Joint Board, consistent with previous review approaches of not allocating distribution costs to these entitlements.
Bundaberg	Water supply	Excluded entitlements for Paradise Dam. Paradise Dam is owned and operated by Burnett Water Pty Ltd (a wholly owned Sunwater subsidiary). The referral for the 2012 Review specifically excluded these services from the scope of our investigation (as is the case for the current review).
Bundaberg	Distribution	Included entitlements and associated water deliveries for distribution services provided to customers with entitlements for Paradise Dam.
Eton	Water supply	Added 700 ML of high-A priority entitlements (equivalent to high priority) to the non-irrigation customer segment, relating to entitlements in the Pioneer River scheme delivered through the Eton scheme. [new] Removed 504 ML of risk priority entitlements related to the operation of the Mirani Diversion Channel.
Lower Mary River	Water supply	Added 1,360 ML of high priority and 2,690 ML of medium priority entitlements for Teddington Weir (owned by Wide Bay Water). Under the existing Operations Manual, Sunwater must transfer water from the Lower Mary River scheme to the Teddington Weir scheme when certain conditions are met.
Mareeba-Dimbulah	Water supply Distribution	[new] Converted 11,508 ML of medium priority loss entitlements to use entitlements following application to DRDMW, upon successful delivery of efficiency works in the scheme.
Upper Burnett	Water supply	Excluded entitlements associated with Kirar Weir (owned by Burnett Water Pty Ltd). The referral excludes these services from the scope of our investigation.

Table 17 – Entitlements and Irrigation water demand (20-year average) by scheme

Scheme	Service	Total entitlements (ML)	20-year average usage as a percentage of total entitlements	
			2025 Review (%)	2020 Review (%)
Barker Barambah	Water supply	34,315	32.5	42.0
Bowen Broken	Water supply	38,930	40.0	37.2
Boyne River	Water supply	43,405	50.3	55.8
Bundaberg	Water supply	236,329	48.0	47.1
	<i>Distribution</i>	151,284	48.0	48.0
Burdekin Haughton	Water supply	1,079,592	53.1	54.9
	<i>Distribution</i>	335,000	62.2	65.0
Callide	Water supply	19,449	63.1	62.4
Chinchilla	Water supply	4,049	55.9	57.5
Cunnamulla	Water supply	2,612	60.7	58.7
Dawson Valley	Water supply	61,737	61.0	61.6
Eton	Water supply	62,759	35.9	42.1
Lower Fitzroy	Water supply	28,621	65.0	66.4
Lower Mary River	Water supply	34,449	25.8	33.1
	<i>Distribution</i>	15,262	29.8	31.2
Macintyre Brook	Water supply	24,997	53.6	63.0
Maranoa River	Water supply	805	2.8	3.3
Mareeba-Dimbulah	Water supply	204,424	62.0	64.7
	<i>Distribution</i>	146,954	62.6	63.0
Nogoa Mackenzie	Water supply	231,859	63.5	72.7
Pioneer River	Water supply	78,110	30.1	34.0
Proserpine	Water supply	62,876	38.5	42.1
St George	Water supply	84,575	85.8	88.6
Three Moon Creek	Water supply	15,028	39.9	41.8
Upper Burnett	Water supply	28,740	54.9	56.7
Upper Condamine	Water supply	33,960	41.0	45.0

The methodology examines historical data to create a correlation between the volumes of entitlements utilised by customers against the volume of entitlements consumed to enable its distribution. Sunwater's expectation (which is supported by the data) is that the ratio of distribution loss entitlements consumed versus volumes of water delivered to customers decreases, as total volumes of water supplied increases.

We are seeking to confirm two key parameters for each scheme from this analysis:

1. The total volume of distribution loss required to deliver all entitlements under the worst-case circumstances, for example dry years where demand is high and evaporation losses are greater. Sunwater would seek to convert (to tradable entitlements) any volumes of distribution loss entitlements held above these worst-case scenario volumes for subsequent sale in the market.
 - o This analysis will need to consider times when a low medium priority announced allocation is in play with a large volume of carry-over, as Sunwater still needs loss volume to deliver carryover water.
2. The volumes of excess announced allocations derived from the distribution loss entitlements that Sunwater holds in any given water year that could be traded on the temporary market. Confirmation of the relationship between losses and demand will assist Sunwater in making judgements early in the water year regarding the volumes of announced allocation that could be safely released to the temporary market. Care will always be required to ensure that Sunwater retains sufficient announced allocations to cover realised losses.

Sunwater has initiated discussions with DRDMW to amend appropriate Water Plan rules to allow the temporary trade or permanent sale of distribution loss entitlements.

The volume of necessary distribution loss entitlements has been calculated for each distribution system (below). Application of the previously applied method continues to conclude the Lower Mary and Mareeba-Dimbulah systems do not have an excess. However, some channel efficiency work has been completed in Mareeba-Dimbulah, which is discussed below.

Mareeba-Dimbulah

In our 2020 pricing proposal, we highlighted some of the work done to deliver better services to customers highlighting plans to address issues of high seepage and water losses in the Mareeba-Dimbulah distribution system.

We stated that we would achieve significant savings through investment in modernisation works in Mareeba-Dimbulah which improve control of water flows, facilitate different customer irrigation practices, and minimise losses. We have now delivered on that promise through the [Mareeba-Dimbulah Efficiency Improvement Project](#), which was funded in part by Sunwater to the value of \$32.5 million. We are currently (at 30 November 2023) in the process of converting 11,508 ML of loss entitlements (savings) into usable irrigation entitlements.

Ahead of the formalisation of this process, Sunwater has made a regulatory adjustment to these entitlements, shifting them from "loss" to use entitlements, reducing distribution costs for irrigation customers. This is clearly set out in the Mareeba-Dimbulah Scheme Summary document and **Section 3.4.1**.

Bundaberg

Sunwater's current position is to not trade or sell any of our own entitlements within the Bundaberg scheme until the Paradise Dam Improvement Project and associated works have been completed. Therefore, Sunwater will bear the costs of the 7,632 ML of excess distribution losses for this price period.

Burdekin Haughton

Consistent with the 2020 Review findings, distribution losses have not exceeded the amount recorded prior to 2014-15. The finding from the previous review can therefore be retained. This means that the costs of 40 per cent of medium priority distribution loss WAE should be borne by Sunwater. This equates to approximately 75,730 ML.

Sunwater owns a large volume of unsold medium and high priority entitlements within the Burdekin Haughton scheme, and notes there is limited demand for this on the temporary trade market due to an excess of available supply within the scheme more generally. There is also a moratorium on selling additional water into the Lower Burdekin Groundwater Management Area (that encapsulates most of the distribution network) until DRDMW finalises the Lower Burdekin Groundwater Management Strategy. This means that there will be limited opportunities to sell any distribution loss entitlements that have been converted.

Sunwater has however, received and used National Water Grid Fund funding to prepare and submit a Burdekin Haughton Modernisation Detailed Business Case (DBC) that identifies opportunities to increase the efficiency of existing channels in the scheme.

Lower Mary

Lower Mary was not considered to hold excess losses at the 2020 Review.

3.5 Headworks utilisation factor

Sunwater's pricing approach seeks to follow economically efficient, user-pays pricing principles. As high priority entitlements receive a higher level of reliability (standard of service), it is appropriate that they incur a greater percentage of fixed costs. Water sharing rules (generally) provide a high priority water entitlement with superior access to the volume specified.

The headworks utilisation factor (HUF) is a way of quantifying this superior access. Sunwater is not proposing any change to the way it was calculated or applied in the 2020 Review. For this price path period, we reviewed 2020 data inputs and considered the nature and materiality of changes to:

1. water entitlement groupings (high and medium priority entitlements)
2. usage/sharing rules
3. hydrological performance (simulation period).

A copy of the review is provided as **Appendix E**. This review identified three schemes which required a recalculation of the HUF. The rationale for each HUF review is presented in **Table 18** along with adopted 2025 review values for all schemes.

The impact of the HUF review differs for each scheme:

1. **Chinchilla Weir** – a change in HUF percentage will increase costs assigned to medium priority entitlements
2. **Mareeba-Dimbulah** – a change in HUF percentage will decrease costs assigned to medium priority entitlements
3. The updated HUF calculations for **Upper Condamine** resulted in a less than one per cent change to previous values – no change was made.

Table 18 – Headworks utilisation factors adopted for price path

Scheme	2025 values		Prior values		Reason for review of HUF calculations
	High	Medium	High	Medium	
<i>Input changes necessitated a HUF review</i>					
Chinchilla Weir	84%	16%	88%	12%	<ul style="list-style-type: none"> • Model simulation period has changed • New medium priority water sharing rules • New eWater Source hydrologic model
Mareeba-Dimbulah	66%	34%	53%	47%	<ul style="list-style-type: none"> • New eWater Source hydrologic model • Model simulation period has changed
Upper Condamine	92%	8%	92%	8%	<ul style="list-style-type: none"> • Model simulation period has changed • New medium priority water sharing rules • New eWater Source hydrologic model
<i>Unchanged from 2020 Review</i>					
Barker Barambah	28%	72%			
Bowen Broken Rivers	100%	0%			
Boyne River and Tarong	96%	4%			
Bundaberg	38%	62%			
Burdekin Haughton	21%	79%			
Callide	73%	27%			
Cunnamulla	0%	100%			
Dawson Valley	39%	61%			
Eton	21%	79%			
Lower Fitzroy	90%	10%			
Lower Mary	52%	48%			
Macintyre Brook	13%	87%			
Maranoa	0%	100%			
Nogoa Mackenzie	72%	28%			
Pioneer River	62%	38%			
Proserpine	71%	29%			
St George	6%	94%			
Three Moon Creek	39%	61%			
Upper Burnett	36%	64%			

3.6 Price-sensitive customer-supported proposals

3.6.1 Changing the renewals cost recovery method

This proposal includes a shift in the recovery of renewals costs from an annuity-based approach to a RAB-based approach, noting that Sunwater has applied an annuity-based approach to the recovery of renewals costs at the past two reviews.

This shift forms part of Sunwater's proposal on the basis that:

- irrigation customers are either broadly supportive of, or agnostic to, the change, and they:
 - have been afforded ample opportunity to engage with the proposal and raise concerns
 - will be better (or no worse) off under the RAB-based approach (Eton high-B (medium) priority is the only tariff group with higher transition prices during the price path period) – *further discussion provided below*
- cost reflective prices in most schemes will be lower under the RAB-based approach, placing downward pressure on the community service obligation (CSO) payment provided by the Queensland Government to Sunwater
- the RAB-based approach is best regulatory practice and delivers improvements in efficiency, equity and transparency
- it has been designed appropriately, with key design features having been part of Sunwater's customer engagement.

Customer support

Following confirmation of review scope via the Notice of Referral, Sunwater completed a tailored internal-decision making process before engaging actively with customers and our Consultative Committee on the rationale for proposing a RAB-based approach to renewals cost recovery.

Sunwater's focus in seeking support for this proposal was to ensure that customers were afforded every opportunity to be involved and provide feedback.

Sunwater is confident that every irrigator who wanted to understand elements of the proposal or its underlying concepts, and/or provide their views had every opportunity to do so.

Key elements of Sunwater's engagement approach for the proposed shift to RAB-based recovery of renewals costs included:

- the concept being introduced to the Consultative Committee at a meeting held 2 May 2023 (Meeting 2)
- a full walk-through of Stage 2 engagement materials relating to the proposal with the Consultative Committee on 28 June (Meeting 4)
- facilitating opportunities for the Consultative Committee to engage with QCA officers to discuss the concept of a RAB-based approach to renewals expenditure.
- Stage 2 engagement materials featuring a dedicated fact sheet and thirteen slides explaining the concept and Sunwater's reason for seeking customer support for this proposal – typically between half and two thirds of each in-scheme forum was spent presenting these slides and responding to customer questions and feedback from the floor.

- Slides and discussion included:
 - how annuity and RAB-based approaches work
 - reasons for considering a change
 - regulatory precedents and trends
 - introduction to key terms
 - proposed approach to annuity closing / RAB opening balances
 - forecast prices (cost reflective and transition) across three, four-year price path periods to show how the change might impact prices from period to period
- all materials being made available via the dedicated project website
- publishing an online calculator allowing customers to input individual data to see their prices under a RAB-based approach compared to an annuity approach
- providing multiple channels through which customers could raise queries (refer **Section 2.2.2**)
- activating a week-long online platform (GoVote - see **Section 2.2.5**), where customers were required to view a short explanatory video prior to expressing their preference
- Stage 3 engagement materials setting out the nature of the feedback received by Sunwater and our intention to include a change to a RAB-based approach in our proposal
 - revised 12-year price forecasts were included in the Bundaberg and Burdekin Haughton materials following feedback from customer representatives on the Consultative Committee that long-term price impacts were a factor in negative sentiment in these schemes.

Based on the feedback received from customers and their representatives during our engagement process Sunwater believes there is sufficient evidence of customer support to move away from the annuity-based approach to a RAB-based approach to renewal cost recovery. Perhaps more significantly, there is no evidence of broad support for the retention of the annuity-based approach.

Sunwater's proposal to adopt a RAB-based approach offers benefits to customers, Sunwater and the Queensland Government in the next price path period and beyond.

Improved efficiency, equity and transparency

This proposal brings Sunwater into alignment with other jurisdictions, including New South Wales and Victoria, where the Independent Pricing and Regulatory Tribunal and Essential Services Commission respectively have supported moves to a RAB-based approach for the rural water businesses they regulate.

Sunwater believes that the advantages of a RAB-based approach are compelling when compared to the annuity-based approach for the following key reasons:

1. Increased efficiency via reduced uncertainty, and optimised effort

- An annuity relies on long term capital forecasts (currently 30 years) which diminish in accuracy and certainty with time. This creates inherent risk that those forecasts are wrong, driving pricing variations.
- A RAB-based approach is less reliant on long term forecasts and is more closely aligned with actual expenditure outcomes.

- Actual funding is based on what is happening in the short term not on what is expected to happen in the long term. Under a RAB-based approach, only the actual capex is rolled into the RAB and recovered through prices.
- Sunwater also diverts time and resources to the development and justification of our 30-year forecasts on an annual basis, as well as ahead of periodic irrigation pricing reviews. One outcome of this approach is that Sunwater revisits the prudence and efficiency of projects multiple times before they fall within the near-term four-year planning and pricing window.
- This effort is diverted from other activities and is effectively “wasted” as it does not impact the key planning and delivery activities that only occur within that four-year window.
- A RAB-based approach also provides Sunwater with greater flexibility to re-prioritise expenditure and pursue least cost opportunities. The associated efficiencies will ensure Sunwater continues to offer value for money services to irrigation customers.

2. Increased flexibility (dynamic efficiency)

- Managing funding through an annuity can become complicated when there is material investment in service improvement. At the heart of an annuity-based approach is the assumption that the network being renewed will not change over time.

- The adoption of annuity funding for renewals effectively locks in a predefined outcome for service provision. Under a RAB-based approach we will have greater flexibility to respond to service improvements.

3. Improved intergenerational equity and with user pays principle

- Under a RAB-based approach, expenditure is recovered over the course of an asset’s useful life through depreciation. This means that at any given time customers are only paying for the proportion of the asset they have used. A RAB-based approach allows Sunwater to adopt depreciation that reflects the useful lives of long-lived assets which will lower prices in the short-term and make them more cost reflective.
- Under the annuity-based approach, assets with useful lives that extend beyond 30 years (typically more expensive assets such as pipelines, channels and other civil structures) are recovered via a 30-year annuity, where there is very little alignment with the user pays principle, and higher prices than would exist under a RAB-based approach.

4. Increased transparency

- The RAB-based approach is less complex to administer and easier to explain to customers. It is also more transparent as customers can see the pricing impacts of near-term expenditures. Projects in the four-year pricing window also have a far greater level of certainty and detail facilitating improved understanding and scrutiny from customers.

Lower prices

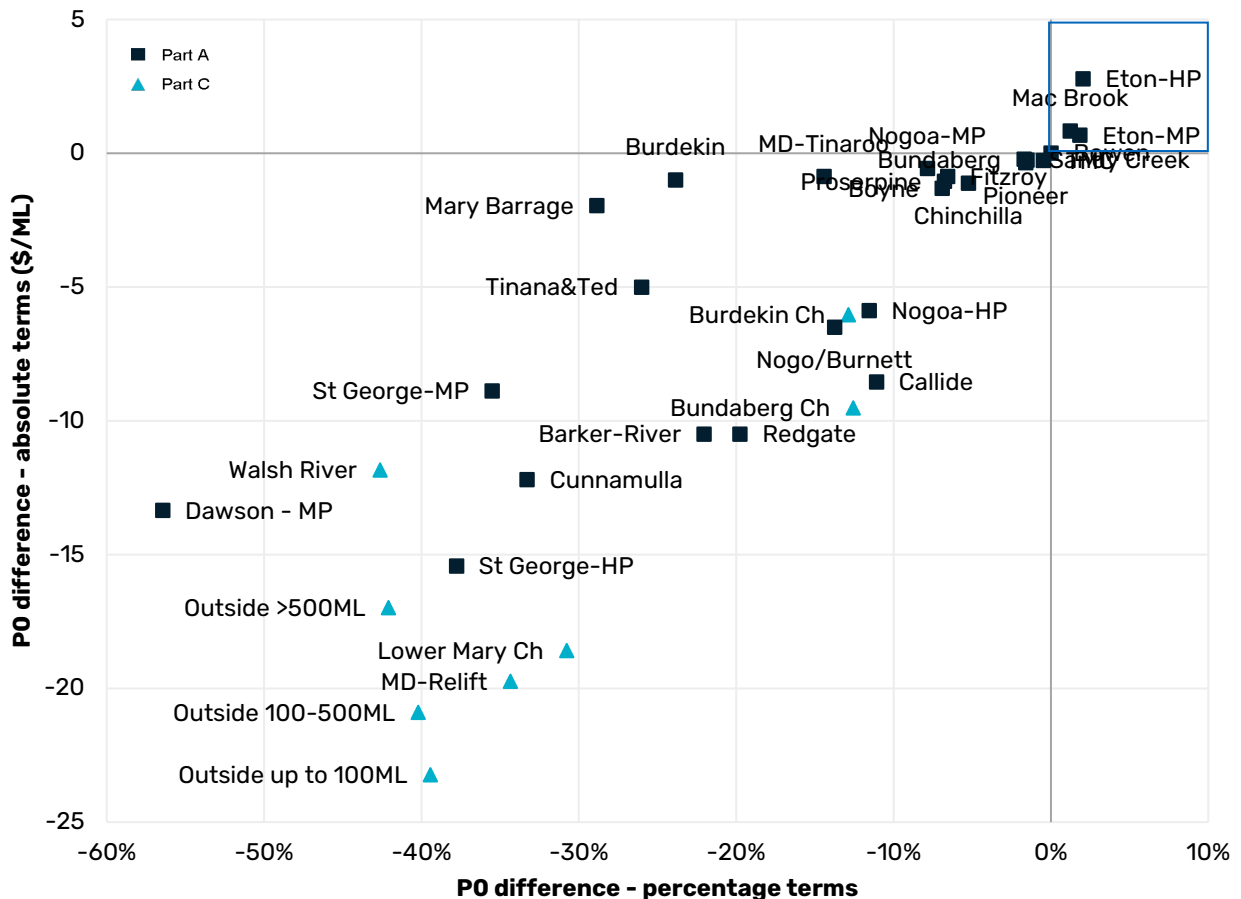
Sunwater’s proposal lowers its underlying (excluding return of positive annuity balances) aggregate revenue requirement by some \$25 million across the price path period (refer **Section 6.5** and **Section 6.6** for revenue requirements under each approach). This is *prior* to considering the return of \$26.6 million in positive annuity balance funds.

This lower revenue requirement translates to lower cost reflective prices for all irrigation tariff groups in all schemes, except Eton, Macintyre Brook and Maranoa as shown in **Figure 8**.

Within these three schemes, only the Eton high-B (or medium) priority tariff group transition prices will be higher under a RAB-based approach, paying an extra 70 cents per megalitre in 2027-28 and 73 cents in 2028-29. Transition prices in the other two schemes (and for Eton high-A (or high) priority) are below cost reflective levels throughout the next period.

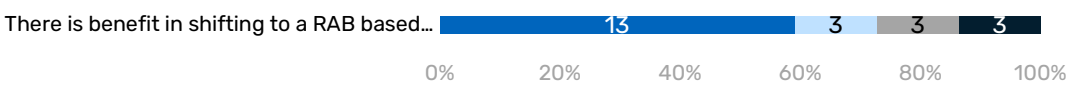
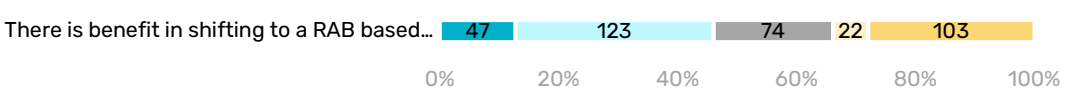
This proposal is summarised in **Figure 8**.

Figure 8 - Impact of shift to RAB-based prices on first year price change¹



Note 1: Abbreviations have been used and scale has been selected to enhance readability, resulting in the omission of Maranoa (+12.4%; +\$12.85/ML) and Dawson Valley - River (high priority) (-68.1%; -\$84.21/ML) tariff groups. Tariff groups with common cost reflective prices have only been shown once (e.g., John Goleby Weir tariff group has the same change as Nogo/Burnett - only Nogo/Burnett is shown).

Table 19 – RAB-based recovery of renewals expenditure – proposal summary

Scope	All schemes –proposed as a whole-of-Sunwater change.
Informed customers	<p>Prior to taking this proposal to customers, Sunwater engaged with the Consultative Committee to test and refine engagement material.</p> <p>We then presented material to customers outlining the reason for our proposal, its benefits, how the methodology would work/be applied and its impact on prices in the scheme. We extended the forecast to three, four-year pricing periods to provide insight into medium term impacts of the change following queries raised during engagement with the Consultative Committee.</p> <p>Considerable time was devoted to discussing this proposal with customers at in-scheme forums, with Sunwater enabling discussion with customers seeking further understanding beyond the defined engagement timeframes (after forums ended).</p> <p>A dedicated fact sheet and presentation materials were uploaded to our project website for ongoing access. Prior to casting preferences, customers also needed to view a short video about the proposal.</p>
Customer feedback	<p style="text-align: center;">Sentiment by scheme</p> <p style="text-align: center;"> ■ Simple majority for ■ More for than against ■ no responses ■ Simple majority against </p> <p>There is benefit in shifting to a RAB based... </p> <p style="text-align: center;">All responses</p> <p style="text-align: center;"> ■ Strongly Agree ■ Agree ■ Neutral ■ Disagree ■ Strongly Disagree </p> <p>There is benefit in shifting to a RAB based... </p> <p>The RAB-based approach was supported in 16 schemes and was received positively by 46 per cent of respondents, with 20 per cent neutral and 34 per cent against.</p>
Sunwater's position	<p>Sunwater received responses from 9.1 per cent of eligible customers through the GoVote platform, noting that the platform's administrators suggest that a five per cent participation rate is a good result for surveys of this nature. Proserpine Canegrowers and Central Downs Irrigators wrote to us on several topics and included commentary that was supportive of the RAB-based cost recovery proposal.</p> <p>On the basis that customers were given ample opportunity to participate in this survey and/or make their feedback known throughout the engagement process, we propose to respect the support for this change and adopt a RAB-based approach.</p> <p>Sunwater acknowledges the responses in the Bundaberg and Burdekin Haughton schemes (accounting for 84 per cent of the "strongly disagree" responses) and will continue to engage with irrigators in these schemes (and any other scheme) to understand and address concerns.</p>
Source materials	Materials presented to the Consultative Committee and schemes form part of our Customer Engagement Report. Engagement materials from all three stages are available for download from the Sunwater website www.sunwater.com.au/projects/price-path/

3.6.2 Changing the method of electricity cost recovery

Sunwater proposes to introduce an ECPT mechanism in the next price path period in eligible schemes where there is sufficient evidence of broad and informed customer support for doing so.

Table 20 provides an overview of the scope, engagement and final proposal in relation to the ECPT mechanism. Key elements of the proposal are then discussed, and further detail is provided in **Appendix F**.

Customer support for the pass-through mechanism is based on the belief that it will deliver a better outcome than the current approach where the forecast of electricity costs is bundled into existing charges by:

- ensuring that customers pay no more or less than the actual electricity cost incurred by Sunwater to provide the services that our customers want
- providing customers with improved transparency over the actual electricity costs incurred to provide the services that our customers want and how these costs are reflected in the prices charged to customers
- providing customers with an effective means to raise concerns over electricity costs on a timely basis via the proposed review and dispute resolution process.

Sunwater worked closely with customer representatives from the eligible schemes to co-design this pass-through mechanism. It has also been shaped by:

- Sunwater's supplementary submission to the 2020 Review⁸, which was informed by customer feedback at the time^{9,10}
- the learnings and insights obtained from the trial Sunwater undertook with customers in selected schemes (**Section 3.3.1**) during the current price path period¹¹
- the feedback received from customers and customer representatives during the consultation and engagement process for this pricing proposal.

The proposed ECPT mechanism should be assessed against the backdrop of a growing level of knowledge and trust that customers have in Sunwater's approach to managing electricity costs, derived from the trial that concluded in 2023.

The design of our proposed ECPT mechanism for the next price path period also reflects a genuine effort by Sunwater to address matters raised by the QCA in the 2020 Review, particularly regarding obtaining empirical evidence of broad-based customer support and addressing efficiency and equity concerns through improved design features and more robust reporting and review processes. The key design features of our proposed ECPT mechanism are shown in **Table 21**. The rationale and justification for each of the proposed design features are discussed below.

⁸ supplementary-submission-electricity-cost-pass-through-mechanism-1.pdf (qca.org.au)

⁹ qff-letter-of-support.pdf (qca.org.au)

¹⁰ 34348_Bundaberg-Regional-Irrigators-Group-Dec-18.pdf (qca.org.au)

¹¹ Electricity Cost Pass-through Trial - Sunwater

Table 20 - ECPT mechanism – proposal summary

<p>Scope</p>	<p>Adoption of an ECPT mechanism via quarterly (lagged) billing of actual electricity costs in schemes that opt-in to this mechanism. This proposal builds on the customer-led trial which ran from 2020-21 to 2022-23.</p> <p>Sunwater proposed this change as a scheme-by-scheme opt-in proposal in the Barker Barambah, Bundaberg, Burdekin Haughton, Eton, Lower Mary, Mareeba-Dimbulah and Upper Condamine schemes.</p>
<p>Informed customers</p>	<p>Prior to taking this proposal to customers, Sunwater engaged with the Consultative Committee to test and co-design the proposed pass-through mechanism and refine our engagement material.</p> <p>We then presented material to customers outlining the reason for our proposal, its benefits, how the methodology would work and its impact on prices in the scheme. We presented an updated pricing view in our Stage 3 materials. Prior to casting preferences, customers also needed to view a short video about the proposal.</p>
<p>Customer feedback</p>	<p>The GoVote process attracted 9.1% of eligible customers. GoVote platform administrators suggest that a five per cent participation rate is a reasonable threshold for surveys of this nature.</p> <p>Response rates in eligible tariff groups ranged from five per cent (Eton) to 89 per cent (Barker Barambah – Redgate relief) through the GoVote platform.</p> <p>Barker Barambah customers clearly did not support the adoption of a pass-through mechanism. Respondents from the other six schemes were clearly in favour.</p> <p>Scheme level responses are presented in the Scheme Summary documents.</p> <p>Following Stage 3 engagement, five of the six previously supportive schemes provided feedback to Sunwater which suggested customer support for the proposal had changed. This feedback has been reflected in the Scheme Summaries and informs our final position on this proposal.</p>
<p>Sunwater's position</p>	<p><i>Stage three engagement feedback</i></p> <p>Sunwater notes that final prices presented in Stage 3 included indicative Part E (fixed electricity charges) and Part F (consumption-based electricity charges) alongside Part A/C and Part B/D charges. In some instances, presenting this material to customers led to concerns that adopting a pass-through would not be in their best interests, contrary to their earlier feedback.</p> <p>Sunwater will continue to gather and respond to customer feedback and will keep the QCA informed of any further change to customer support for this proposal. Consistent with our position throughout our engagement with customers, Sunwater does not wish to pursue an ECPT mechanism in the absence of customer support.</p> <p>Based on feedback received from customers prior to 30 November 2023, Sunwater is:</p> <ul style="list-style-type: none"> • not proposing an ECPT mechanism for the Barker Barambah, Bundaberg, Burdekin Haughton, Lower Mary, Mareeba-Dimbulah and Upper Condamine schemes • proposing an ECPT mechanism for the Eton scheme, noting that support in this scheme may be qualified or change during the review phase. <p>Sunwater attempted to clarify the position Eton prior to finalising this submission, but as no further feedback was received, is progressing as stated.</p>
<p>Source materials</p>	<p>Materials presented to the Consultative Committee and schemes form part of our Customer Engagement Report.</p> <p>Engagement materials from all three stages are available for download from the Sunwater website www.sunwater.com.au/projects/price-path/</p>

Table 21 – Key design features of ECPT mechanism proposal

Design feature	Description
<i>Fully symmetrical pass-through</i>	The mechanism is symmetrical in design, which means that increases (and decreases) in actual electricity costs are reflected in an increase (and decrease) in the charges paid by irrigation customers.
<i>Opt-in at scheme level</i>	The mechanism is to apply only to eligible schemes where Sunwater has obtained sufficient evidence of broad and informed customer support. We were clear with throughout the proposal development process that would not pursue an ECPT mechanism in the absence of customer support.
<i>All electricity costs in scope</i>	The calculation of Part E and Part F charges under the mechanism would be based on total electricity costs, inclusive of administration costs.
<i>Pass-through at regular intervals</i>	Pass-through of changes in electricity costs are implemented in a timely manner via quarterly price setting.
<i>Clear performance reporting and review pathways</i>	An agreed review mechanism with a potential trigger for review. Adverse findings could trigger an asymmetric pass-through outcome.

Symmetrical exposure to cost risk

Sunwater believes that it is appropriate for the mechanism to expose customers to total price and volume related risks associated with electricity costs during the price path period. Designing the mechanism in this way ensures that Part E and Part F charges are reflective of electricity costs. It also ensures that our customers pay no more or less than the actual electricity costs incurred by Sunwater to deliver the regulated services that they want.

The efficiency of Sunwater’s electricity costs is addressed by the review mechanism and a customer base that has strong knowledge of electricity matters.

Opt-in at a scheme level

Sunwater adopted an opt-in at scheme level approach due to the significance of electricity to some tariff groups and the variability of this significance across schemes. The limited number of schemes that consume material amounts of electricity also means a whole of Sunwater approach is not necessary from an internal efficiency and effectiveness perspective.

Full coverage of electricity costs

The mechanism is based on total electricity costs incurred to provide the service to irrigation customers at desired standards of service. This approach ensures that the Part E and Part F charges under the mechanism are as cost reflective as possible.

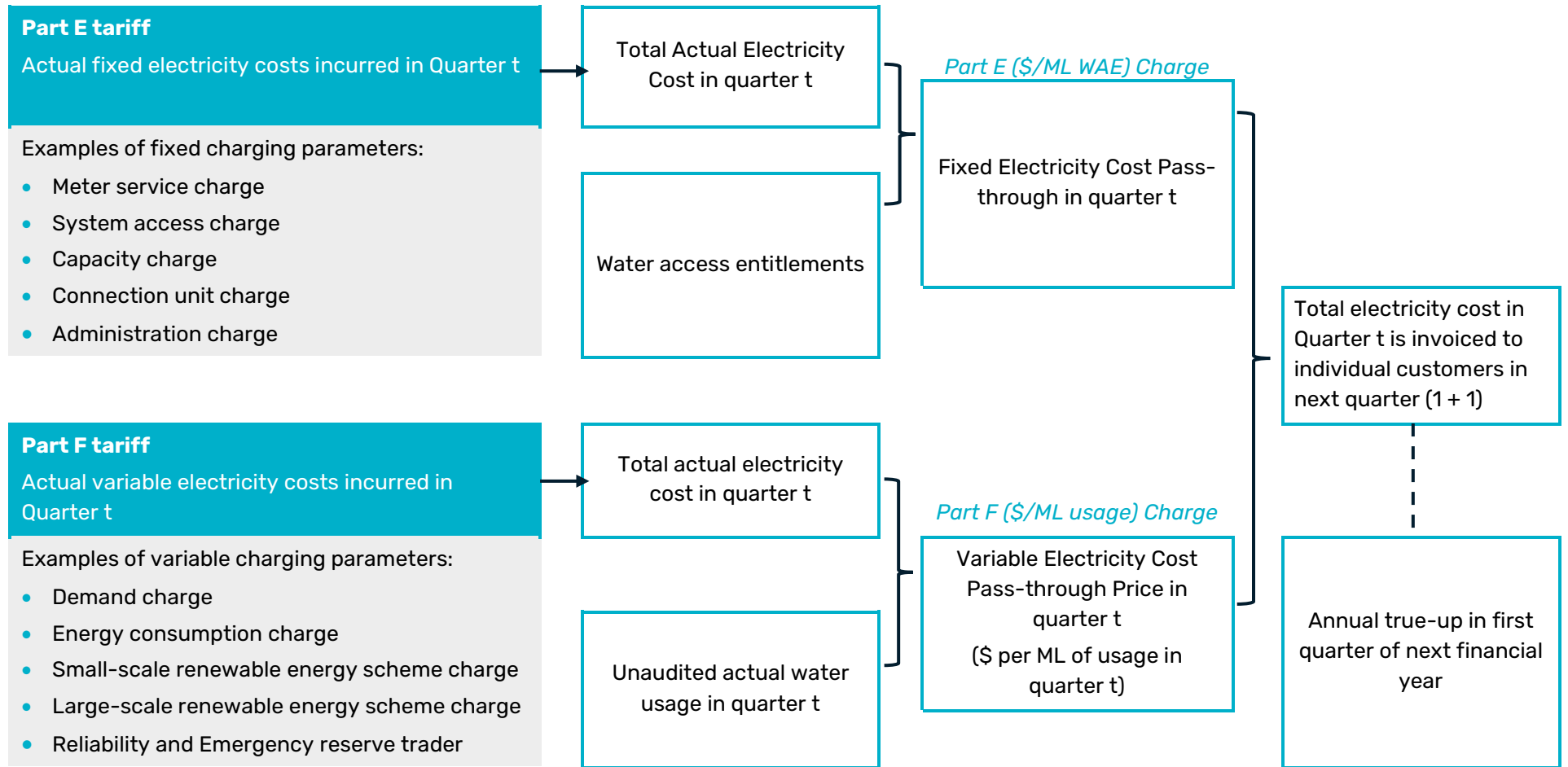
Sunwater also proposes to pass-through incremental management costs associated with the pass-through methodology. These will be quantifiable when the number of participating schemes is known.

Price setting at regular intervals – Part E and Part F charges

A key design feature of Sunwater’s proposed mechanism is the introduction of Part E and Part F charges in the next price path period.

The proposed methodology for calculating Part E and Part F charges is set out in **Figure 9**, and is designed to ensure that these charges are as cost reflective as possible. That is, the Part E charge is reflective of fixed electricity costs and the Part F charge is reflective of variable electricity costs.

Figure 9 - Proposed methodology for setting Part E and Part F charges



A central feature of the ECPT mechanism is that Part E and Part F charges will be set on a quarterly basis. This approach was co-designed with Bundaberg, Burdekin Haughton, Mareeba-Dimbulah and Upper Condamine representatives on the Consultative Committee to address concerns relating to potential ‘bill shock’ associated with an annual billing approach.

Reporting and review process

A critical customer-protection feature of Sunwater’s proposed mechanism is the reporting and review process. The proposed steps in this process are discussed in **Table 22**.

Table 22 – Key design features of reporting and review process under the ECPT proposal

Key steps	Description
<p>Step 1 Publish annual electricity pass-through report</p>	<p>Sunwater publishes an annual report to provide customers and their representatives with the information they require to assess whether the actual electricity costs passed through in the previous financial year is reasonable and in accordance with the price-setting methodology.</p> <p>The information in this annual report would include the following:</p> <ul style="list-style-type: none"> • The pass-through amount and true-up amount (if any) for the review year and the underlying calculations. • A comparison of electricity prices with prior year prices • An overview of Sunwater’s tariff strategy and upcoming price changes relevant to selected tariffs. • A comparison of the annual water and electricity usage against previous years. • Additional information as necessary to explain high usage or irregular water and electricity usage relationships.
<p>Step 2 Customer review</p>	<p>Customers and their representatives review the annual report and raise any concerns relating to inefficient or imprudent costs.</p>
<p>Step 3 Sunwater response</p>	<p>Sunwater provides a response to customer concerns (if any). These responses may include additional information and analysis, or adjustment to the electricity charges.</p>
<p>Step 4 Review/dispute resolution</p>	<p>If customers remain concerned over the efficiency and prudence of the actual electricity costs incurred by Sunwater, then they have the option of initiating a formal dispute resolution and review process.</p> <ul style="list-style-type: none"> • Reporting would be presented to IAC/CAC groups in the first instance. • Irrigator-nominated customer representatives responsible for decision-making ask Sunwater for a formal response and/or to move to dispute resolution. • To initiate a dispute resolution process, the scheme needs to formally write to Sunwater that a review is necessary and material – in deciding to initiate the process the scheme may elect to commission independent advice (e.g., from a peak body or other) at their own cost. <p>The potential outcomes of this process could be:</p> <ul style="list-style-type: none"> • no change to invoices or future costs • an adjustment to customer invoices (backdated) • an adjustment to future costs.

4 Operating expenditure (opex)

This section describes the approach taken to develop, test and finalise Sunwater’s opex forecast. It sets out:

- our commitment to keeping costs as low as possible through innovation and a commitment to efficiency
- our base-step-trend methodology adopted using 2022-23 actuals for base year forecast development
- how Sunwater has escalated costs across the price path period and the significance of the inflation challenge.

4.1 Strategic priorities

Since the 2020 Review, Sunwater’s annual corporate and strategic planning processes have delivered a change in strategic priorities/focus to better align our operational activities with our purpose and strategic goals.

The strategic goals of safe and engaged people, sustainable business and operational excellence led to a refresh of our approach to strategic workforce planning (**Figure 10**).

We have recognised risks within our workforce plan and are actively looking at critical areas of the business with a view to identifying critical skills needed to deliver services consistently to customers.

This strategy included a focus on areas such as formal succession planning (new for Sunwater) to future-proof the workforce and protect customer services from the loss of critical staff and knowledge. This is particularly pertinent in the context of an aging operational workforce.

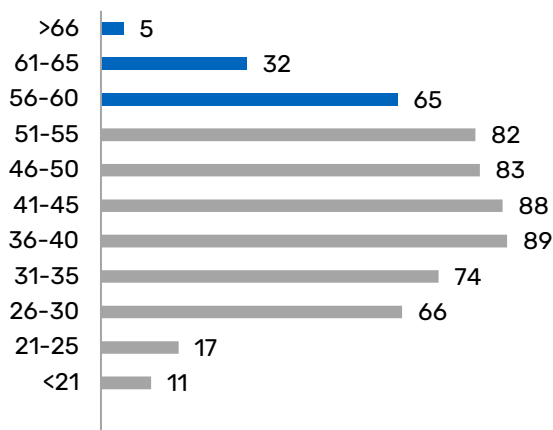
Figure 11 shows 58 per cent of Sunwater’s workforce is 41 years old or over, with 30 per cent over 50. Functionally, the majority of Sunwater’s older workers (over 55 years of age) are found in Operations (60 individuals).

Figure 10 - Strategic Workforce Planning strategy

Strategic Workforce Planning is **future focused**, enabling our organisation to make **long term workforce investments** to ensure the **right people** are in the **right place**, at the **right time**.



Figure 11 – Workforce age profile



4.1.1 Improvements

In the 2020 Review, the QCA’s consultant (AECOM) noted that while Sunwater’s maintenance regimes, work scheduling and delivery processes were prudent and efficient, we could explore some areas to further efficiency in operations and maintenance activities. These included:

- investigating the upgrade of communications networks to remove constraints for remote control and data collection for critical assets via the Supervisory Control and Data Acquisition (SCADA) network
- formalising and optimising spares management to further leverage efficiencies in work scheduling that may be present when critical spares are needed and not available.

As a result, we are currently investing in upgrades to regional communications and network systems (as an enabler for SCADA and other technologies) that are, or will, deliver the following benefits:

- improved remote control and data collection for critical assets

- ability to video conference from site with specialist engineers and business support to improve timeliness of communication, assessment and resolution of issues
- ability to use new mobile measuring point apps that transfer data to SAP faster than manual data entry (this was part of the ‘DEBS’ project discussed during the 2020 Review – ‘DEBS’ is now business-as-usual work for the ICT Delivery function)
- digitisation of work instructions in SAP (FAMS) to reduce the time it takes for staff to receive work orders and removing the manual data entry of work activities upon completion
- improved access to documentation and records onsite for maintenance and customer service, including digital manuals on iPad
- introduction of enhanced security monitoring equipment as part of the cyber program, keeping Sunwater staff, the community and assets safer
- safety improvements by providing Wi-Fi in remote and confined spaces such as dam galleries which will also enable back-to-base telemetry devices to improve data timeliness and accuracy (legislative requirements for manual checks remain)
- less outages and improved site uptime due to real time monitoring and increased responsiveness

These improvements will ultimately assist us in maintaining or improving the current utilisation rate, ensuring the workforce is actively engaged and performing efficiently for customers.

A critical spares project is also underway. Decreased availability of spares and extension of procurement lead times was further highlighted during the COVID-19 pandemic. To address this and ensure Sunwater can continue to meet customer service standards, we have:

- developed and published a critical spares methodology document
- assessed assets that have a spares requirement for criticality
- uploaded the asset criticality score to SAP for approximately 50,000 assets
- developed and validated a risk-ranked list of 329 critical spares across all four operational regions
- determined minimum/maximum holding quantities or catalogue for each of the 329 critical spares.

Further due diligence and implementation is planned for the price path period.

Sunwater expects the critical spares methodology will allow for optimisation work to be done onsite at every scheduled visit by ensuring that everything needed for the planned work is available, and that related work at a site can be grouped for delivery where possible during single visits. This will be an improvement to our work scheduling and delivery processes, and demonstrates our commitment to continuous improvement.

4.2 Opex forecasting approach

To develop a prudent and efficient opex forecast for this pricing proposal, Sunwater employed the standard regulatory practice of base-step-trend forecasting. This process is set out in **Table 23**.

Fees associated with the irrigation pricing review process (the QCA issues Sunwater with an invoice for its review activities) have been applied as a revenue adjustment in the pricing model in line with the approach taken for the 2020 Review (**Section 6.4.4**).

Table 23 - Sunwater's base-step-trend forecasting process

Key step	Description
<i>Establish base year</i>	Most recent year of actuals (2022-23)
<i>Ringfence regulated costs</i>	Using established cost allocation methodology and exclusion of recreational facilities expenditure
<i>Remove non-recurrent, add recurrent</i>	Review base year for any expenditure that would / would not be incurred in a normal year, followed by <ul style="list-style-type: none"> • Removal of non-recurrent expenditure • Addition of recurrent expenditure not incurred in the base year
<i>Extrapolate base year into baseline</i>	Applying cost escalation factors, including allowances for inflation, non-price growth and efficiency
<i>Material step changes</i>	Step changes to pass materiality threshold and relate to new service / expenditure obligation (e.g. new opex supporting new capex coming online, new obligations, changes in service levels)
<i>Final forecast</i>	Final opex forecast incorporates recurrent opex, step changes and escalation factors

4.3 Defining the efficient base year

Sunwater selected 2022-23 as the base year because it is the most recently concluded full financial year at the time of this proposal. Sunwater’s efficient base year commenced with the collation of actual (unadjusted) expenditure of \$73.7 million for the 26 in-scope service contracts.

We completed a robust review, including the utilisation of external consultants to identify opportunities to adjust our actuals to ensure they reflect prudent and efficient expenditure under a typical operating year.

The results of this review process are shown on **Figure 12**, and include:

- An upward adjustment of \$1.2 million, as a result of below average electricity use in 2022-23 – this uplift is described further in **Section 4.3.1**
- \$2.2 million being removed from the base year across multiple categories – these adjustments are described further in **Section 4.3.2**

The final adjusted base year expenditure of \$72.8 million was then used to generate forecasts across the price path period via the application of inflation, an efficiency factor and one step change.

4.3.1 Electricity adjustment

Detailed actual data, forecasts and modelling (further explained in **Appendix F**) shows that electricity costs in the 2022-23 base year were representative for fixed but not variable (pumping driven) costs. This was due to customer water demand, and associated Sunwater pump usage being well down on long-term averages.

This reduction in customer water demand is evident during both 2021-22 and 2022-23 and is linked to above average rainfall across Queensland. The Bureau of Meteorology stated that the 2022-23 North Queensland wet season was “the sixth-wettest season on record (since 1900-01)”¹², while 2021-22 also had close to record amounts of rain across Queensland¹³.

To illustrate this point, **Table 24** shows whole of Sunwater electricity consumption and volume pumped for the past two years are well below the average for the most recent six-year period.

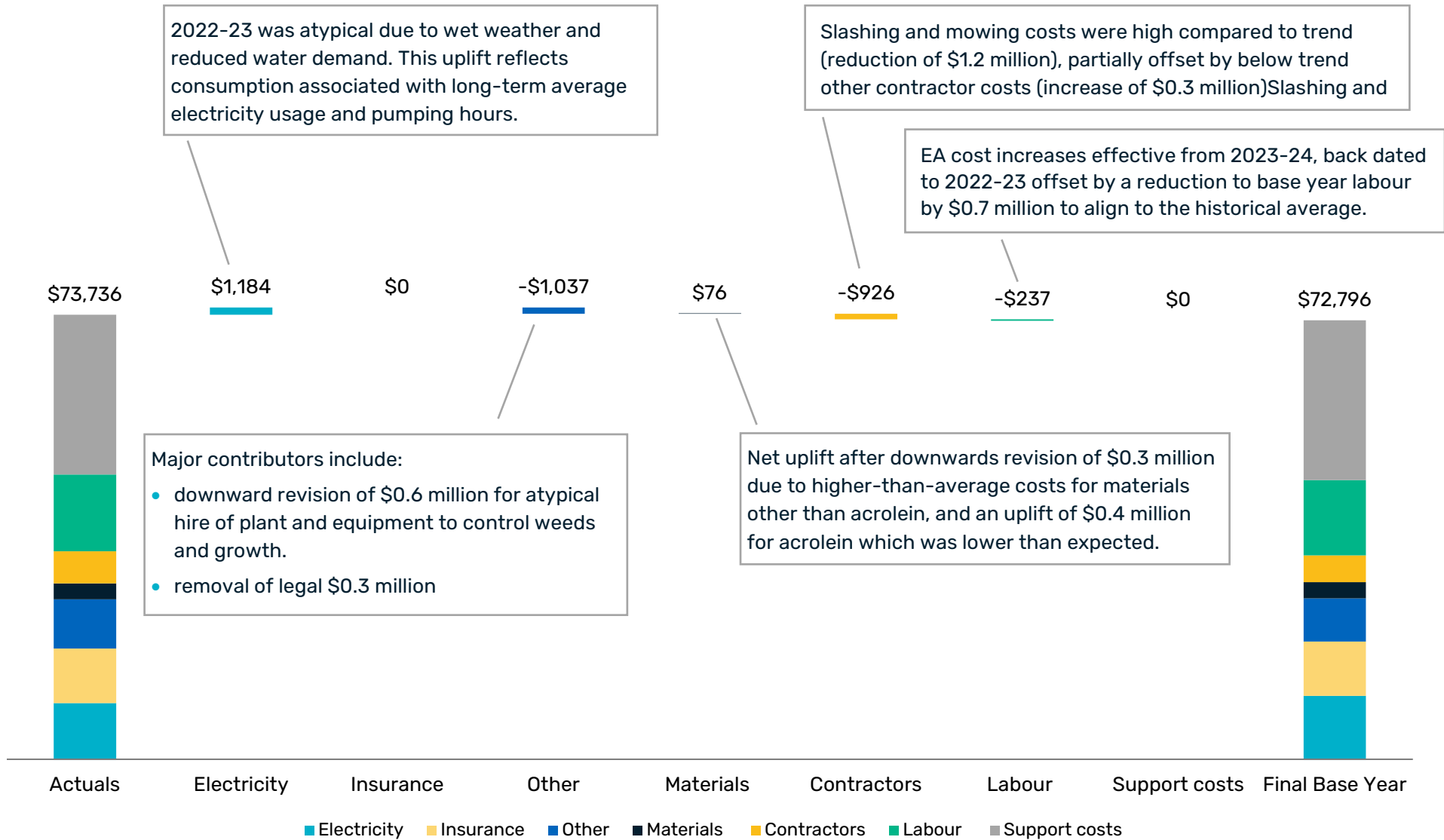
Table 24 – Consumption (MWh) and volume pumped (ML) (large electricity using schemes)

Parameter	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Avg
MWh	52,911	61,596	79,498	62,718	42,733	39,287	56,457
ML pumped	588,238	627,407	777,791	630,107	470,935	370,271	577,458

¹² [2022-23 northern wet season \(bom.gov.au\)](https://www.bom.gov.au/seasonal/2022-23-northern-wet-season/) – Accessed 6 June 2023

¹³ [Annual Statement 2022 \(bom.gov.au\)](https://www.bom.gov.au/annual-statement/2022/) – Issued 8 Feb 2023

Figure 12 – Base year adjusted for recurrent / non-recurrent spend ('000s)



To derive a “typical year” and calculate a suitable scheme-by-scheme adjustment to the base year, Sunwater sought to derive a long-term kilowatt-hour (kWh) average using 16 years of available pumping data (kilowatt-hours). **Table 25** compares base year consumption with the long-term average and shows the variance from the historical average in 2022-23.

Based on the kWh variances shown in **Table 25** and known electricity consumption costs (\$/kWh) for each scheme, Sunwater proposes an adjustment to the base year of \$1.2 million. The detailed calculations that sit behind this table are provided in **Appendix F**.

4.3.2 Other adjustments

A full discussion of each cost category is provided in **Section 4.8**. **Table 26** sets out the primary adjustments made to the non-electricity cost categories.

4.4 Inflation

Sunwater’s approach to inflation of costs is outlined in **Section 3.2**. The majority of the costs are inflated at a general inflation rate across the price path period.

Prior to the price path period (i.e. the 2023-24 and 2024-25 periods), we have inflated insurance, labour and electricity at known contract rates. These rates represent efficient market-tested (or equivalent in the case of regulated electricity) contract costs.

4.5 Efficiency

Higher than expected inflation and an appropriate uplift in the focus on safety and compliance has led to Sunwater absorbing considerable costs on behalf of customers during the current period. Except for insurance, Sunwater is not seeking to recover these costs from customers during the price path period via a review event.

Table 25 – Electricity consumption by (large use) scheme 2022-23

Scheme (service)	<i>Base year (kWh)</i>	<i>16-year avg (kWh)</i>	<i>Variance (kWh)</i>
Barker Barambah	629	41,358	-40,729
Bowen Broken Rivers	321,605	514,100	-192,495
Bundaberg (distribution)	17,063,472	21,659,379	-4,595,907
Burdekin-Haughton (distribution)	19,288,318	23,191,665	-3,903,347
Eton Supply	36,519	1,270,791	-1,234,272
Dawson Valley	29,033	189,778	-160,745
Lower Mary (distribution)	305,354	989,753	-684,399
Mareeba-Dimbulah (distribution)	1,786,150	1,898,182	-112,032
Upper Condamine	456,021	355,331	100,690
Total	39,287,100	50,110,337	-10,823,237

Table 26 - Other base year cost adjustments by category

Category	Discussion
Other	<p>Actual 2022-23 spend for this category was \$8.192 million. This directly charged cost category includes rental and hire equipment, land taxes, rates and legal fees.</p> <p>Sunwater has made total downward revisions to the base year in this cost category of \$1.037 million (12.7 per cent) with the main components of this revision being:</p> <ul style="list-style-type: none"> • A downward adjustment of \$0.64 million reflecting atypical levels of rental and hire equipment costs in 2022-23. This higher level of activity was the result of a one-off effort to bring drain channels and access road areas up to standard. These areas of civil works have seen significant cost growth over the last few years. It is expected that these costs will fall to more historic levels across the price path period as activity returns to normal levels. • The removal of \$0.3 million in legal fees related to a settlement activity.
Materials	<p>Actual 2022-23 expenditure on materials was \$2.616 million.</p> <p>Sunwater has made an upward adjustment of \$0.076 million (2.9 per cent) following analysis of long-term usage of key materials, including acrolein. This adjustment is discussed further in Section 4.8.4.</p>
Contractors	<p>Actual 2022-23 expenditure on contractors was \$5.36 million. Non-chemical weed control (slashing and mowing) is a significant contributor to contracted services costs and in 2022-23 was higher than usual due to favourable non-aquatic weed growing conditions. Sunwater has made total downward revisions to the base year of \$0.926 million (17.3 per cent) with the main components of this revision being:</p> <ul style="list-style-type: none"> • downward revision of \$1.21 million for non-chemical weed control (slashing and mowing) activities (the Burdekin Haughton distribution service accounts for \$0.478 million) • Upward revision of \$0.29 million for other contractor categories which were below historical averages
Labour	<p>A \$0.237 million (1.9 per cent) downward revision to 2022-23 actuals arising from:</p> <ul style="list-style-type: none"> • downward revision to areas where labour was well above historical averages • an uplift to the base rate for labour in line with the back-dated EA increases.

Current price path period

For the 2020 Review, Sunwater proposed (and the QCA accepted) a 0.2 per cent efficiency factor across controllable opex. Sunwater has delivered (and is continuing to deliver) several efficiency and productivity improvements in pursuit of this target (**Table 27**).

Sunwater's savings this period total \$21 million to date, with further savings projected in 2023-24 (the majority of these projected saving will be the energy efficiencies embedded in the base year).

Setting an appropriate efficiency factor for the price path period

Recognising the challenging cost (and compliance) environment (both during the current period and forecast), and responding to customer expectations that we do everything we can to keep costs down, we have challenged ourselves to deliver a higher level of efficiency for this price path period.

Sunwater has applied an annualised efficiency target of -0.5 per cent for the next price path period (discussed below) and has also applied that target *from* the 2023-24 year to continue to drive these initiatives. As stated earlier, this factor *includes* the realisation of the productivity commitments that accompany our EA for the 2022-23 to 2024-25 period.

This not only more than doubles the applied 2020 Review factor from -0.2 per cent to -0.5 per cent per annum, it also places Sunwater well above most of its peers when it comes to efforts to reduce costs as shown in Table 28 - Efficiency factor benchmarks.

Importantly, we have applied this factor to controllable and non-controllable opex categories.

Applying this factor reduces our aggregate opex from \$352 million to \$344.5 million across the price path period, a reduction of \$7.5 million or 2.1 per cent.

4.6 Step changes

Sunwater proposes only one material controllable step change in cost for the next price path period – the implementation of the Customer and Stakeholder Project (CASPr).

Table 27 – Realised savings 2019-20 to 2022-23 (\$ million, real \$2023)

Initiative (whole-of-business)	Realised savings (\$million)
Electricity initiatives	15.90
Renegotiation of telecommunications contract	0.72
Insurance initiatives (including WorkCover)	2.45
Sale of a redundant plant and realignment of operational staff	0.32
Other minor initiatives	1.88
Total	21.27

Table 28 - Efficiency factor benchmarks

Utility	When	Factor
Sunwater	2023	-0.50%
Seqwater	2022	-0.20%
Yarra Valley Water	2023	-0.26%
Barwon Water	2023	-0.10%
Greater Western Water ¹	2024	-0.20%
Gippsland Water	2023	+0.50%
South East Water	2023	-0.87%
Southern Rural Water	2023	-1.00%
Melbourne Water	2021	-0.20%

Note 1: Proposed by Greater Western Water, not yet accepted by the Essential Services Commission

4.6.1 Billing system renewal

CASPr is focused on maintaining our ability to deliver and comply with customer and regulatory requirements around customer experience, people capability, technology, processes, and reporting in the areas of customer and stakeholder management, water accounting, billing and accounts receivable. The current meter-to-cash (M2C) system is at the end of its useful life and has been withdrawn from the market by the vendor, removing the option to continue with or upgrade the existing solution.

Limitations of the current solution have led to several disparate spreadsheets and offline processes. This fragmentation of process and solutions on applications that lack the appropriate controls has created audit, compliance, and security risks reducing Sunwater’s ability to assure that it is complying with relevant legislative and regulatory requirements.

CASPr is required to:

- address the vulnerability of a business-critical application
- address identified technical and cyber risks, currently being managed, mitigated, and monitored by the ICT Operations team (and expected to increase over time)
- address audit and compliance risk
- maintain access to real time account and water balance information
- provide access to online, real time, water use information, water ordering and water products (in conjunction with other initiatives)
- improve operational efficiency and reduce risk
 - mitigating compliance risks and needing to replicate data across multiple applications to execute business processes, water accounting and M2C operations are excessively manual. This also increases the effort and risk of error.

The estimated total build cost of the new system is \$38.6 million. A ‘Software-as-a Service’ solution has been selected which carries an ongoing annual operating cost of \$1.7 million per annum to run the solution, in addition to the build costs.

Before committing to CASPr, Sunwater undertook a benchmarking activity through a combination of one-on-one interviews, round table discussions and reviewing publicly available information to understand the cost of M2C systems implementations within the Australian water utilities industry. The benchmarking activity found:

- Sunwater’s needs were substantially different to that of a standard value chain for an urban water utility
- there was additional complexity in the implementation of the CASPr solution as it required functionality above other M2C solutions for urban water utilities
- despite these two findings, the projected costs of CASPr aligned to comparable projects by other Australian water utilities.

As the solution impacts all water customers (irrigation customers, standard and non-standard commercial customers and urban customers) Sunwater has allocated the capital and operating costs of the project to all customers on a cost per customer basis.

Sunwater proposes to recover CASPr build costs over the expected useful life of the asset (a 20-year period) consistent with the treatment of other capital assets under a RAB-based approach. This is an appropriate way to recover these costs from customers.

Annual operating expenses have been treated as opex (consistent with their accounting classification).

A detailed business case and cost recovery workbook calculations form part of Sunwater’s supporting documentation.

Scheme-by-scheme CASPr opex and capex allowances were communicated to customers via our Stage 3 engagement materials – **Scheme Summaries** and associated presentations.

4.7 Opex forecasts (2025-26 to 2028-29)

The base-step-trend methodology outlined above results in a four-year aggregate opex forecast of \$344.5 million as shown in **Table 29**.

4.8 Review of the cost inputs

After inflation effects, the 2022-23 base year is \$3.2 million above the (adjusted¹⁴) QCA allowance (**Figure 13**), but \$0.61 million below the five year historical average which reflects more closely the current operating environment and cost pressures Sunwater has faced since the last price review.

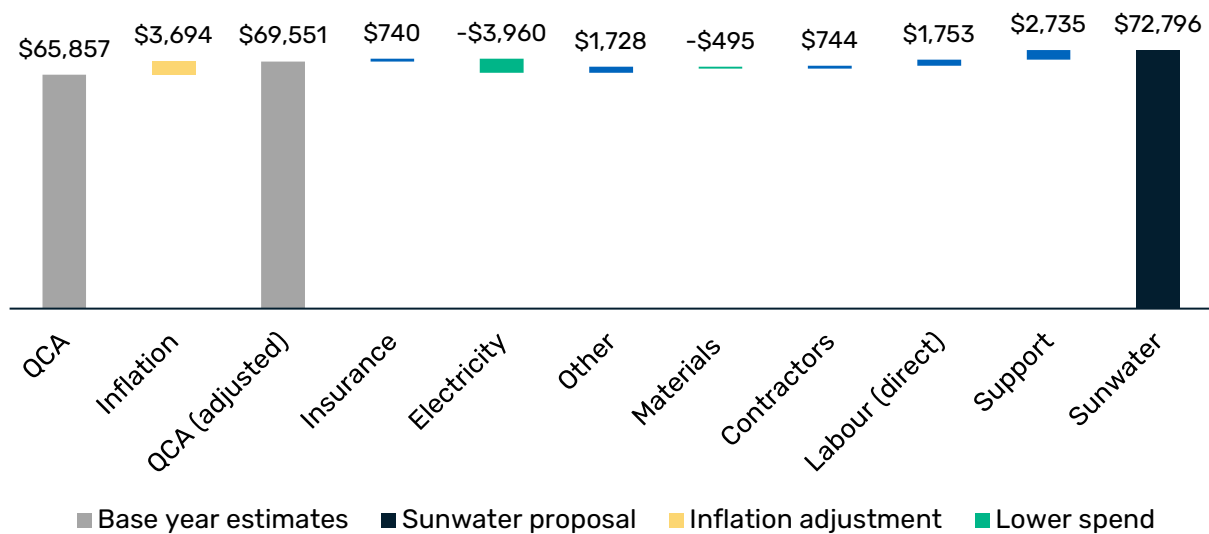
While Sunwater has been able to reduce electricity and materials costs for customers, and keep insurance costs from rising too rapidly, other costs have proved a challenge in the current operating environment.

¹⁴ Sunwater calculated each cost escalator in line with the QCA methodologies using actual inflation data.

Table 29 – Base-step-trend forecast (\$ millions)

	Base	Current	Interim	Regulatory Period				Aggregate
	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	
<i>Numbers may not add due to rounding</i>								
Total opex (excluding depreciation)	469.06							
Non-regulated service contracts	87.84							
Major projects and other activities	267.40							
Regulated service contracts	113.82							
<i>Renewals related expenditure</i>	37.12							
<i>Recreational facilities</i>	2.96							
Total regulated opex	73.74							
<i>Base year adjustments</i>	-0.94							
<i>Adjusted controllable opex</i>	72.80	72.80	76.90	79.76	81.81	83.69	85.45	330.71
<i>Efficiency adjustment (-0.5% efficiency factor)</i>		-0.36	-0.38	-0.40	-0.41	-0.42	-0.43	-1.65
<i>Cost escalation adjustment</i>		4.47	3.24	2.44	2.29	2.17	2.13	9.04
Controllable opex - adjusted	72.80	76.90	79.76	81.81	83.69	85.45	87.15	338.09
Step change additions to efficient base year				1.62	1.56	1.60	1.64	6.43
Total regulatory opex				83.43	85.25	87.05	88.79	344.52
<i>Breakdown by major cost category</i>								
Insurance				12.29	12.58	12.86	13.12	50.85
Electricity				11.28	11.47	11.68	11.91	46.34
Operations and maintenance				29.25	29.95	30.59	31.20	120.99
<i>Labour (direct)</i>				13.65	13.98	14.27	14.56	56.45
<i>Materials</i>				2.94	3.01	3.07	3.13	12.15
<i>Contractors</i>				4.84	4.96	5.06	5.17	20.03
<i>Other direct</i>				7.82	8.01	8.18	8.34	32.35
Support costs				30.61	31.25	31.92	32.57	126.35

Figure 13 – Base year analysis (2022-23) – Drivers of difference by cost category (\$'000)



Areas putting upward pressure on costs include:

- a genuine need for increased direct (direct labour) and support roles in order to better manage risk, and ensure Sunwater is able to meet customer service standards now and into the future
- an increase in 'other direct costs' due to the need for additional hire equipment, increase to compulsory land taxes
- increased investment in information technology – as an enabler and also as a risk management strategy particularly in relation to cyber security risks
- increased compliance requirements (cyber security, procurement)
- increased focus on safety – both Sunwater and contracted staff – placing upward pressure on internal (increased procurement effort, new standards) and external (increased compliance) costs.

A review of each cost input is discussed below setting out the basis for our base year expenditure and management actions Sunwater takes to appropriately manage costs in each category.

4.8.1 Insurance

The insurance category accounts for \$9.0 million (12.4 per cent) of Sunwater's proposed base year opex.

Sunwater's actual insurance costs for the period are outlined in **Section 3.3.2** as part of our discussion of an insurance review event proposal. Sunwater has worked extremely hard during the period to keep insurance premiums to a minimum and continues to keep a strong focus on this cost category.

Context

The insurance landscape continued to change this price path period and became additionally risk-adverse given the COVID-19 pandemic and economic impacts.

Market movements and extreme weather events causing flood damage were key drivers in higher premiums, with 2021 and 2022 (calendar years) being significant in terms of size and subsequent damage to infrastructure.

For context **Figure 14** shows global market losses (and causes) that occurred in 2021 and 2022 placing pressure on profit margins for insurers with flow on effects for premiums worldwide.

It is very difficult to predict premiums into the future when there are many external national and international risk factors which influence premium pricing. While Sunwater cannot control these, it has been actively managing insurance premium costs to ensure its coverage is appropriate, reflective of the risks faced by the business and as low as possible.

Management of costs

In seeking to minimise insurance premium costs Sunwater uses an insurance broker (Marsh) to procure insurance competitively. It also self-insures where it is more cost effective to do so (business interruption and cyber security breaches). Sunwater has previously investigated self-insurance for some distribution assets and other key risks, however there was little premium benefit in doing so.

Sunwater has effectively managed insurance costs through:

- insurance premium cost controls, including regular engagement with brokers and insurers to ensure they understand the context within which Sunwater operates
- proactive asset maintenance programs
- a maturing asset management framework
- a focused dam safety management program

- robust emergency action plans
- a proactive education program to minimize the risk to public safety from Sunwater assets.

Through these strategies Sunwater saved customers \$2.24 million in insurance costs that would otherwise have been incurred.

Each of these is discussed further below.

Insurance premium cost controls

Sunwater actively manages premium costs by reviewing risk profile, identifying, and removing possible overlaps in coverage and reviewing policy specifications (including deductibles). This results in the most practical insurance coverage available in the market and identifies where a risk could be self-insured. It also examines options to improve premium expenditure efficiencies by testing deductible limits to assess premium benefits.

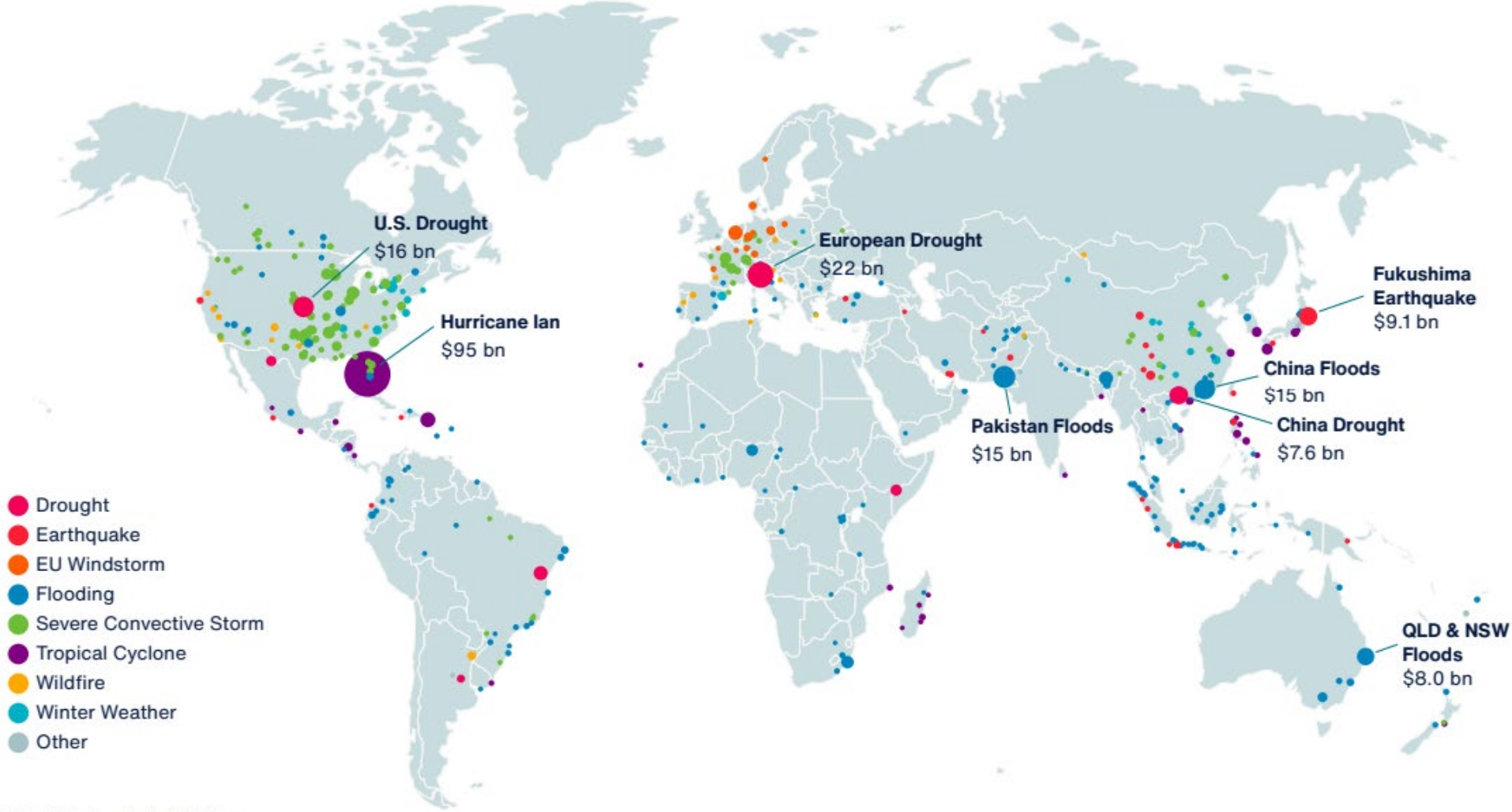
Sunwater undertook a full revaluation of its assets in 2021 resulting in a reduction in asset values from \$13.5 billion to \$11.7 billion (a 13.3 per cent reduction) and a flow on reduction in insurance premiums of approximately \$0.8 million. Periodic revaluations such as this are part of Sunwater's approach to prudent and efficient management of insurance costs.

Sunwater engages with insurers "often and early" to maximise knowledge of the risk profile of our assets and services.

Engagement includes:

- Presenting to insurers to enhance their knowledge of our business and reduce additional premiums that would come from bundling Sunwater with higher risk businesses.

Figure 14 - Market losses 2021-22 (globally)



- Detailed and regular presentations and workshops to outline Sunwater’s approach to risk management, including:
 - internal risk controls (such as emergency action plans and incident response procedures),
 - a Sunwater’s proactive approach to community engagement, comprehensive asset management and maintenance program (e.g., CRAs)
 - sharing the “good news stories” (such as no claim from Sunwater during the January 2022 flood events in South East Queensland).
- Taking insurers on infrastructure tours to enhance understanding of Sunwater’s day-to-day operations and practical approach to asset and risk management.
- Highlighting Sunwater’s very low claim rate across its insurance portfolio.

Robust maintenance program

Sunwater undertakes scheme-based asset risk assessments so it can prioritise expenditure for the asset management program.

It also undertakes safety and environmental risk assessments at any time when a hazard has been identified or following the implementation of risk mitigation measures.

Dam safety

Sunwater adopts a portfolio risk assessment approach supplementing regulated dam safety inspections with a ‘CRA’ process. CRAs are updated when key input studies are revised, for example due to recalibration of flood models following significant rainfall events, in order to ensure Sunwater’s processes are continually up to date and accurately identifying and quantifying portfolio risks.

This ongoing process provides a consistent risk view across the Sunwater dam portfolio.

Management of assets to reduce risk

Sunwater’s asset management strategy is designed to limit risk exposure to Sunwater and its customers. In doing so, it reduces insurance risk through:

- A focus on whole of lifecycle value that includes ongoing asset condition, performance and risk assessments which informs the lifetime maintenance and eventual replacement of assets to avoid asset failures and risks to Sunwater staff, assets and the community. This occurs at both asset and portfolio level.
- Implementing corrective solutions that focus on resilience and reducing the likelihood of future asset failure. For example, following flood damage to a Mary River pipeline in 2021, Sunwater looked at a range of options and the potential for future damage (and cost) and designed out the risk of future flood damage by reinstalling the pipeline under the river.

Robust emergency action planning to limit impact during emergencies

Sunwater has a robust emergency action planning framework to ensure it responds appropriately and in a timely manner when emergencies occur. This is to limit the impact to Sunwater personnel, customers, infrastructure and the community. In doing so, these action plans seek to limit insurance exposure of emergency events.

Customer and community education to limit risk to Sunwater assets

Sunwater also seeks to limit insurance risk through customer and community education programs. Active education programs at present include:

- emergency preparedness
- wet season awareness
- safe interaction with Sunwater assets.

4.8.2 Electricity

The electricity category accounts for \$10.5 million (14.4 per cent) of Sunwater’s proposed base year opex.

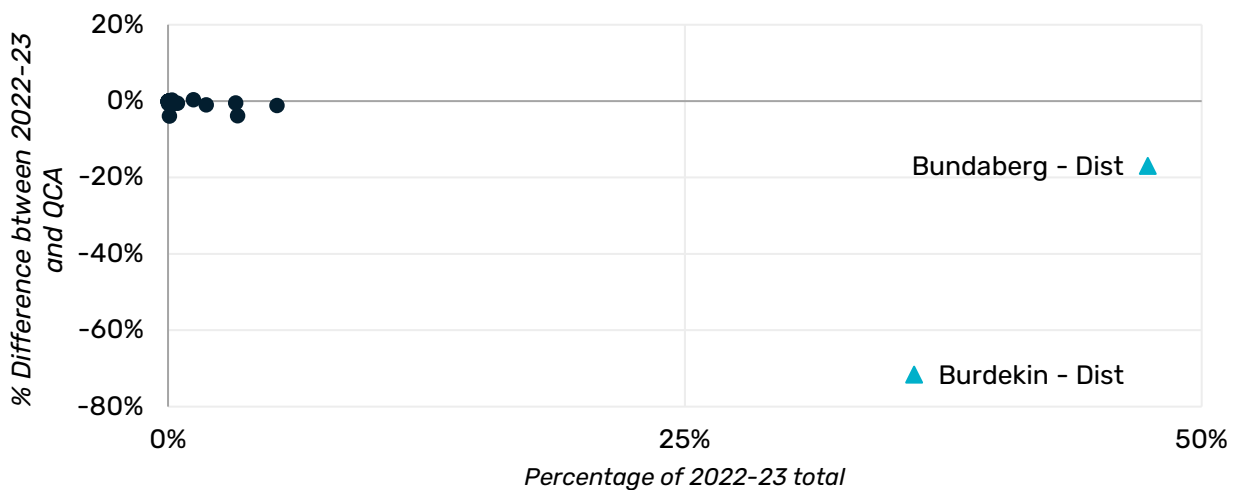
Figure 15 shows that the distribution service within the Bundaberg and Burdekin Haughton schemes account for 84 per cent of Sunwater’s total electricity costs. They are also the primary source of lower-than-expected electricity costs when compared to the QCA’s forecast for the 2022-23 year (adjusted for inflation).

Sunwater commenced the implementation of its current *Energy Strategy* at the beginning of the current price path period. The strategy focuses on managing energy price and cost risks, sustainable energy management and efficient energy use.

A key initiative was investigating alternate procurement options which included wholesale electricity market contract arrangements. During this process Sunwater became aware of a whole-of-Government electricity contract established by the Queensland Government Procurement Office in 2018. During 2019, Sunwater conducted due diligence in terms of market testing and alternate procurement approaches to validate the value of the whole of Government contract. The evaluation found the whole of Government contract was the most competitive and offered significant savings over other pricing arrangements at the time.

This contract came into effect on 1 January 2020 and has delivered \$8.5 million of savings against the QCA allowances for this current price path period to date.

Figure 15 - Service level view of electricity costs



Sunwater continues to investigate and analyse possible ways to deliver further savings to customers by:

- continuing to review electricity arrangements (annually to ensure sites are subject to the optimal tariff or if there is financial benefit transfer to the contestable market)
- continuing to review alternate generation opportunities
- reviewing operational optimisation on a regular basis to manage costs as well as asset efficiency.

These savings have generally been passed on to irrigation customers via the electricity cost pass-through mechanism which is discussed in **Section 3.3.1**.

4.8.3 Labour (direct)

The labour (direct) category accounts for \$12.5 million (17.1 per cent) of Sunwater’s proposed base year opex.

More than half (52 per cent) is incurred in Sunwater’s three largest distribution services (Burdekin Haughton, Bundaberg and Mareeba-Dimbulah) as shown in **Figure 16**. The three next largest schemes (by direct labour) take this cumulative total to 65 per cent.

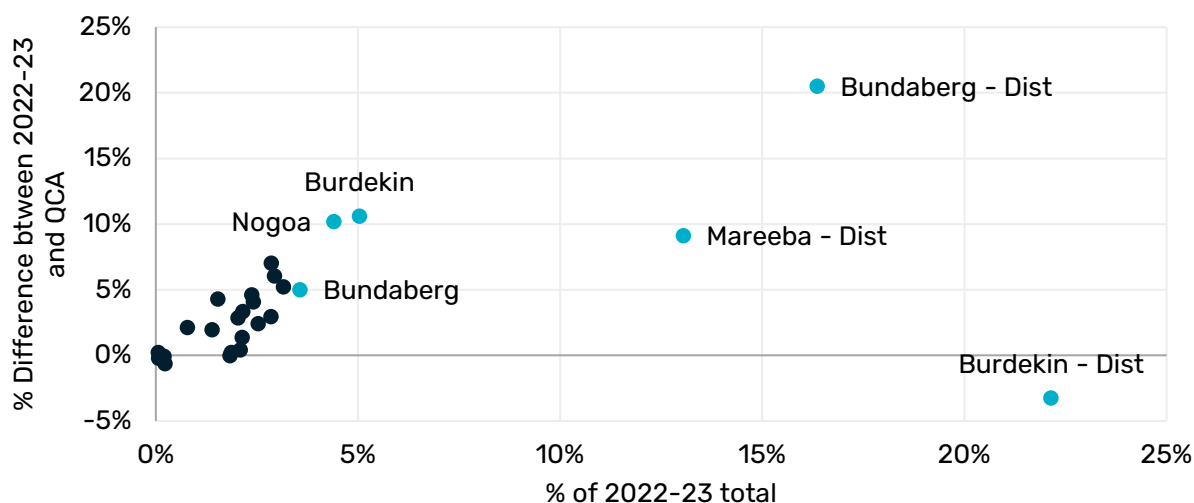
Sunwater’s direct labour costs are \$1.8 million higher in the 2022-23 base year than the adjusted QCA allowance.

Sunwater’s direct labour costs (operating and maintenance labour costs) have increased since the last review because:

- We have invested in additional full-time equivalent (FTE) roles to meet business needs and address risks to service (discussed below).
- Average hourly rates have increased (discussed below) due to:
 - the need for additional hours at higher levels to supervise and train cadets, apprentices and trainees
 - costs increasing higher than the labour index due to the demand for similar resources across industry particularly trades skilled labour in regional areas as well as the need to procure additional resources in a tight labour market where candidates are attracting higher rates.

The analysis presented below shows that while we have increased FTEs in direct labour we have maintained a high utilisation rate which AECOM considered at the upper end of industry best practice.

Figure 16 – Service level view of labour (direct) costs



AECOM also reviewed Sunwater's maintenance regimes, work scheduling practices and delivery methods and found our practices across all three areas to be prudent and efficient.

Sunwater has maintained (or improved) our approach to each of these areas and is confident that its practices and resourcing levels remain prudent and efficient.

Implementation of workforce strategy – uplift in FTE

Implementing the new strategic direction and risk management has increased Sunwater's focus on the following, both in direct labour and support labour:

- the safety of its people, customers and the community
- business resilience which led to the development of a workforce planning strategy to ensure Sunwater was appropriately managing the risk of our ageing workforce on its operations and services to customers (succession planning)
- improving internal functions to meet new and emerging regulatory and customer service expectations (procurement, legal, insurance, customer and stakeholder relations, information technology)
- recognition that lean rostering resulted in excessive leave balances and or overtime accrual, fatigue related safety risks, and some attrition due to workload.

The Operations and Maintenance area has the largest percentage of employees over 55 in the business. Sixty of the 242 FTEs in this group are over 55 years of age.

This age profile created a need for ongoing investment in graduates, cadets and apprentices to ensure sufficient operational staff and knowledge as employees retire. This led to 15 additional graduates, cadets and apprentices and an additional electrician in operations and maintenance (shared across regulated and non-regulated business activities) to ensure the resilience of Sunwater irrigation services as the average age of operations and maintenance staff increases.

To address other business resilience and operational risks Sunwater also employed:

- six regionally-based project managers to deliver an increasing number of renewals projects as our assets age
- planning managers, planners and coordinators (shared across the regulated and non-regulated business) to ensure work is planned and carried out safely, effectively and efficiently and to deliver reliable assets that meet the needs of our customers
- additional trades staff and apprentices (four) have been sourced for as part of the insourcing strategy at the Bundaberg workshop (to address skills issues and availability of contractors to refurbish large pump sets, valve trains and actuators)
 - this strategy has addressed the risk of unavailability and poor-quality outcomes that Sunwater has experienced in this space prior to the insourcing strategy (largely as a result of market changes during and post COVID) – these resources and costs are shared across regulated and non-regulated services
 - this is **not** a one-off or short-term investment – costs associated with addressing this risk are expected to be ongoing for at least the term of this price path period

- a net increase of four FTEs in the asset management function at Sunwater to improve skills and expertise, and therefore the efficacy and efficiency of the function
 - skills include, asset planning, electrical, mechanical, civil, high voltage, condition assessment, metering, asset systems and administration

These actions have contributed to an increase of 31 FTEs in Sunwater’s operations and maintenance teams since 2018-19 (**Table 30**).

Utilisation

Table 31 shows that in 2022-23, 80 per cent of the hours worked by Sunwater’s 242 operations and maintenance staff were allocated to direct charging activities. The remaining hours were spent on necessary management, training, safety and administration activities.

A system change in 2020-21 means data for that year is not available in an accurate or usable format.

Rates in 2020-21 and 2021-22 were also impacted by COVID-19 which changed the way in which we were able to work. An increased focus on safety also means an increase in hours assigned to safety training and risk assessment / management.

During the 2020 price review AECOM reviewed Sunwater’s utilisation rates and found that Sunwater’s utilisation rate of 87.8 per cent in 2018-19 was “excellent compared to best practice”¹⁵. The year-to-date data for 2023-24 shows a return to previous utilisation rates post COVID-19 which represents an improvement in utilisation given Sunwater’s sustained focus on safety which is not a direct chargeable activity.

Continued strong utilisation rates (excluding COVID years) demonstrates Sunwater has a genuine need for our current workforce of 242 FTE.

Implementation of strategy – uplift in \$/FTE

Increased FTEs has led to both an increase in hours being charged to schemes but also a change to the average cost of an FTE (mix of hourly rates).

Figure 17 and **Figure 18** below show examples of the hours by employment band changing over time in the Nogoia and Burdekin Haughton supply schemes.

These examples show that the number of hours charged to schemes at higher rates has increased from 2018 to 2023. This is due to an increased level of seniority and skill aligned with Sunwater’s strategic direction to build business resilience and succession planning requiring additional supervisory and training hours with more senior resources.

Table 30 – Operations and maintenance FTEs 2019-20 to 2022-23

2018-19	2019-20	2020-21	2021-22	2022-23
211	210	204	228	242

Temporary decrease in 2019-20 and 2020-21 influenced by the need to comply with State and Federal health requirements related to the pandemic.

¹⁵ AECOM, Rural Irrigation Operational Expenditure Review, Sunwater, 30 August 2019, p. 41

Table 31 – Sunwater's historic utilisation rates

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24 ^b
North	82.9%	83.0%	83.2%	88.1%	89.5%	N/A	73.0%	80.0%	89.0%
Central	77.9%	78.8%	82.7%	88.9%	89.7%	N/A	80.0%	77.0%	91.0%
Bundaberg ^a	83.6%	83.5%	85.6%	87.7%	91.1%	N/A	82.0%	81.0%	89.0%
South	81.8%	86.5%	87.0%	78.6%	90.2%	N/A	76.0%	73.0%	85.0%
Total	81.8%	82.0%	84.1%	87.8%	90.1%	N/A	77.8%	80.0%	87.0%

Note a: Bundaberg – Lower Mary region; Note b: 2023-24 year to date November 2023

Figure 17 – Change in rate mix over time - Nogoa Mackenzie supply

Comparison of total hours by band 2018 to 2023

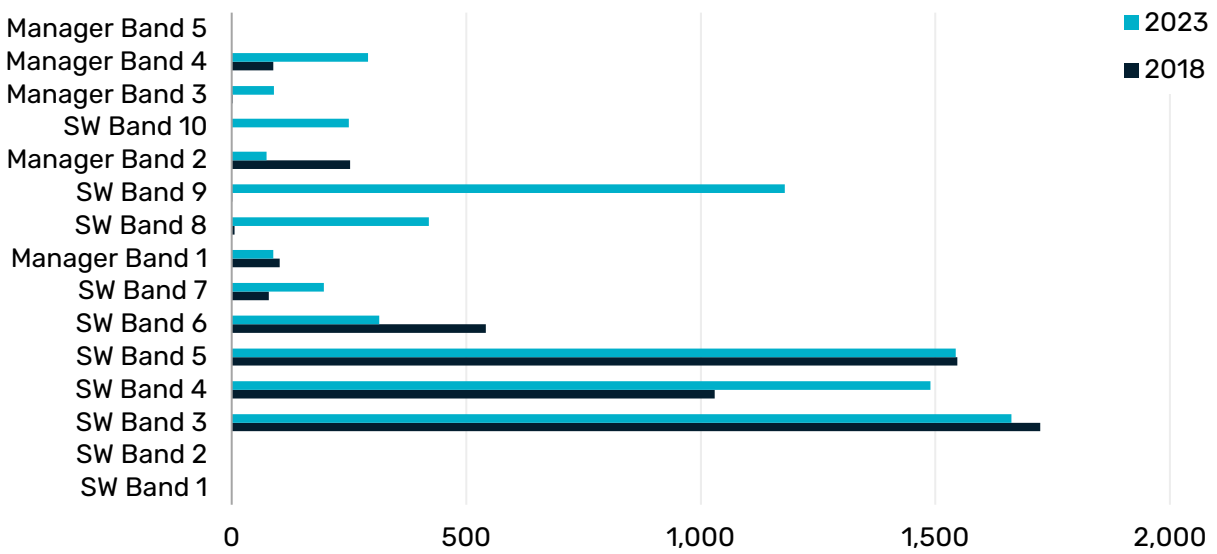
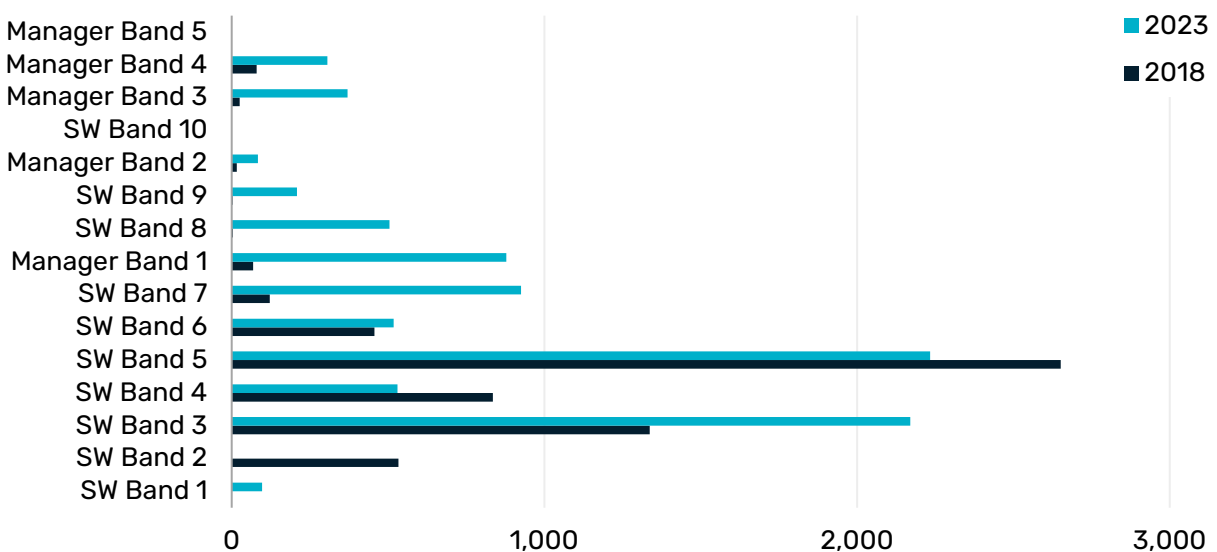


Figure 18 – Change in the rate mix over time - Burdekin Haughton supply service

Comparison of total hours by band 2018 to 2023



It also represents the higher labour cost resources procured in recent years. Labour costs have risen, particularly as a result of the pandemic and a tight labour market. Higher unit costs of labour come from both a rising wage index but also market conditions.

Along with the procurement of 31 additional FTEs, Sunwater has also had to replace staff from time to time, and each time it replaces a position, or creates a new one, it must pay the prevailing market rate for that resource – for a number of senior operational positions this has often meant recalibrating rates to a higher level to deliver the desired strategic or service outcome. This is particularly evident for regional positions.

Table 32 below shows the change in hourly rate from 2018 to 2023 as an absolute percentage and year-on-year growth (compound annual growth rate) for the schemes that incur the greatest labour effort in the irrigation business.

Year-on-year increases range from four to nine per cent which is above the wage price index for the same period.

Sunwater has no plans to drastically increase FTE in this function in the near term so does not expect to be subjected to ongoing higher costs to procure resources. The base year is therefore considered appropriate as a base for the forecast for the next price path period.

4.8.4 Materials

The materials category accounts for \$2.7 million (3.7 per cent) of Sunwater’s proposed base year opex. **Figure 19** shows that 88 per cent of this spend is related to the distribution service activities within the Bundaberg, Burdekin Haughton and Mareeba-Dimbulah schemes.

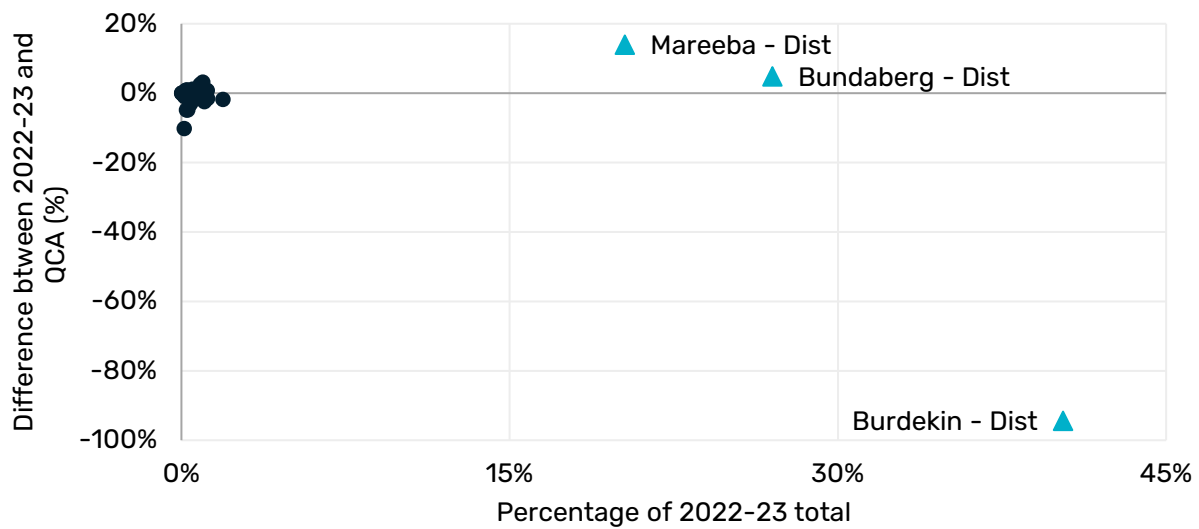
Sunwater’s materials category base year expenditure is some \$0.5 million lower than the adjusted QCA allowance for the period, driven almost exclusively by lower costs in the Burdekin Haughton distribution service (**Figure 19**). This is after adjustments made for:

- Downwards revision of \$0.3 million due to higher-than-average costs for materials other than acrolein
- An upward revision to acrolein, which was \$0.4 million lower than the long-term average.

Table 32 – Change in hours and hourly rates across sample schemes between 2018 and 2023

Scheme	Service	2018	2023	Change	Absolute	CAGR
		(\$/hour)	(\$/hour)	(\$/hour)	(%)	(%)
Bundaberg	Distribution	51	68	17	33	6
	Water supply	57	68	11	19	4
Burdekin Haughton	Distribution	52	67	15	29	5
	Water supply	55	83	28	51	9
Nogoa Mackenzie	Water supply	57	85	28	49	8

Figure 19 – Service level view of materials costs



Acrolein

Acrolein is a herbicide used to control the growth of aquatic weeds.

Sunwater’s acrolein use was reduced in 2022-23 (and in the prior year) due to increased turbidity (caused by wet conditions) which hampers aquatic weed growth.

It is expected with the advent of more normal climate conditions or a move to drier climate conditions, the use of acrolein will return to pre-2023 levels. An upwards increase has been applied to the base year to allow for normal use of acrolein going forward.

Sunwater has also had to factor in the higher unit rates we are now incurring for this chemical – there are no Australian manufacturers of this chemical and limited suppliers internationally. The average unit cost of the product has increased from \$7,980 per unit in 2021 to \$8,958 per unit in 2023.

Sunwater continues to explore opportunities to reduce chemical costs, engaging with potential alternative suppliers, other bulk water utilities and universities to trial alternative products.

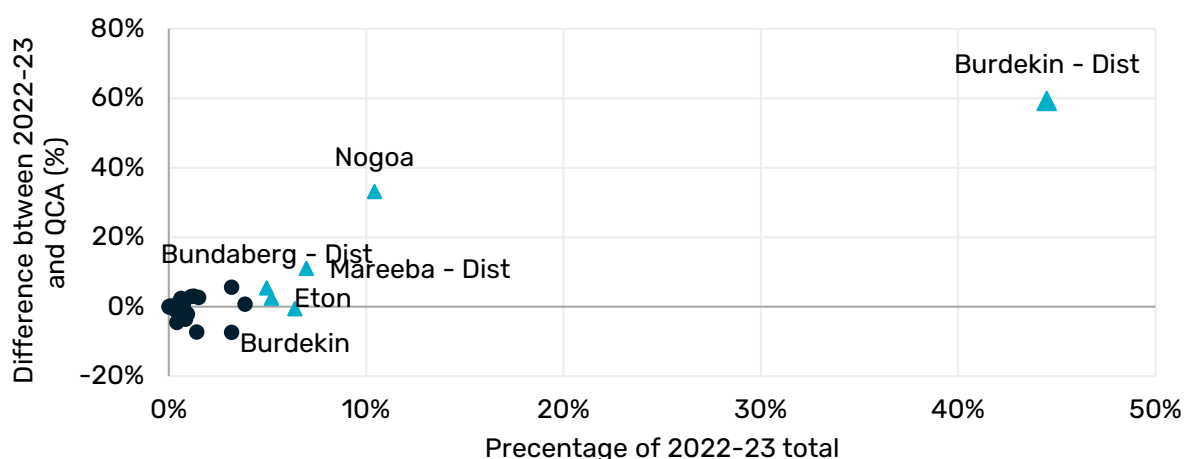
A trial of alternative chemicals in the Burdekin Haughton concluded that acrolein is the most physically effective and cost-effective control at present.

4.8.5 Contractors

The contractors category accounts for \$4.4 million (6.1 per cent) of Sunwater’s proposed base year opex. This is after the *downward* base year adjustment of \$0.93 million outlined in **Section 4.3.2**. The Burdekin Haughton distribution service accounts for 45 per cent (**Figure 20**) of total contractor costs, with Bundaberg and Mareeba-Dimbulah distribution services accounting for a further 12 per cent. Nogoia accounts for 10 per cent.

Weed control activities, such as slashing and mowing, account for a significant portion of total contractor costs. These activities occur primarily in schemes with distribution services where weed control is an ongoing focus to maintain service standards for customers and reduce losses. Heavy weed growth limits the ability of operators to safely complete thorough inspections and can result in additional plant and equipment damage. It also presents an enhanced safety and fire risk to adjoining properties and the public.

Figure 20 – Service level view of contractor costs



While Sunwater has made a downward adjustment to account for the unusually strong non-aquatic weed growing conditions during the base year, the cost of engaging contractors has increased.

One major contractor in the Burdekin Haughton scheme delivers most slashing services. Rates for this contract were set in September 2022, revising a November 2016 contract which did not have an escalation clause. Prices in 2022-23 were therefore subject to a rate uplift of 32 per cent for general spraying activities, and 20 per cent for slashing activities. Fixed fees for slashing in the Burdekin Haughton channel area ranged from a 16 per cent uplift to a 47 per cent uplift, with an average of 24 per cent.

4.8.6 Other direct costs

The other direct category accounts for \$7.2 million (9.8 per cent) of Sunwater’s proposed base year opex.

Other direct costs in the base year for operations and maintenance are \$1.7 million above the QCA (adjusted) allowance for 2022-23 (**Figure 13**). Costs in this category are shown in **Table 33**.

Over 70 per cent (\$5.0 million) of other direct costs are assigned to the Burdekin Haughton (supply and distribution), Bundaberg and Mareeba-Dimbulah distribution services and Nogoia scheme as shown on **Figure 21**.

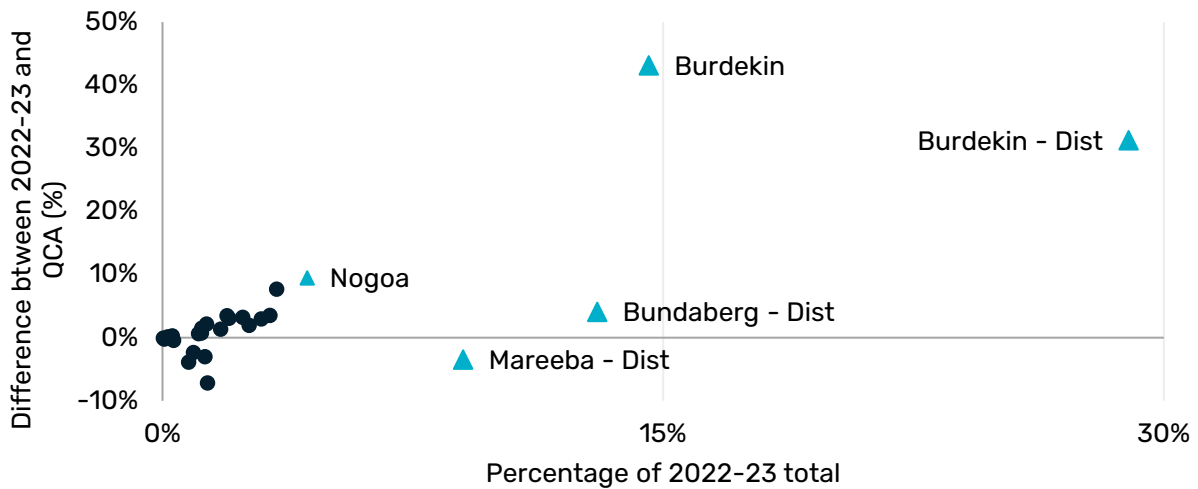
The most significant areas of spend within these five schemes includes:

- \$2.4 million in plant, vehicle and equipment hire (73 per cent of the Sunwater total on this area)
- \$1.6 million in local authority rates (80 per cent of the total for this area)
 - Burdekin Haughton (supply and distribution) alone accounts for 65 per cent of total Sunwater local authority rates)
 - an increase in uncontrollable local authority rates (Burdekin Haughton scheme) of 61 per cent from 2021-22 to 2022-23 added \$0.22 million to the Burdekin Haughton supply service alone.

Table 33 – Breakdown of base year other direct costs category ('000s)

Account category	Nature of costs	Total
Plant, equipment & vehicles	Rental and hire equipment (including contractor costs where personnel are required to operate the equipment) Motor vehicle leases (formerly centrally charged as local overhead costs but now recorded as direct costs)	3,225.6
Local authority rates	Local government fee levied upon land holdings	1,997.2
Telephone and occupancy	Building and facilities, telephone and occupancy costs	592.9
Land tax	State fee levied upon land holdings	436.6
Travel and accommodation	Domestic travel	322.4
Administration	Information technology and facilities management	216.1
Other assets	Small office assets	182.7
Other (licence fees)		181.6

Figure 21 – Service level view of other costs



The increase above historical averages in this category is primarily driven by a decision to allocate motor vehicle lease costs to other direct costs (previously considered a support cost) and uncontrollable increases in rates and land taxes.

This shift followed feedback from customers during the Local Management due diligence process that they would prefer vehicles involved in operating the schemes to be captured as a direct cost.

4.8.7 Support costs

The support costs category accounts for \$26.5 million (36.4 per cent) of Sunwater's proposed base year opex. As a business grows in operational needs, its support needs also increase. Since 2018 Sunwater has invested in additional capacity and functionality to:

- improve business resilience
- improve safety outcomes for its people, its customers and the community
- meet growing compliance obligations (particularly around procurement and cyber security)
- drive better business and customer outcomes (particularly around digital enablement and customer and stakeholder relations).

Support costs are allocated via a multiplier applied to direct labour hours. This multiplier, and how it has changed since the 2020 Review are set out in **Table 34**.

Sunwater's support cost multiplier has only grown by 0.11 on average across the schemes despite the additional investment required to support the business and a \$2 million growth in direct labour hours.

Variability across schemes is driven by the cost allocation methodology which allocates support costs to schemes by factors that can vary significantly from scheme to scheme and period to period:

- **Risk** – the risk profile of assets impacts the way costs are allocated. For examples schemes with dams and bulk water infrastructure are responsible for water planning and flood room operations costs. Schemes without this

infrastructure do not bear these costs through the cost allocation methodology.

- **Direct labour** – aside from risk, direct labour is the primary allocator of most support costs. This means the schemes with more direct labour required to run them will attract a higher proportion of support costs than other schemes.
- **Renewals** – when significant projects are occurring in certain areas they will not only attract additional direct labour (and the overheads that come with it) but some more significant projects will attract direct charged labour of support functions like stakeholder and customer relations and corporate communications.

The nature of the cost allocation mentioned above, and the type of work that impacts it, is variable in location and timing which makes these three categories incomparable across periods.

For this reason, Sunwater's discussion refers to 'support costs' only. We monitor and manage support costs at the top level to ensure we are not overspending or over-recovering from customers.

During the current price path period, Sunwater's support costs have grown by 0.11 on average (from a base that has been corrected for costs that were inadvertently unallocated in the 2020 Review) across all schemes while adding capability necessary for compliance with new regulatory requirements, improved customer service and business representing sound cost management and improved performance in this cost category.

Table 34 - Sunwater's overall support cost recovery rate in 2017-28 vs 2022-23¹⁶

Scheme	Service	2017-18 ¹⁷	2022-23	Change
Barker Barambah	Supply	2.27	2.37	0.11
Bowen Broken Rivers	Supply	2.12	2.22	0.10
Boyne River and Tarong	Supply	2.26	2.30	0.05
Bundaberg	Supply	1.83	1.94	0.11
	Distribution	2.17	2.17	0.00
Burdekin Haughton	Supply	1.82	1.96	0.14
	Distribution	2.27	2.16	-0.10
Callide	Supply	2.40	2.51	0.12
Chinchilla Weir	Supply	1.98	1.99	0.01
Cunnamulla Weir	Supply	1.96	2.03	0.07
Dawson Valley	Supply	2.16	2.23	0.07
Eton	Supply	2.26	2.37	0.11
Lower Fitzroy	Supply	1.96	2.06	0.10
Lower Mary	Supply	1.77	1.95	0.18
	Distribution	1.95	2.09	0.14
Macintyre Brook	Supply	2.17	2.22	0.05
Maranoa	Supply	2.08	2.05	-0.03
Mareeba-Dimbulah	Supply	1.79	1.97	0.17
	Distribution	2.15	2.26	0.10
Nogoa Mackenzie	Supply	2.20	2.18	-0.02
Pioneer	Supply	2.20	2.26	0.06
Proserpine	Supply	2.31	2.32	0.01
St George	Supply	2.22	2.22	0.00
Three Moon Creek	Supply	2.22	2.28	0.06
Upper Burnett	Supply	2.07	2.21	0.14
Upper Condamine	Supply	2.15	2.22	0.07
Simple average of loading rate		1.98	2.09	0.11

¹⁶ Values may not add due to rounding.

¹⁷ These values vary from 2020 Review values because Sunwater has corrected some errors found in the previously provided data that under-allocated support costs to schemes.

5 Renewals expenditure

This section describes Sunwater's approach to developing, testing and finalising our renewals forecast. It sets out:

- *our forecast investment in assets to meet customer service standards, legal and regulatory obligations*
- *what we have delivered in the current period to meet these requirements*
- *what Sunwater proposes to deliver in the next price path period to continue to meet these requirements*

Sunwater operates and maintains our assets to meet customer service requirements (set out in the **Scheme Summaries**) and legal and regulatory obligations. Our systems and processes are designed to ensure the work we do meets these obligations efficiently and effectively.

This section addresses all expenditure currently funded via the annuity contribution and includes:

1. planned and reactive (unplanned) capital expenditure to ensure our assets continue to comply with regulatory and customer service standards
2. periodic (or non-routine) maintenance costs to ensure assets can continue to comply with regulatory and customer service standards
3. planned capital expenditure to ensure our assets are compliant with new or emerging regulatory requirements
4. planned capital expenditure to deliver new services or service standards with explicit customer endorsement (Sunwater does not have any actual or proposed expenditure in this category in this review).

Sunwater is proposing a transition to a RAB-based renewals expenditure recovery model which requires a four-year renewals expenditure forecast.

We have also presented a full 33-year forecast (a 30-year forecast for each of the four years of the price path period) that would underpin the continuation of the annuity-based renewals expenditure recovery approach.

This section is structured to talk about our asset management framework and planning methodologies, followed by an overview of our actual (and expected) expenditure for the current price path period (2020-21 to 2024-25) and finishing with an explanation of our forecast for the price path period.

5.1 Compliant, service ready, safe assets

Sunwater's asset management approach is linked to our corporate strategy delivering water for prosperity. Aligned to the Financial and Performance Management Standard and consistent with good practice, it considers the 'whole-of-life' implications of acquiring, operating, maintaining and disposing of our assets to meet legislative / regulatory requirements as well as customer service targets.

Sunwater's long-term 'whole-of-life' approach means that assets are maintained consistent with specific standards of service, with assets refurbished throughout their service lives as much as is economically feasible, and progressively replaced at the end of their service lives to maintain the relevant service standards.

Operating and capital expenditure components are jointly considered as part of the life cycle of our assets, with monitoring and inspection activities continually feeding back into our asset management planning cycle.

Sunwater's asset management life cycle is represents a value-for-money process for customers. Strategies are established as assets are built, and whole-of-life-cycle asset management processes then guide the operation, maintenance, refurbishment and ultimately replace of assets using a total expenditure optimisation approach.

Further detail can be found in our Strategic Asset Management Plan (**Appendix G**).

Sunwater's asset management approach is governed by the hierarchy of documentation set out in **Figure 22**, all of which have been provided in support of this pricing proposal. This documentation has been separated into three categories:

Strategic	High level guiding documents which set the overall direction.
Tactical	Documentation which guides development of the renewals program and activities associated with this.
Operational	Documentation which provides guidance on how to undertake regular activities such as risk assessments and condition assessments.

Consistent with good practice and in alignment with International Organisation for Standardisation (ISO) 55000 asset management standards, Sunwater has created a business-wide Strategic Asset Management Plan (SAMP) and separate Asset Management Plans (AMP) for water supply and distribution services within each of our schemes.

5.1.1 Strategic level

The AMP and SAMP are the primary strategy-level documents.

The AMP sets:

- Sunwater's overall approach to asset management to ensure we achieve our commitment to delivering water for prosperity. The AMP sets the principles by which assets are created and managed.
- The expectation that Sunwater's assets, and those it manages for others, are managed in a sustainable and commercially focused manner, which safeguards asset integrity and ensures alignment to customer values, quality of service, compliance with regulatory requirements, service continuity, efficiency and affordability.

Figure 22 - Asset Management Document Hierarchy

Strategic	Asset Management Policy AM 01 P1	
	Strategic Asset Management Plan	Service contract specific Asset Management Plans
Tactical	PCM Development Process	Planning flowchart – non-routine maintenance
	PCM Program Delivery Guideline	PCM Program Delivery Procedure
	Maintenance Strategy & Object codes	
	Options Analysis AM11	AM11 G04 Guidelines Regulatory Period
	PCM Development Process AM40	AM40 G34 PCM Tier Definitions AM40 G35 Initiation Documents Guideline
Operational	Methodology for Risk Assessment AM20	
	Condition Assessment of Assets AM21	P01 Asset Condition User's Manual G1 User's Manual for Assessing Electrical assets G2 User's Manual for Assessing Mechanical assets P01 Use's Manual for Assessing Civil assets P01 Use's Manual for Assessing Headworks assets

The SAMP:

- aims to provide asset management objectives, aligned with Sunwater's strategic goals over the strategic planning horizons, and a framework for asset management in the form of an Asset Management System used to achieve these objectives
- operationalises the AMP by defining the overarching strategy and process to provide asset management objectives, aligned with Sunwater's strategic goals over the strategic planning horizons
- sets an asset planning methodology based on maintaining service standards at minimal cost in a safe and environmentally responsible manner, through:
 - strategies to extend asset life in a way that minimises the risk of assets failing
 - use of reliability centred maintenance techniques to routinely maintain, periodically refurbish or run assets to fail depending on the nature and type of the asset
 - asset strategies that apply to groups of similar asset types.

In its current form the SAMP applies to assets used directly for the provision of water services and does not apply to non-water assets such as land, office space, plant and equipment, vehicles and housing.

5.1.2 Tactical level

Asset management and planning is done regionally at a portfolio (programs and individual projects) level and five-year plans form a 'rolling' outlook of future years. The strategic documents shown above guide regional asset planning management activities which plan and deliver:

- inspection, condition and risk assessment activities
- fit for purpose renewals programs at scheme level
- individual renewals projects.

Project works for the current year are prioritised and initiated based on an understanding of the assets condition, performance, risk and criticality. It also takes into consideration assets' service lives as well as the latest information on the operating environment, customer requirements and commercial conditions. This triangulation of data and expertise allows Sunwater to refurbish or renew assets at the optimal economic time.

Sunwater maintains a long term (beyond 30-years) forecast for long-term corporate planning and price setting activities.

Cost estimating is also a critical component of Sunwater's asset management. It involves a robust process of options analysis, scoping and internal cost estimating and/or market testing. For smaller or less complex projects, cost estimates are based on the cost of previous projects of the same or similar nature (given that much of what Sunwater does in the renewals space is repetitive in nature) which have been market tested in many instances.

Sunwater prepares options analyses for renewals projects within the planning period based on the rules outlined in Sunwater's '*AM11 G4 Options Analysis Guidelines Regulatory Period*'. These are where:

- there is no obvious solution
- the current maintenance strategy is changing
- technology has changed significantly
- there is a high risk in the project execution.

For less complex (more routine) renewals projects with fewer practical outcomes, Sunwater uses customer, operator and engineering consultation and experience to determine the optimum solution.

This ensures that effort applied to the development of an options analysis is appropriate to the nature of the project. Approximately 40 per cent of renewals projects annually are routine and/or non-complex projects such as pump changeovers, valve replacements and customer meter replacements where complex optioneering and options analysis would incur additional expense for customers without any additional benefit.

Sunwater notes that while formal, documented options analyses are not undertaken for smaller projects, informal option discussions are held during planning review meetings and at earlier stages of project execution. For example, once a pump or motor has been removed, and the internal condition assessed, a decision is made on refurbishment or replacement based on the level of deterioration evident.

Customers are also involved in Sunwater's asset planning and project processes through their annual review of the S&PPs and the related consultation process.

5.1.3 Operational level

Appropriate assessment of risk and condition lies at the heart of the operational level of the hierarchy.

Risk assessment

The outcomes of risk assessments are used to influence the timing for replacement or refurbishment of an asset. The higher the risk score (or criticality) of the asset, the more important it is to maintain operability of the asset. The SAMP prioritises these assets to prevent failure and impacts on supply.

Condition assessment

Sunwater's asset management approach is designed to benefit from ongoing asset monitoring and inspection activities performed by the teams directly responsible for, and in touch with, these assets on a daily basis. These are informed by *AM21 – Condition Assessment of Assets*.

Daily operational activities feed updated asset condition, performance and risk data back into our data management system (SAP) which continually updates Sunwater's renewals program. The regional operations teams are also involved in the annual forecast review process to overlay onsite asset condition, performance and customer impact knowledge.

5.2 Renewals costs for this pricing proposal

Sunwater's pricing proposal is founded on the asset management framework and activities outlined above.

5.2.1 Risk

During the 2012 and 2020 reviews the QCA recommended that Sunwater improve the way we forecast renewals expenditure as our standard asset management practices tended to lead to apportionment of too much cost risk to customers via forecasts that were:

- earlier than necessary, and therefore not prudent
- higher than current market replacement values and therefore not efficient.

It recommended that Sunwater make improvements to predictive maintenance and asset condition reporting (including via asset class-specific decay curves) to better inform the timing of asset replacement and to cost estimation processes to ensure asset replacement values generated by SAP represent current market replacement values.

While these risks were apparent across the whole of the long-term forecast (33-years for the annuity approach in 2020) they were more problematic in the years beyond the price path (i.e. the outer 29-years).

We accept that this is problematic under an annuity approach for price setting and have adopted the following mitigations to address this risk:

1. engaged with customers to test and propose a shift from an annuity to a RAB-based approach to recovery of renewals expenditure – this is discussed in **Section 3.6.1** and removes the bulk of the risk as the forecast window is limited to the price path period (4-years)
2. commissioned KBR to complete an independent prudency and efficiency review of our unadjusted renewals forecast – covering the 2024-25 through 2057-58 period

3. adopted their recommendations in full, making the cost and timing adjustments presented in **Table 35**, reducing the renewals program by:
 - a. **\$13 million** for the 2024-25 year (a 30 per cent reduction)
 - b. **\$17 million** for the 2025-26 to 2028-29 period (a 17 per cent reduction)
 - c. **\$531 million** for the 2029-30 to 2057-58 period (a 34 per cent reduction)
4. initiated a project to develop asset class-specific decay curves to inform future forecast development (project initiated in 2023).

Table 35 - Recommended adjustments by program ('000s)

Program	Recommended adjustment ¹		Aggregate 33-year forecast		
	Timing (years)	Cost (%)	Unadjusted (\$)	Adjusted (\$)	Adjustment (\$)
Switchboard and control renewal	1	13.4	90,474	79,582	-10,892
Meters	0	-1.3	118,264	107,530	-10,734
Instrumentation	0	-0.6	10,595	9,798	-798
Valve renewal and replacement	5	-7.3	48,536	35,696	-12,840
Dam-related works	0	-2.8	95,998	86,329	-9,669
Safety / security assets	0	-22.3	57,005	40,409	-16,596
Pump and motors	0	-3.8	128,852	112,127	-16,725
Gates	6	-15.2	118,740	93,425	-25,315
SCADA	0	-32.5	33,466	23,795	-9,671
Pipeline refurb / replacement	15	-7.3	277,635	11,023	-266,612
Channel re-lining and re-shaping	0	2.0	44,241	41,684	-2,558
Civil and roads (inlet / outlet towers)	1	-2.3	55,735	50,116	-5,619
Mechanical / minor works	0	0	111,371	93,295	-18,075
Individual projects	2	-5.70	483,625	341,848	-141,777

Note 1: Recommended adjustment¹ values are findings applied to non-reviewed expenditure only, and are not a measure of the total resulting change.

5.2.2 Efficiency

Sunwater's schemes are independent and geographically dispersed, with expenditure profiles that vary significantly depending on the nature of the assets in each. This means that there are limited opportunities for economies of scale and scope across the whole of Sunwater's business.

Efficiency opportunities are therefore generally focused at the scheme level and fall into delivery and procurement categories. Sunwater applies a continuous improvement approach, that seeks to capture learnings and knowledge from completed projects, across procurement and delivery activities.

To deliver projects and programs efficiently and to manage price volatility, resource shortages and general construction risks, our procurement and delivery strategies consider:

- a range of procurement and delivery models
- bundling of similar projects to achieve scope efficiencies
- utilisation of standardised designs (wherever possible) to avoid duplication of design costs.

A range of procurement and delivery methods are assessed for each project and program to determine the most appropriate methodology to mitigate risks. This includes market scans and indicators that predict which model may be most successful in delivering value or additional benefit to us. For example, new technologies being used successfully or new contract models delivering cost and time benefits.

The procurement process is determined by the value and risk of the contract, in line with Sunwater's Procurement Policy.

To ensure that appropriate service providers are available when required, Sunwater establishes (through competitive tender processes) panels of service providers with a range of knowledge and technical skills that can be provided at short notice. This ensures that Sunwater has appropriate rates for these skills across a contract period.

Key performance indicators are built into significant contracts and for all projects progress is monitored monthly to ensure they are delivered on time, to the right quality and safely.

From a delivery (and scoping) perspective Sunwater explores opportunities to optimise:

- scheduling (activities that require doing in the same year are undertaken concurrently)
- scope (packaging of similarly disciplined jobs for procuring one contractor).

In some instances Sunwater will also look to replace rather than simply refurbish an asset where cost and service benefits exist in doing so.

Optimisation of schedule is an ongoing process, and is a significant focus at Sunwater's annual renewals planning workshops where planners and project delivery managers collaborate to bring forward or defer items to align with particular shutdown opportunities. For example, if Sunwater is going to remove a pump and the motor was also due for refurbishment within a couple of years, both activities would be completed together to reduce customer impact, and reduce time involved in isolation, removal, reinstallation, and commissioning.

Efficiency in delivery example

A recent example of optimised scheduling, scope and replacement over refurbishment is the Bullyard pump station suction valves.

Four suction valves were originally staged for refurbishment over a 4-year period – one per year. The nature of a scheme and site dictates the shutdown requirements, and in this case, the balancing storage would need to be nearly emptied each time to allow the refurbishment to occur.

This is a significant operation with both cost and customer service implications. Sunwater explored aligning all four valves into the one year to minimise the effort and cost of multiple dewatering events. However all four valves could not be done at the same time as this would be an unacceptably long outage for customers.

The next option considered was to do two valves at a time (in the same year) which still required a total of three outages – one to remove the first two valves and refurbish, a second to replace the first two and remove the final two for refurbishment, then a third to replace the final two.

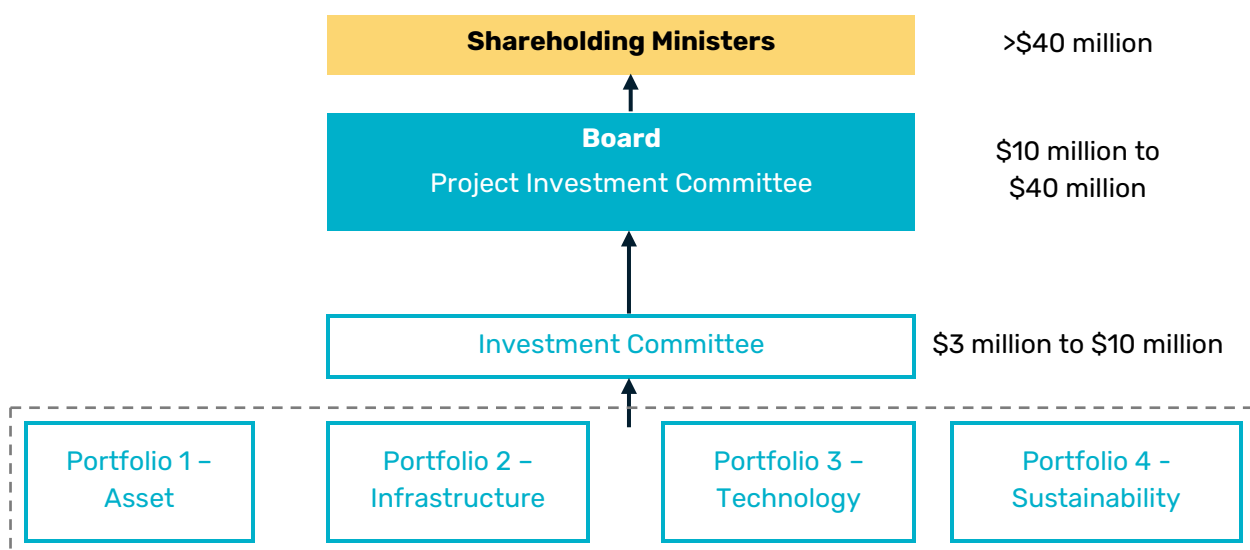
This is led to an option to replace, rather than refurbish, eliminating the need for more than one shutdown. Replacement valve installation will be planned to allow for the ordering lead times. Procurement efficiencies will be sought via a batch of four valves of the same specification (rather than one at a time at a future date). Removal and replacement in a single shutdown will minimise customer impact, with the site works completed within a single week.

Progress of each project and program are monitored monthly on a dynamic basis by both project managers and overseen at the appropriate level of Sunwater's governance framework. Most Sunwater renewals projects and activities are less than \$3 million and are managed at portfolio level as shown in **Figure 23**.

The Asset Portfolio Committee oversees the management of the projects and programs. The committee is responsible for the optimisation (value and efficiency) of the portfolio of works. The role of the committee includes:

- enhance transparency, accountability and responsibility and performance to plan for Projects and Programs of work
- monitor and manage the portfolio performance to plan (planning and delivery) to include cost, quality and schedule of 'in scope' P3MF projects and region based PCM performance
- review and approve gate submissions including business cases
- review and approve variation submissions (including selection of preferred option) and provide guidance into preparation of variation requests if required
- track and address dependencies between projects
- maintain visibility of high and extreme project and portfolio risks
- review priorities across the portfolio and reallocate resources if required
- act as a consultation forum for significant design decisions that are pending.

Figure 23 – Sunwater’s project governance framework



This provides early visibility where works are either being delayed or are beginning to overrun on cost. This pro-active early oversight of each line of the capital plan allows for the development of early intervention strategies to mitigate against either non-delivery of the plan or significant cost overruns.

5.2.3 Compliance and dam safety focused programs

In addition to the continuation of renewals programs that have been presented at past reviews Sunwater has developed (and provided) business cases and forecasts for four new programs of work which are required to meet emerging legal, regulatory or technological issues:

1. Arc flash
2. Dam instrumentation
3. Smart meters
4. Dam safety management

Each of these represents an extension of obligations Sunwater already has to ensure the safety, reliability and efficiency of its assets and the safety of its people and customers. They are discussed further in **Section 5.4.1**.

5.2.4 Improved presentation

KBR also assisted Sunwater in the development of a consolidated program-based view of forecast expenditure – the programs are shown in **Table 35**. This allows us to present our forecast in a way that improves our ability to communicate our plans with customers and is aligned with the way we manage our assets.

The existing renewals program is shown in fifteen programs of work and a business case has been prepared for each, highlighting the rationale (need) for work within the program as well as the basis for cost forecasts. The program-based view dramatically simplifies the overall work program and provides an improved level of insight into the work we undertake to maintain our assets and deliver our services. The programs are defined in **Section 5.4.1** and include activities such as meter renewal and switchboard and control renewal.

Projects that do not fit naturally within one of these fifteen programs have been presented as program sixteen – individual projects. Projects in this category have drivers and characteristics that preclude their inclusion in a program and have individual business case documentation.

Sunwater’s presentation and supporting material (provided separately) provided customers with a comprehensive view of our renewals program. As outlined in **Section 2.2**, our Stage 3 engagement material responded to requests to provide further levels of detail on key projects and programs to our customers.

5.2.5 Billing system renewal – build costs

Sunwater has also included the build cost for its billing system renewal as a capital asset for pricing purposes. Current accounting rules classify build costs under a SaaS arrangement to be an expense rather than a capital item. Adopting this approach for the purpose of pricing would mean that the entire build cost would be recovered within a four year-pricing period and not across the serviceable life of the new system. We have therefore elected to treat these costs as a capital item with a life of 20 years consistent with assets of a similar nature. These costs are included in the following discussion.

Our Stage 3 engagement materials set out how the build costs have been apportioned to schemes to facilitate customer review and feedback. The total build cost applied to the in-scope schemes and services is set out in **Section 5.4**.

5.3 Roll-forward period (2019-20 to 2024-25)

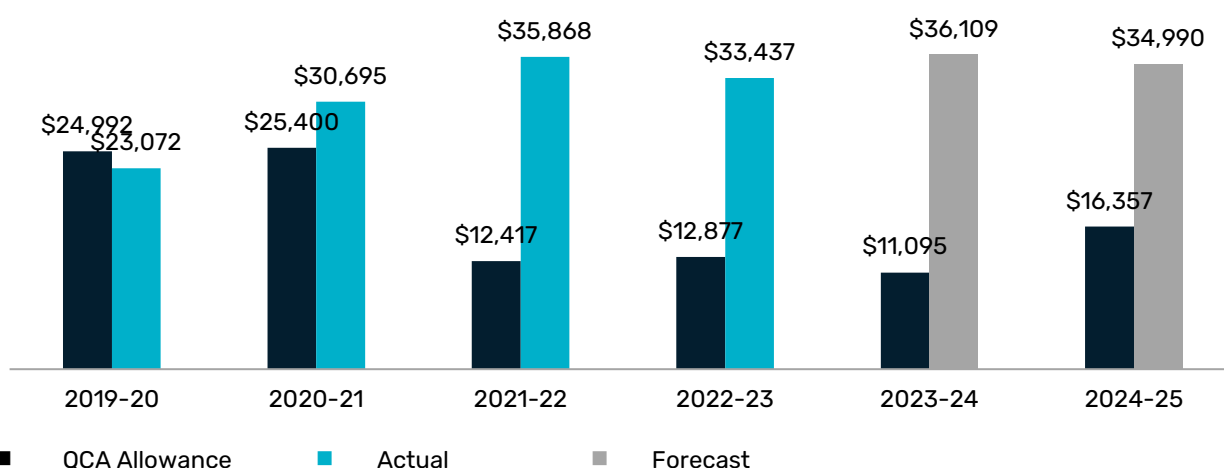
5.3.1 Actual and forecast expenditure

Sunwater’s program of works at the time of the 2020 Review was an estimate based on the best available risk and condition information. As was the case at previous reviews the actual work undertaken by Sunwater continues to be determined annually based on the best available assessments of condition and risk.

A portion of Sunwater’s renewals effort includes reactive activities in response to unplanned events or asset failures. Wherever possible, Sunwater tries to meet the needs of unplanned non-routine expenditure within existing allowances by re-prioritising the upcoming non-routine program.

This period Sunwater has had to contend with the COVID pandemic, flooding and inflation materially higher than that forecast by the QCA in its previous price review (**Figure 24**). This affected both labour and materials and has affected the costs we incurred to deliver our renewals program during the current period.

Figure 24 – Comparison of actuals (and budget) against QCA allowances (\$'000s)



As a result, during the current price path period Sunwater expects to have invested (four years of actual plus two years of forecast) \$194 million, an uplift of \$91 million against the QCA allowances for the same period.

Figure 25 presents a scheme-by-scheme comparison of the base six-year allowance (from 2019-20 to 2024-25 showing QCA allowance on the x-axis and Sunwater's expected spend (four years of actual plus two years of forecast) on the y-axis. The larger the distance from the scheme to the parity line, the larger the gap between expected spend and the QCA allowance.

Larger schemes (by spend) are further to the right and require a far greater absolute spend to deviate from the QCA allowance than schemes to the left. For example, the Cunnamulla scheme recorded an 800 per cent uplift against a relatively small QCA base allowance of \$0.94 million. The major projects section that follows discusses some of the significant projects during the period that have contributed to the uplift from the QCA allowance over the period.

Further detail relating to scheme level expenditure (and comparison with QCA allowances) is presented in the **Scheme Summary** documents.

5.3.2 Flood repair works

Extreme weather events and flood damage are unpredictable and do not form part of Sunwater's forecast for pricing or corporate planning purposes. Expenditure related to repairs and renewals following a flood event is recovered as part of the ex-post review at each pricing review.

During 2019-20 and the current price path period, Sunwater spent a total of \$3.71 million on flooding related renewals as shown in **Table 36**.

5.3.3 Major projects during the roll-forward period

Sunwater has delivered, or is in the process of delivering, 10 major projects which cumulatively represent \$44.5 million, or 23 per cent of the \$194 million investment during the roll-forward period.

Documentation for each of these projects has been provided (along with more than 60 other current period projects, across all schemes, asset types, classes and values) that clearly and succinctly addresses the regulatory tests of prudence and efficiency.

Figure 25 - Renewals expenditure 2019-20 to 2024-25 against QCA allowance (\$'000s)

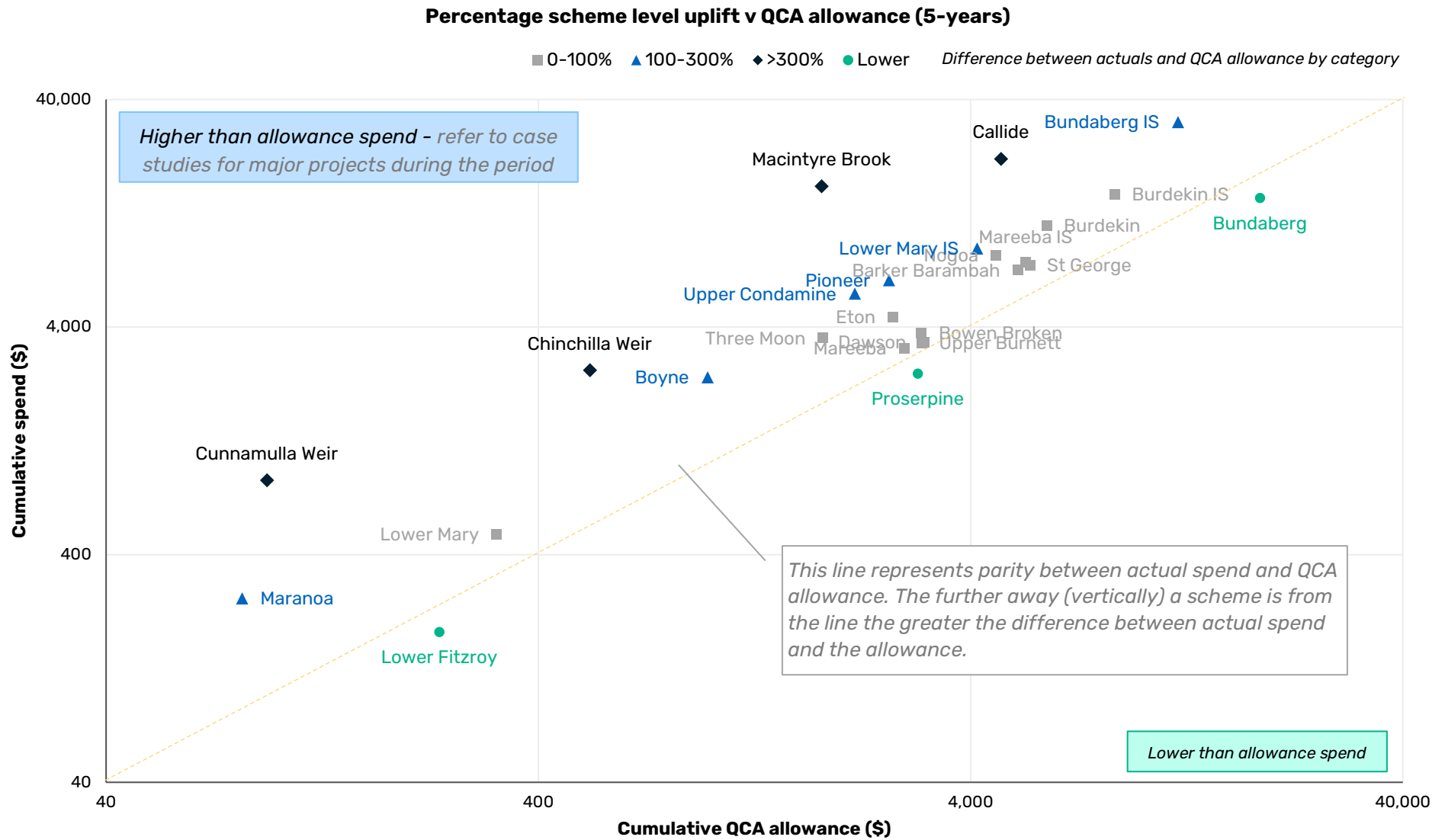


Table 36 – Projects driven by response to extreme weather events (\$ '000)

Service	Project summary	Total
Bundaberg Supply 20BUN17 FD01	<p>Significant damage was caused by floods passing through the lined and unlined spillway during 2010-11, 2013 and 2017-18. An option study into the need for, and scope of, repairs determined that the scour has increased over time and has been observed encroaching upon the foundations of the Monduran pumpstation and moving upstream towards the spillway structure and toe of the dam. Flood risk to the pumpstation and dam was assessed as above the limit of tolerability.</p> <p>Remedial works were divided into two stages and options assessed to provide short- and long-term risk reduction. Stage 1 is complete and reflected in the costs shown. Stage 2 is ongoing.</p>	2,652
Lower Mary – Distribution FD01 (JAN) FD Repairs	<p>The right bank of the Mary River was badly scoured during the 2022 flood causing the pipeline to fail.</p> <p>Sunwater completed repairs adjacent to the Walker Point pumpstation, and reinstated the failed section of C1 pipeline that provides water to customers near Copenhagen Bend pumpstation.</p> <p>Options to reinstate it were considered, including a no reinstatement and customer entitlement purchase option. Customers were not supportive of this option and insisted upon reinstatement.</p> <p>The final solution was to bore beneath the riverbed and pull a pipeline through the casing to prevent future pipeline failures. This was completed in late 2022 and early 2023.</p>	237
Bowen Broken Rivers Supply 19BBR12 FD01 (2019) - FNQ Flood Event - 19BBR13 FD02 (2019) - FNQ Monsoon - Jan/ 19BBR14 FD02 (2019) - FNQ Monsoon - Jan/ 17BBR02 FD01 (2017) Flood Damage Repairs	<p>Flood events in 2017 and 2019 impacted Bowen Broken – only costs relevant to the roll-forward period are included here.</p> <p>During a monsoon event 2019 the Bowen River Weir was damaged by flood waters. Covers and rock protection were damaged and, in some places, completely washed away.</p> <p>Replacement items were designed and reinstated. The gatic cover over the penstock was replaced by a webforge walkway. Damaged infrastructure was removed and earthworks were reinstated. New rock filled gabions and mattresses were keyed into the existing works.</p> <p>During cyclone Debbie in 2017 the Gattonvale Storage was damaged by high winds which induced wave action causing erosion on the inside batters. A project was commissioned to rectify the damage. Stage 2 of this project was completed in 2019. A 1500mm high, 1400m long section of layered rock in differing sizes was extended to the final design height of 3000mm.</p>	823
Total		3,712

Project 1 Callide Dam gates project, Callide Scheme

<p>\$14.8 million to refurbish the Callide Dam gates to ensure their safety and reliability</p>	
<p>Context / background</p>	<p>Callide Dam is located on Callide Creek in the Dawson River catchment of the Fitzroy Basin and has a capacity of 136,300 ML. Near Biloela, the dam was commissioned in 1965 and features a concrete crest spillway. In 1988 the dam was upgraded (capacity increased from 55,385 ML to current) with the installation of concrete piers and six large radial gates. The gates were designed for automatic operation with a manual redundancy, and operate in pairs.</p>
<p>Issue</p>	<p>The spillway gates have experienced unexplained vibration issues during spillway events at various times over the last few years. Various possible causes were investigated. An extreme vibration event occurred in 2013 where the spillway piers swayed laterally in the order of +/-200mm and walkway beam hold-down bolts failed. On this occasion, one variable counterweight derailed, and the associated gate was temporarily jammed in a partially open position. Another brief vibration event was recorded in 2015 and in 2017 the gates again vibrated uncontrollably, and was captured on a handheld iPhone. Analysis confirmed that the observed vibration was at the gate's critical vibration mode of 4.3 Hertz.</p> <p>Sunwater has obligations to ensure all dams meet the relevant safety guidelines. A project was initiated in February 2021 to remove the gates from service mitigating the risk of a gate failure should they need to operate in the coming wet season.</p> <p>The primary benefit of the project was to limit future damage and possible failure of the gates during an event reducing the risk of dam failure to an acceptable level as soon as reasonably practical.</p>
<p>Solution</p>	<p>The <i>Radial Gate Investigation Stage 1</i> project was undertaken between 2019-20 and 2022-23.</p> <p>A competitive tender process was undertaken for a suitably qualified contractor for an investigation and options assessment to "Remove the Gates from Service", followed by the detailed planning methodology to achieve the delivery of the selected option to minimize future damage to the gates.</p> <p>At the completion of the investigation phase, the scope of works was finalised and costs estimated. A total final budget of \$13.3 million was approved in May 2021 to cover all works required to meet the project objectives.</p> <p>Competitive tender processes were followed in the delivery of this work.</p>
<p>Status</p>	<p>The project has been fully commissioned with the final control systems commissioning completed in May 2023. The project is now complete with the development of the "as Constructed" document package and the mandatory reports for the Dam Safety Regulator developed.</p> <p>Sunwater has prepared a summary document setting out further details on the need for this project and its costs in support of this pricing proposal. This document has been provided to the QCA along with this pricing proposal.</p>
<p>Doc Ref #</p>	<p>RX110 – Callide Dam - Radial Gate Investigation Stage 1</p>

Project 2 Coolmunda Dam variable counterweight project, Macintyre Brook Scheme

\$6.7 million to address reliability issues with Coolmunda Dam gates	
Context / background	<p>Located in the Macintyre Brook Scheme, and built in 1968, Coolmunda Dam has a capacity of 69,000 ML and is equipped with seven radial gates which operate independently.</p> <p>These gates feature fixed counterweights and two variable counterweights (VCW) each – a total of 14 VCWs. The gates have not undergone any significant overhauls since 1968. The VCW components, such as seals and guide rollers, are deteriorating with age and refurbishment is required to maintain compliance with dam safety standards and ensure asset and service reliability.</p> <p>The specialised nature of the works required the engagement of a mechanical contractor experienced in dam gate refurbishment.</p>
Issue	<p>In 2020, GHD was engaged to conduct a gate reliability review which revealed several issues with the guide rail systems and VCW components:</p> <ul style="list-style-type: none"> • Slime observed at the base of four VCW units, indicating water ingress into the float buoyant foam region • Serviceability issues identified in the guide wheels of many VCW units, although these issues did not impact gate reliability or normal operations. Regular physical testing of the gates every three months ensures functionality • Leaking drain valves in the base of each VCW chamber
Solution	<p>A project was established to complete inspection and testing on the VCW to determine the condition and the nature and timing of necessary refurbishment or replacement works.</p> <p>During the establishment of the project the dam filled from 16% to over 100% and regularly spilled requiring an alternative approach to delivering the project.</p> <p>In an environment where components could not be inspected, the modified approach was to fabricate four new VCWs to replace the three in expected worst condition and one in expected good condition meaning that the VCW could be replaced in a short duration of time and the removed VCW could be dismantled, and condition assessed.</p> <p>The results of the VCW condition assessment would inform the decision and timing for replacement of the remaining ten VCW.</p>
Status	<p>Work on the project commenced in 2020 and the project is expected to be delivered by the end of 2023.</p>
Doc Ref #	<p>RX111 – Coolmunda Dam Variable Counterweight Improvement</p>

Project 3 Silverleaf Weir refurbishment, Barker Barambah Scheme

\$4.4 million to refurbish the weir at Silverleaf	
Context / background	<p>As part of its regime of periodic inspections and maintenance deterioration of the Silverleaf Weir’s structural timber and minor slumping of the left abutment observed.</p> <p>Following the recording of these assessments, Sunwater engaged (in September 2018) external advisor Wood Research and Development to conduct a visual and invasive structural assessment of the weir timber.</p>
Issue	<p>The Wood Research and Development report found that the weir’s condition had deteriorated to a condition score of 4 (poor) necessitating replacement or refurbishment of the weir.</p>
Solution	<p>A <i>‘Condition Assessment Report and Refurbishment Plan – Stage 1’</i> report was completed by Wood Research and Development in 2018 reviewed four options, being:</p> <ul style="list-style-type: none"> • Option 1 - Do Nothing • Option 2 - Replace or Refurbish the Entire Weir • Options 3 & 4 - Refurbish or Replace the Weir for the Short Term or the Long Term. <p>The preferred option from this study was to undertake the Option 2 repair works. Full restoration of the structure will prevent continued decay. This proactive approach with restoration or replacement of the deteriorated elements will prolong the useful life of the spillway to 40+ years pending proper maintenance.</p>
Status	Complete
Doc Ref #	RX112 – 20BBA03 Silverleaf Weir Refurbishment

Project 4 Teemburra Dam CRA, Pioneer River Scheme

\$4.1 million to carry out a CRA at Teemburra Dam	
Context / background	<p>The Sunwater Board has a legal obligation to ensure that the risk assessments are undertaken in line with current dam engineering guidelines which at the time of project delivery was as outlined by ANCOLD Guidelines on Risk Assessment (ANCOLD, 2003) (now ANCOLD (2022)) and the Queensland Department of Natural Resources and Mines (DNRM) Dam Safety Management Guidelines (2003) (now Department of Regional Development, Mines and Water –DRDMW 2020). The latter standard (DRDMW, 2020) is more risk averse and generally drives higher expenditure to ensure community safety – compliance is a regulatory necessity.</p> <p>A CRA for Teemburra Dam was undertaken by Sunwater in 2009 (eDocs #785404) and Five-Yearly Comprehensive Dam Safety Inspections (CDSIs) were undertaken by Sunwater in 2005, 2010 and 2015. In addition, a 20 Year Dam Safety Review (DSR) was undertaken on Teemburra Dam and was planned to be finalized in November 2017 (finalized in January 2018 – eDocs #2325959).</p> <p>Relevant to the Teemburra Dam Safety Improvement Project (TDSIP) that was planned to initiate was four (4) recommendations from the CRA (Sunwater, 2009) and two (2) recommendations from the DSR (Sunwater, 2018) including:</p> <ol style="list-style-type: none"> 1. CRA: Teemburra Dam Upgrade should be given a high priority. 2. CRA: The main dam parapet wall should be raised by 0.7 m. 3. CRA: The crest elevations of Saddle Dam Nos. 1 and 2 should be raised 1.0 m and 0.7 m respectively. 4. CRA: The saddle dam filters should be extended up to crest level. 5. DSR: In order to safety pass the PMF event a required upgrade including the raising of the parapet wall at the Main Dam by 0.4 m, the raising of the crest of SD2 by 0.4 m and the raising of Saddle Dam 1 by 0.7 m and the raising of the filter zones in both saddle dams to crest level is required. 6. DSR: Carry out physical modelling of the spillway in order to confirm the spillway rating. A model case without the flow splitters should be included since the structural check of the flow splitters indicates they cannot withstand a log impact load.
Issue	<p>The Sunwater Revised Portfolio Risk Assessment 2017 (Rev 6) (eDocs #2221906) placed Teemburra in a dam safety action (DSAC) Class 3. The societal risk at this point plotted above the ANCOLD Limit of Tolerability line – requiring the potential need for a dam safety upgrade or other risk reduction measure. Between 2009 and 2017, while the risk at Teemburra Dam plotted high, it was classed lower than other dams (such as Burdekin Falls Dam, Paradise Dam or Tinaroo Falls Dam). DSIPs were required to be completed at higher priority dams within the portfolio before Teemburra Dam could be addressed (in part constrained by the resources across the years).</p>
Solution	<p>Sunwater had the legal responsibility to investigate the need for a physical improvement to the dam which was undertaken in the form of a lengthy and comprehensive CRA.</p>
Status	Complete
Doc Ref #	RX113 – 18PI010 Teemburra Comprehensive Risk Assessment

Project 5 Clare Weir works, Burdekin Haughton Scheme – Distribution Service

\$4.1 million for renewal works at the Clare Weir	
Context / background	<p>Clare Weir is situated on the Burdekin River approximately 7.7 km south of Clare. The primary functions of the weir are to provide a pumping pool for the Tom Fenwick, Elliot and Clare B Pump Stations, and to release water to downstream riparian customers including the North and South Burdekin Water Boards.</p> <p>Construction of the weir was completed in 1978 with one third of the weir reconstructed in 1979 after suffering extensive flood damage.</p> <p>The weir is a mass concrete structure comprising 29 spillway and abutment monoliths. The weir is 425 m in length, stands 7 m above the river-bed and stores 15,900 ML at full supply level.</p> <p>The weir crest is fitted with 150 hydraulically operated stainless steel flap gates, its outlet works on the right bank comprise two 900 millimeter diameter and two 1050 millimeter diameter outlets controlled by hydraulically operated upstream slide gates. A fish lock is located against the right abutment of the weir.</p> <p>Safety inspections are undertaken every year in accordance with <i>AM43 Weir Engineering Inspection Guidelines</i>. Inspections and are aligned with <i>the Queensland Dam Safety Management Guidelines – Appendix F Table 23 (DNRME)</i>.</p> <p>The most recent Clare Weir inspection was completed in June 2022.</p> <p>The weir’s energy dissipators (flip bucket) units are engaged (though not captive) with the downstream face of the spillway monoliths. They are designed to dissipate overflow turbulence and protect the downstream toe of the weir from erosion.</p>
Issue	<p>A routine inspection in September 2021 found the downstream toe of units 18 and 19 was undermined and lacking foundation support.</p> <p>The requirement for this project is due to condition (obvious defect) and risk (potentially significant loss of infrastructure and subsequent impact on service).</p>
Solution	<p>The objective of the project was to:</p> <ul style="list-style-type: none"> • Identify the extent of downstream erosion and undermining • Confirm the erosion mechanism • Design and implement temporary measures to secure the structure • Design and implement a permanent protection solution
Status	In progress. Forecast to complete during 2023-24.
Doc Ref #	RX114 – Clare Weir Works

Project 6 Replacement of Ben Anderson Barrage shutters, Bundaberg Scheme

\$3.7 million to replace barrage shutters to address safety and asset failure risks	
Context / background	<p>This project resulted from age and adverse environment related degradation of the 110 collapsible shutters atop the concrete crest of Ben Anderson Barrage. The shutters boost the freshwater storage capacity. They were designed to progressively collapse to safely pass flood flows and later be lifted back into place to re-establish full storage capacity. They were originally manufactured in mild steel from the early 1980s.</p> <p>Due to the saline environment immediately downstream of the barrage, and damage from intermittent flooding, the shutters had required continual maintenance to reduce the risk of uncontrolled failure. This had been via an established rotation plan, with refurbishment of blocks of 10 shutters undertaken by a local company and a set of 10 previously refurbished spares reinstalled each year.</p> <p>A 2017 Business Case (eDocs #2242651) was approved for the refurbishment approach to be superseded by a replacement approach using an improved design. The strategy was for the replacement of 10 shutters per year until all 110 had been completed. In late 2022 a condition assessment found the shutters had deteriorated to the point that the replacement program would not have been sufficient to maintain asset integrity, presenting an unacceptable risk to the operation of the barrage and the supply of future year water allocations.</p>
Issue	Safety and asset failure risk – replacement of shutters required prior to failure
Solution	Sunwater expedited the shutter manufacture and changeout process to ensure the existing shutters are replaced before failures occur, with the manufacture of all remaining steel shutters to be completed over the next two financial years. It was also advantageous to maximise the number of shutters to be installed if/when site access becomes available during the Paradise Dam major construction works from FY 2026 or earlier.
Status	<p>In progress. The current program for the project is:</p> <ul style="list-style-type: none"> • Manufacture 32 new shutters including 64 pivot arms in 2023-24. • Manufacture 32 new shutters including 64 pivot arms in 2024-25. • Develop Installation Strategy into timing of all site works, including shutter installation process. • Remove existing and install new shutters in 2025-26. (Proposed only. Commencement may vary subject to Installation Strategy and/or if opportunities arise e.g., within a dry weather event.)
Doc Ref #	RX117 – 22BU01 – Replace Ben Anderson Barrage Shutters

Project 7 Thuraggi Diversion Channel works, St George Scheme

\$2.8 million to ensure stability of the embankment and reduce safety risks	
Context / background	<p>Beardmore Dam is the major storage for the St George Water Supply Scheme and is located 21 km upstream of the town of St George. The dam supplies water to meet allocation demands by regulating releases in the Balonne River and to the St George Irrigation area via the Thuraggi Diversion Channel. The dam also has minor flood mitigation ability. The construction of the dam commenced in April 1968 and was completed in March 1972. The scheme was built to supply water to the developing irrigation sector, in particular the cotton industry.</p> <p>Flow of water to Thuraggi Diversion Channel is controlled by an outlet structure. Moolabah and Buckinbah Weirs which are located on Thuraggi Channel help control the delivery of water to irrigation customers.</p> <p>In July 2014, work was carried out to address sand boils immediately downstream and beside the Thuraggi channel outlet structure. This led to a geotechnical investigation of the area to determine the source of seepage and whether this seepage was a stability issue for the embankment.</p> <p>In July 2015, the outlet to Thuraggi Channel was dewatered and an inspection was undertaken. Damage to the rock mattresses was identified, sand boils had formed, and seepage on the outlet right bank training wall. A short-term solution was necessary to reduce the hydraulic gradient on the outlet structure, while a long term solution was developed. The rock mattresses were repaired in FY2016, a temporary coffer dam was installed. Temporary works continued to be carried out to meet service levels and protect the channel.</p> <p>The condition of the channel was determined to be a safety and operational risk that could put Sunwater in breach of their regulatory requirement under the St George Bulk Scheme.</p> <p>If seepage was allowed to continue with consequent loss of material near the channel bed the stability of the embankment becomes compromised.</p> <p>Works were required to maintain strategic alignment with Sunwater's Corporate Plan and Statement of Corporate Intent which is to, "Operate and maintain Sunwater's existing water infrastructure assets to ensure continued delivery of water to customers and communities in line with shareholder expectations." Ultimately seepage leading to instability of the dam embankment is a dam safety issue that needs to be addressed.</p>
Issue	To reduce the risk of embankment failure due to seepage
Solution	Options analysis determined the optimal solution to be extending the width of the existing embankment by placing earthfill in the channel downstream of the existing structure. This would increase the flow path length reducing the seepage gradient in the foundation and reduce the potential for backward erosion piping below the structure.
Status	The project was completed in September 2019 (eDocs #2520408). The Project Closure Report (eDocs #2512372) prepared in April 2020 identifies a final project cost of \$7.5 million (including \$4 million incurred in prior years (i.e. pre 2019-20)). Consistent with the 2020 Review findings, the full cost of this project has not been passed through to customers.
Doc Ref #	RX115 – 16BAL12 – Install a Filter Zone between Thuraggi Inlet and Outlet – Beardmore Dam

Project 8 Owanyilla Pump Station switchboard upgrade, Lower Mary River Scheme

\$2.6 million to address safety risks and upgrade ageing infrastructure	
Context / background	<p>For both the Owanyilla and Main Road pump stations, Sunwater had determined that upgrades were required to address Arc Flash Incident Energy related issues associated with the switchboards, based on the internationally recognised methodology described in standard IEEE 1584:2018. The standard had been updated to incorporate revised methods which produce more accurate results based on the characteristics of a particular switchboard and electrical system.</p> <p>To adequately manage its risks, Sunwater has been undertaking new detailed Arc Flash Studies and calculations for each site to accurately determine the Incident Energies to apply adequate risk controls. The incident energy levels taken from the Sunwater Interim Arc Flash PPE Site Specific Assessment (eDocs #2527273) for both pump station sites.</p>
Issue	<ul style="list-style-type: none"> • Address arc flash risks • Upgrade assets based on condition and risk, addressing age related deterioration • Timely modernization of SCADA functionality
Solution	<p>Owanyilla Pump Station</p> <p>This component of the project involved replacement of the Common Controls and Low Voltage (LV) and High Voltage (HV) Switchboards at the Owanyilla Pump station. The pump station supplies water for irrigation customers and is used to supplement the water supply to Maryborough. Interruption to the operation of this pump station for even relatively short periods therefore carries significant reputational risk. The project was to address the risks associated with reaching the 'End of Life' stage for the three major components and the unaddressed Arc Flash exposure, in addition to rectifying the lack of a SCADA platform which was constraining operational effectiveness.</p> <p>Main Road Pump Station</p> <p>This component of the project involved replacement of the Low Voltage (LV) Main Switchboard and Control System at the Main Road Pump station. The pump station is required to lift water from the Owanyilla Diversion Channel into a clay-lined banked balancing storage, supplying farms in the Glenorchy area via a gravity main.</p> <p>The LV Main Switchboard and Control Panel at Main Road Pump station had been in service since 1989 and was becoming unreliable, with various switchboard components failing and requiring replacement with equivalent components. There were also safety concerns with the dated switchboard design, where live parts were exposed with the switchboard doors open, after isolation of the pump feeders. With the switchboard components operating near the ends of their notional service lives, the project was therefore to replace the assets and bring the whole installation up to modern standards.</p>
Status	The project is currently in progress with the contractor at the 60% design stage with completion expected in November 2024.
Doc Ref #	RX116 – Owanyilla Pump Station - Switchboard 2 and Main Roads Pump Station - LV Switchboard

Project 9 Woongarra Pump Station electrical upgrade, Bundaberg Scheme

\$2.1 million to replace electrical equipment at the Woongarra Pump Station	
Context / background	<p>The Woongarra Pump Station is a wet-well river-lift pump station located on the southern bank of the Burnett River, within the Bundaberg scheme. The station was constructed, and the pumps and motors were installed, in 1980. It consists of five single stage vertical mixed flow diffuser type pumps each with a duty of 850 L/sec @ 35 m head, powered by 375 kW electric motors.</p> <p>The pump station delivers water from the river via five separate buried rising mains to the Woongarra balancing storage on the river bank. Water from the balancing storage then flows into the Woongarra and Alloway main channel systems.</p> <p>Faults in electrical and ancillary systems of the station have caused pump downtime and a loss of pumping hours. As the station normally operates only during off-peak tariff times to meet demand, this downtime has on occasion required pumping outside these hours, incurring extra peak tariff power costs in addition to the costs of rectifying the faults themselves. A 2009 audit recommended both boards (HV and common control) be planned for future replacement based on 'age of the switchboard and the availability of spare components'. Condition assessments in SAP from 2016 rate the age of the switchboards as '5' (Major deterioration).</p>
Issue	Risk to service presented by age and condition of asset and availability of spare parts
Solution	Retention of existing pumps and replacement of electrical equipment.
Status	The project was completed in June 2021.
Doc Ref #	RX118 – Upgrade - Electrical System - Woongarra Pump Station

Project 10 Coolmunda Dam CRA, Macintyre Brook

\$1.9 million to complete a CRA	
Context / background	<p>Sunwater has a legal obligation to ensure that risk assessments are undertaken in line with current dam engineering guidelines. At the time of delivery this included ANCOLD Guidelines on Risk Assessment (now ANCOLD (2022)) and the Queensland Department of Regional Development, Manufacturing and Water (DRDMW). The Coolmunda Dam CRA completed in 2012 identified that the dam life safety risk was above the ANCOLD Limit of Tolerability.</p>
Issue	Comply with obligations in relation to dam safety and responsible dam management
Solution	<p>This project was established in response to the findings and recommendations in the 2009 CRA and 2012 CRA addendum. The objective was to reduce dam risks (life safety) to an acceptable level – reducing current risks to ensure the dam is below the ANCOLD Limit of Tolerability, considering ALARP principles, and in accordance with Sunwater's Dam Safety Policy and ANCOLD and State Dam Safety Guidelines.</p> <p>The scope of this project was to undertake a detailed review and assessment of existing dam risks, evaluate and recommend improvement options to concept design level, and define the project and subsequent works in a preliminary business case.</p>
Status	Complete
Doc Ref #	RX119 – 20MAB01 Coolmunda Dam Comprehensive Risk Assessment

5.4 Price path forecast (2025-26 to 2028-29)

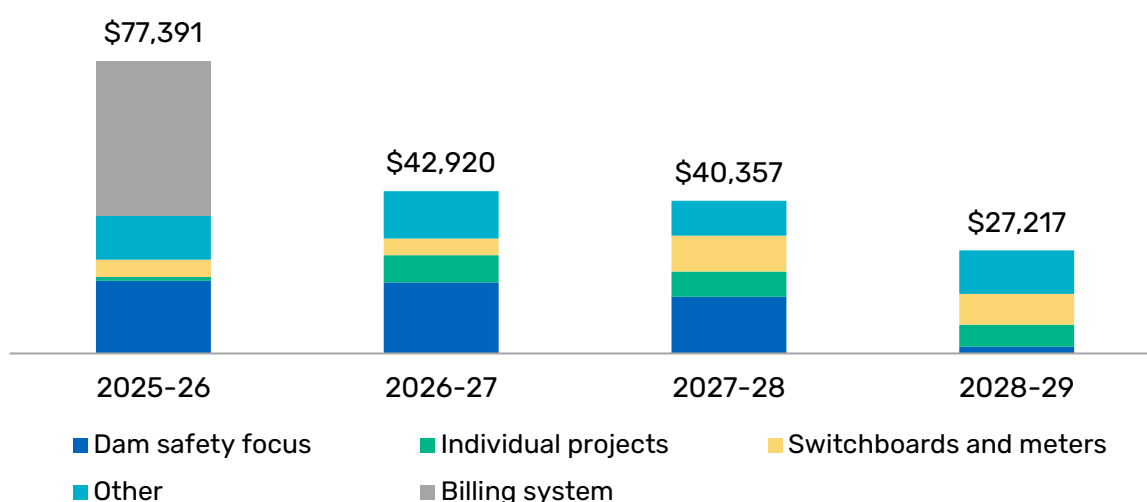
This section sets out our investment priorities for the next four years by program. A year-by-year breakdown is shown on **Figure 26** and an aggregate view is presented via **Figure 27**. **Figure 27** also shows the split between capital and opex within the renewals expenditure forecast. This split is important for the revenue requirement calculations discussed in **Section 4**.

Key features of our investment plan include:

- billing system renewal via \$40.9 million¹⁸ in “build” costs allocated
 - this represents the largest single project planned for the period, with costs allocated to the 2025-26 commissioning year
- non-billing system investment (\$147.0 million) is covered in 17 programs (\$126.3 million) and via individual projects (\$20.7 million)

- within the 17 programs – discussed further in **Section 5.4.1**:
 - 37 percent continues our focus on ensuring our dams and related assets are compliant with regulations and safe for our people via Dam Instrumentation (\$27.9 million), Arc Flash (\$14.7 million) and Dam Safety Management (\$12.1 million) programs
 - 18 per cent continues our renewal of switchboard, control panels and meters (\$26.6 million)
 - the remaining 31 per cent (\$45.0 million) is spread across 11 smaller programs that range between \$8.3 million and \$0.9 million within the period.
 - no investment is planned for the pipelines program within this period
- major projects (including the billing system renewal) are discussed further in **Section 5.4.2**.

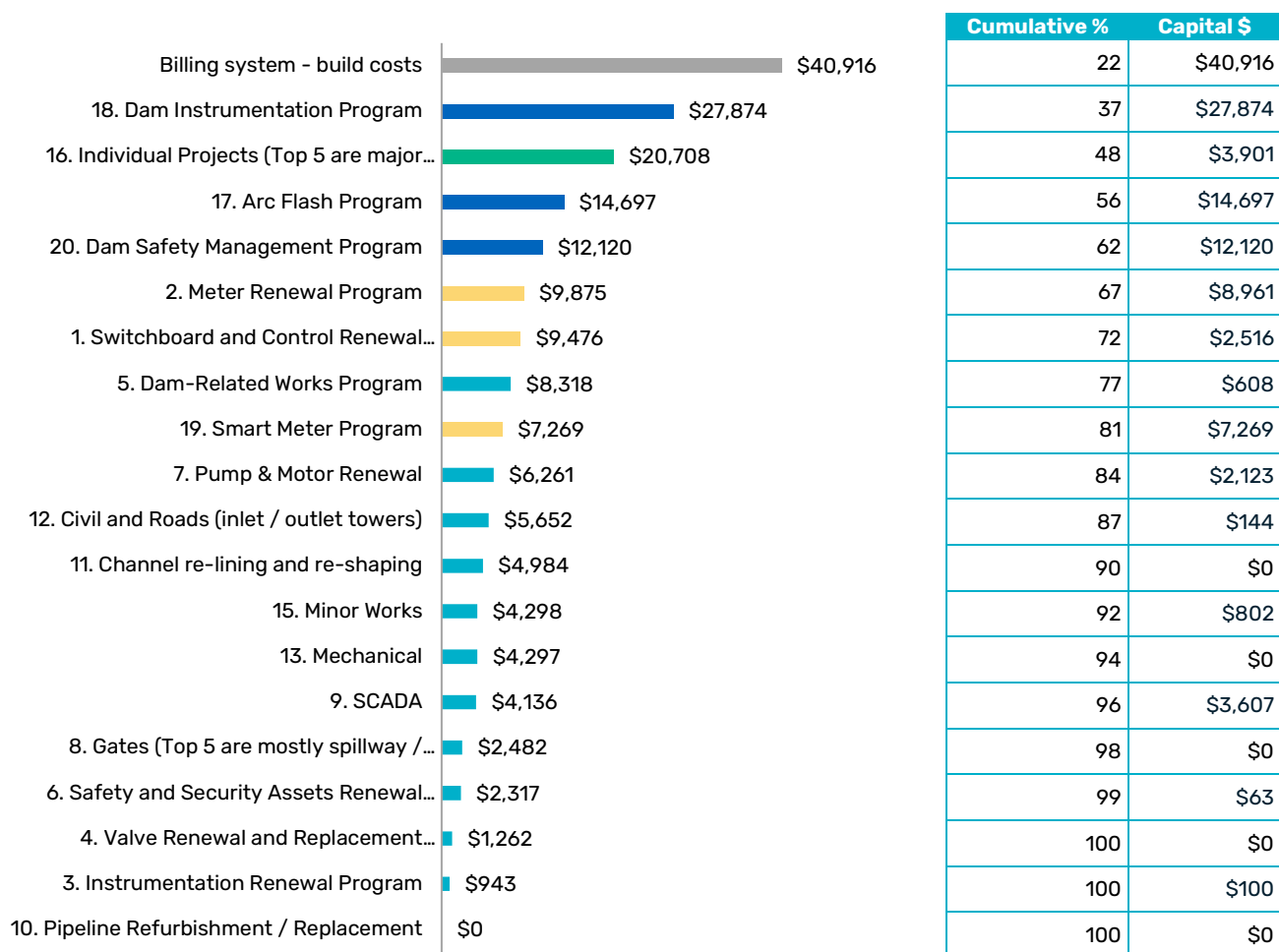
Figure 26 - Total year-by-year expenditure across the price path period (\$000s)



¹⁸ The approved \$38.6 million build cost has been inflated to \$42.4 million to account for a 1 July 2025 commissioning

date. The value shown represents the that falls within the scope of this review.

Figure 27 - Renewal and compliance expenditure (2025-26 to 2028-29) (\$'000s)



Excluding the once-in-a-generation billing system renewal Sunwater’s expenditure forecast for the first three years fluctuates around an average of \$39.9 million before an apparent decline in 2028-29. This final year drop is reflective of our approach to exclude projects which are uncertain, rather than an expectation that actual expenditure will drop by 25 per cent in the final year of the period. As we continue with our routine inspections, investigations and condition assessments our actual work program will adapt and (as has occurred in the current period) we expect that additional expenditure will be required in 2028-29.

Sunwater’s proposed expenditure across the four-year period is discussed in more detail below and supported by 19 program and over 70 project business cases provided as supporting documents.

5.4.1 Programs

As outlined above 86 per cent (\$126.3 million) of Sunwater’s non-billing system renewals expenditure is driven by 17 overarching programs of work. The ten largest programs (which account for 84 per cent of this total) are introduced in **Table 37**. Supporting documentation has been provided for all 17 programs.

Table 37 – Program overview – 10 largest programs by value

Program	Purpose (service / compliance need)	Doc ref #
18 Dam instrumentation	Installing automated dam instrumentation to reduce workplace hazards and improve knowledge of real-time risks to the integrity of referrable structures.	RX097
17 Arc flash	Risk assessments and installation of arc flash mechanisms to high-risk electrical switchboards to address an intolerable risk to human safety – related to the switchboards and control renewal. Sunwater has been careful to avoid duplication of costs under this program.	RX096
20 Dam safety management program	Sunwater is required to operate dams in compliance with modern engineering design standards and safety requirements set out by the regulator. Tasks include ALARP screening and confirmatory studies, risk investigations and management plan reviews implementing CRA recommendations.	RX099
2 Meters	Sunwater has an ongoing program to replace existing customer meters when they fail. This business-as-usual program is designed to measure customers water use, whereas the Smart Meter Program (separately described) also allows Sunwater to better manage river flows to meet customer demand (and other benefits). Replacement of customer and system meters to ensure accurate billing data and responsible resource management.	RX082
19 Smart meters	Allows Sunwater and customers to access real time flow and take data to better manage river flows to meet customer demand, optimise losses and reduce staff kilometres travelled.	RX098
1 Switchboard and Control Renewal	Replacement of switchboards and controls to ensure Sunwater can continue to provide reliable and timely irrigation services to customers in a way that is safe for Sunwater’s employees, contractors, customers and the community.	RX081
5 Dam-Related Works	This program is to renew and replace existing dam related assets.	RX085
7 Pump & Motor renewal	Replacement of pumps and motors to ensure Sunwater can transport bulk irrigation water from one place to the next, reliably and on time.	RX087
12 Civil and roads (inlet/outlet towers)	Construction or replacement of civil works and roads to ensure Sunwater assets are safe, accessible and do not pose risks to staff, customers or the community.	RX092
11. Channel re-lining and re-shaping	This program is to replace and renew linings of existing channels in accordance with standard assets lives.	RX091

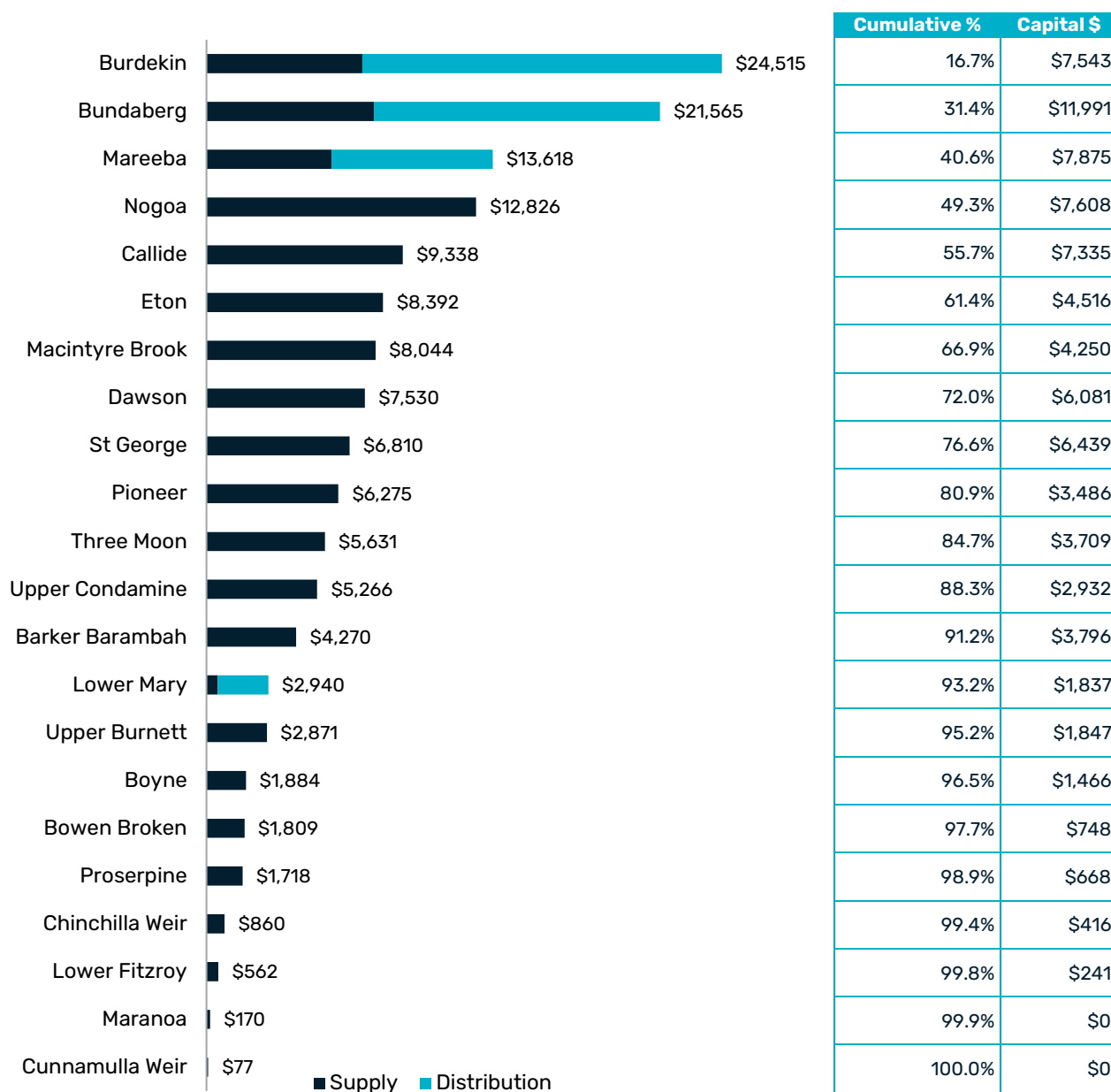
No expenditure is proposed within the period under the pipeline refurbishment / replacement program (Program 10).

5.4.2 Scheme level overview

Renewal expenditure is presented by scheme (including distribution services within schemes) on **Figure 28**.

It shows that the three largest schemes with distribution services (Burdekin, Bundaberg and Mareeba-Dimbulah) account for 40.6 per cent of total renewals expenditure. At the other end of the spectrum, seven schemes with less than \$2 million in proposed expenditure account for less than 5 per cent of Sunwater’s total renewals spend.

Figure 28 - Renewal and compliance expenditure (2025-26 to 2028-29) by service (\$'000s)



5.4.3 Major projects

All projects delivered by Sunwater are supported by levels of documentation suitable for the size and complexity of the project. Supporting its pricing proposal Sunwater has collated and included as part of its submission package, supporting documentation for the billing system renewal project as well as two significant projects in each scheme.

Scheme Summary documents (and accompanying presentation materials) identify major projects for the price path period.

As well as being the largest single project affecting the pricing period, the billing system renewal project is also Sunwater's only inter-scheme project. **Table 38** shows the build cost that have been apportioned to each in-scope scheme (for recovery via Part A charges) based on total scheme customers.

Table 38 - Allocation of build costs by scheme – billing system renewal

Scheme	Allocation breakdown		
	\$	%	Cumulative %
Bundaberg	8,856	21.6	21.6
Mareeba-Dimbulah	8,736	21.4	43.0
Nogoa Mackenzie	3,569	8.7	51.7
Burdekin Haughton	3,371	8.2	60.0
Eton	2,703	6.6	66.6
St George	1,502	3.7	70.2
Dawson Valley	1,407	3.4	73.7
Lower Mary River	1,399	3.4	77.1
Boyne River and Tarong	1,343	3.3	80.4
Barker Barambah	1,335	3.3	83.6
Upper Burnett	1,248	3.1	86.7
Callide Valley	1,081	2.6	89.3
Upper Condamine	779	1.9	91.2
Macintyre Brook	747	1.8	93.1
Three Moon Creek	731	1.8	94.9
Proserpine River	707	1.7	96.6
Bowen Broken Rivers	413	1.0	97.6
Chinchilla Weir	310	0.8	98.3
Lower Fitzroy	246	0.6	99.0
Pioneer River	199	0.5	99.4
Cunnamulla	191	0.5	99.9
Maranoa River	40	0.1	100.0
Total¹	40,916	100	

*Note 1: This value is the capital cost inflated to 1 July 2025 when the project is due to be commissioned and is being applied to customer prices. The actual expected build cost is \$38.6 million as outlined in **Section 4.6.1***

5.5 Outside the price path (2029-30 to 2057-58)

Sunwater proposes to use a RAB-based approach to renewals expenditure recovery from the next price path period but acknowledges that this is a proposal for assessment and approval.

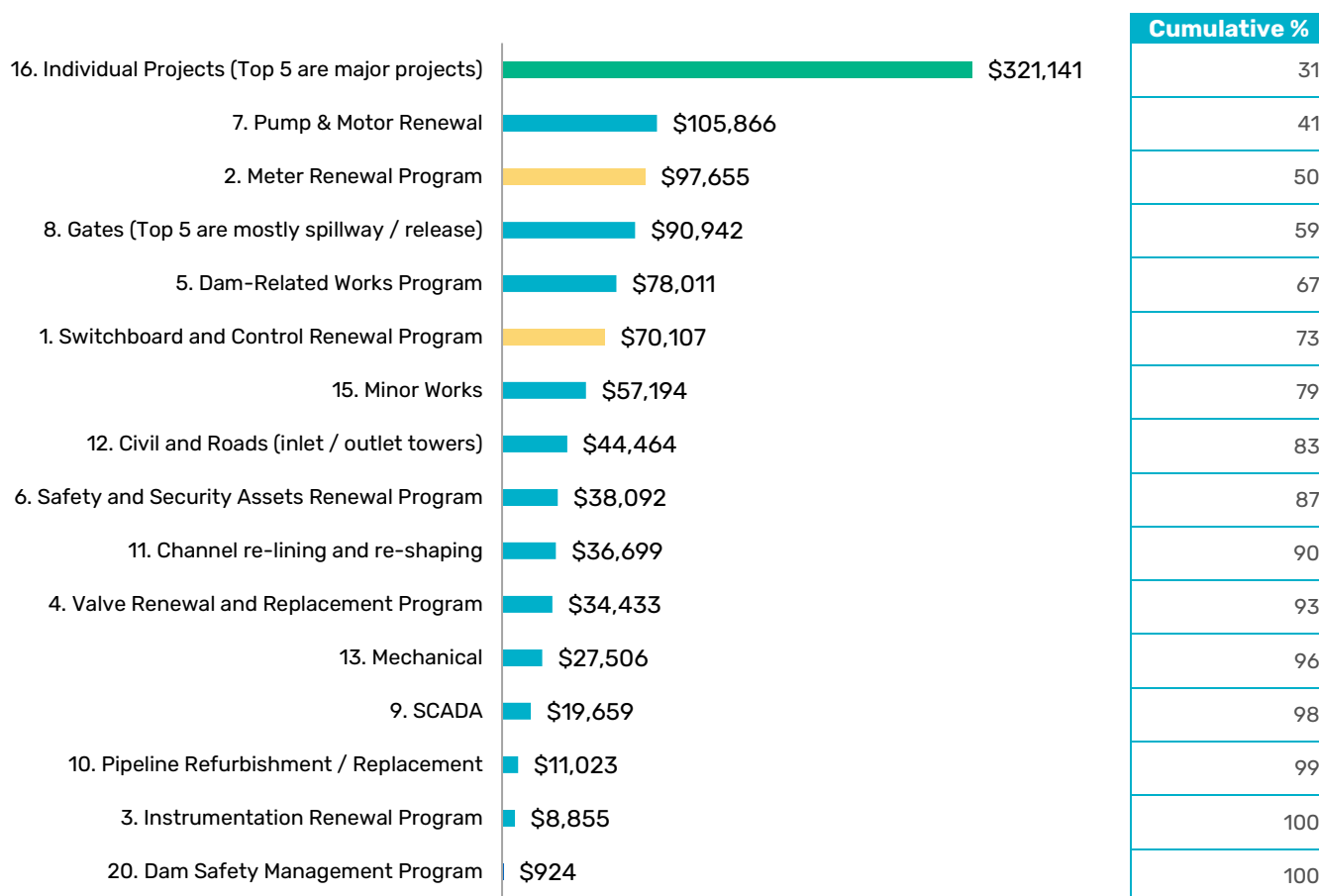
The balance of the necessary 33-year forecast for an annuity-based renewals expenditure recovery methodology is presented below. Scheme Summary documents identify year-to-year expenditure across this period identifying major programs and projects relevant to each scheme.

Scheme Summary documents (and accompanying presentation materials) identify major projects for the price path period as well as the year-to-year forecast.

5.5.1 Programs

The balance of Sunwater's proposed adjusted renewals expenditure for the remainder the 33-year forecast required is presented by program in **Figure 29**. The cumulative forecast of \$1.04 billion between 2029-30 and 2057-58 is likely a significant under-estimate of the actual expenditure required across this period, however the challenges of developing a robust long-term forecast are one of the primary reasons for the proposed shift to a RAB-based approach.

Figure 29 - Renewal and compliance expenditure (2029-30 to 2057-58) (\$'000s)



This long-term forecast does not currently include renewal of major support systems like the billing system.

Scheme Summary documents identify major projects for the price path period.

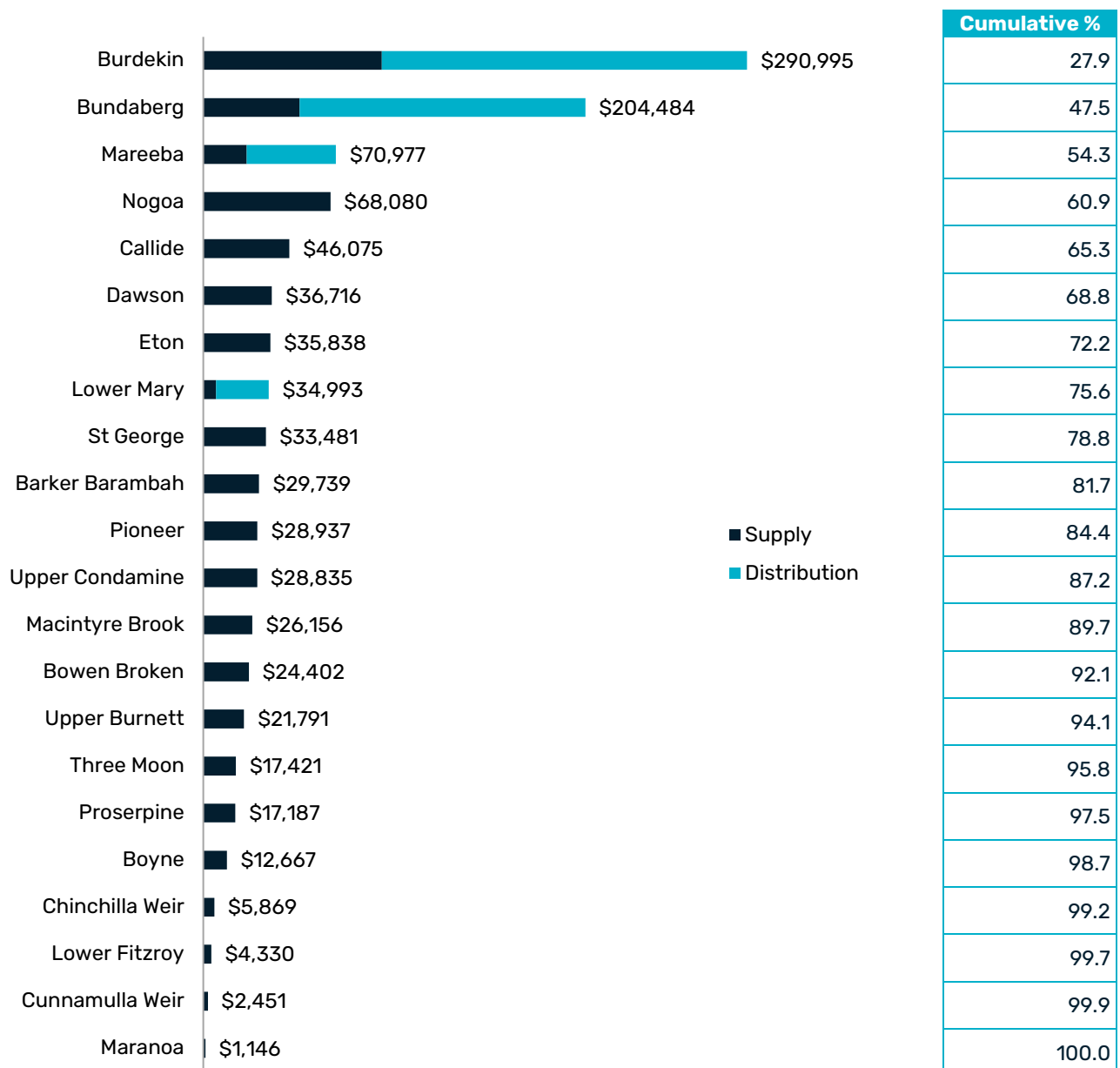
5.5.2 Scheme level overview

Renewal expenditure is presented by scheme (including distribution services within schemes) on **Figure 30**.

It shows that the two largest schemes with distribution services (Burdekin Haughton, Bundaberg and Mareeba-Dimbulah) schemes account for 47.5 per cent of total renewals expenditure. At the other end of the spectrum, seven schemes with less than \$18 million in proposed expenditure account for less than six per cent of total renewals spend across the period.

Year-on-year expenditure profiles are presented in the **Scheme Summaries**.

Figure 30 - Renewal and compliance expenditure (2029-30 to 2057-58) by service (\$'000s)



6 Revenue requirement

This section describes Sunwater's overall and scheme-level revenue requirement setting out:

- *The RAB-based building block methodology we propose to apply to the establishment of a revenue requirement*
- *An alternative annuity-based building block methodology to apply in the event that Sunwater's preferred approach is not supported*
- *Proposed transfers of costs to better align the final revenue requirement with the service provided within a scheme (and ring fencing of costs recovered elsewhere)*
- *Key regulatory inputs and approaches required to calculate building block elements*
- *A final proposed (and alternate) revenue requirement*

6.1 Building block approach

Consistent with the QCA's previous price reviews, Sunwater has adopted a 'building block' approach to calculating the revenue it requires to provide irrigation services over the next price path period, meeting legal and regulatory obligations¹⁹ and service levels agreed with customers.²⁰

The relevant costs to be included under the building block approach for Sunwater are those allowable under the Referral²¹ and contribute to the development of a lower bound price. Excluded from allowable costs under the referral are allowances for capital expenditure incurred before 1 July 2000 to build existing assets and capital expenditure on dam safety.

The building block approach was used by the QCA in Sunwater's previous price reviews²² and is widely used by Australian regulators in water, transport and energy sectors.

As introduced in **Section 2.2.5** Sunwater worked with customers on a proposal to change the building block methodology it applies to the recovery of renewals expenditure. Following consideration of feedback received and the relative merits of both approaches, Sunwater is proposing to adopt a RAB-based building block approach.

Table 39 compares the key building block elements for a RAB-based approach and an annuity-based approach. Our approach to the calculation of an annuity contribution (under the alternate annuity approach) reflects the approach adopted at the 2020 Review.

Sunwater's proposed approaches to the calculation of the capital returns (return on, and return of) and tax allowance building blocks are presented in **Section 6.1.1** and **Section 6.3**.

¹⁹ Including regulatory and legislative obligations, such as those relating to water planning and dam safety, imposed by government and other regulatory bodies.

²⁰ Including customer service standards.

²¹ [referral-notice.pdf \(qca.org.au\)](#)

²² <http://www.qca.org.au/project/rural-water/>

Table 39 – Building block elements under proposed and alternate methodologies

Allowable costs	Discussion	Applicable building blocks	
		Proposed (RAB)	Alternate (Annuity)
<i>Core building blocks</i>			
Opex (Section 4)	Opex is recovered in the year in which it is incurred under either approach.	Opex allowance	Opex allowance
Renewals expenditure (Section 5)	Sunwater’s renewals expenditure includes both opex and capital expenditure. Under a RAB the opex is added to the opex allowance and recovered in the year in which it is incurred. A 33-year forecast is required to set annuity contributions for a 4-year price path, while only a 4-year forecast is required to set the RAB building block components for the same period.	Opex allowance (renewals opex)	Annuity contribution
		Return on capital	
		Return of capital (depreciation)	
Taxes or tax equivalent payments	Under an annuity renewals expenditure is treated as ‘operational’—that is, deductible for tax purposes. As a result, there is no tax liability associated with renewing existing assets.	Tax allowance	<i>Not applicable</i>
Revenue earned from other fees and charges	Revenue Sunwater recovers from other charges such as drainage charges and access charges is deducted from the revenue requirement. This ensures that Sunwater does not over-recover (or recover twice) revenue across all its tariffs, fees and charges.	Revenue offset	Revenue offset
<i>Discussion provided for completeness</i>			
Working capital	Working capital allowances form part of some regulatory building block frameworks where a business may suffer economic loss arising from timing difference between receivables and payables.	<i>Not proposed</i>	<i>Not proposed</i>

6.1.1 Inflation adjustments

The return investors receive on their assets should reflect the risks of their investment. These risks include the prospect of inflation eroding the investor’s purchasing power. The inclusion of an allowance for expected inflation provides compensation for this risk.

There are three main ways to provide compensation for inflation:

- *Real rate of return approach* – This approach combines a real rate of return (which is lower than a nominal rate of return by the degree of expected inflation) with an indexed RAB. Compensation for inflation is provided only through the indexation of the RAB.

- *AER approach* – This approach combines a nominal rate of return with an indexed RAB, and a negative revenue adjustment. Because compensation for inflation is provided through both the RAB and rate of return, the negative revenue adjustment is needed to prevent double compensation for inflation.
- *Nominal rate of return approach* – This approach combines a nominal rate of return with an unindexed RAB. Compensation for inflation is provided only through the rate of return.

Consistent with QCA guidance (and the 2020 Review approach for dam improvement program capital), the proposed approach combines a nominal rate of return with an indexed RAB, and a negative revenue adjustment – the *AER approach*. Compensation for inflation is provided through both the RAB and rate of return, with the negative revenue adjustment needed to prevent double compensation for inflation.²³ We make this revenue adjustment through the depreciation component of our calculations.

Our approach produces an identical revenue outcome to the real rate of return approach.

6.2 Capital returns

Calculation of the capital returns building blocks for the price path period require the following inputs:

1. Proposed capital expenditure (refer to **Section 1.1**)
2. Opening RAB balance

3. Weighted average cost of capital
4. Asset life assumptions

Under a RAB approach, Sunwater’s revenue comprises an annual return on existing and new renewal capital expenditures and recovery of prudent and efficient opex in the year incurred, through prices. The capital return earned under the RAB approach is calculated using the WACC, as shown in **Figure 31**.

The following sections explain in detail the individual elements of Sunwater’s proposed RAB approach.

6.2.1 Opening RAB balances

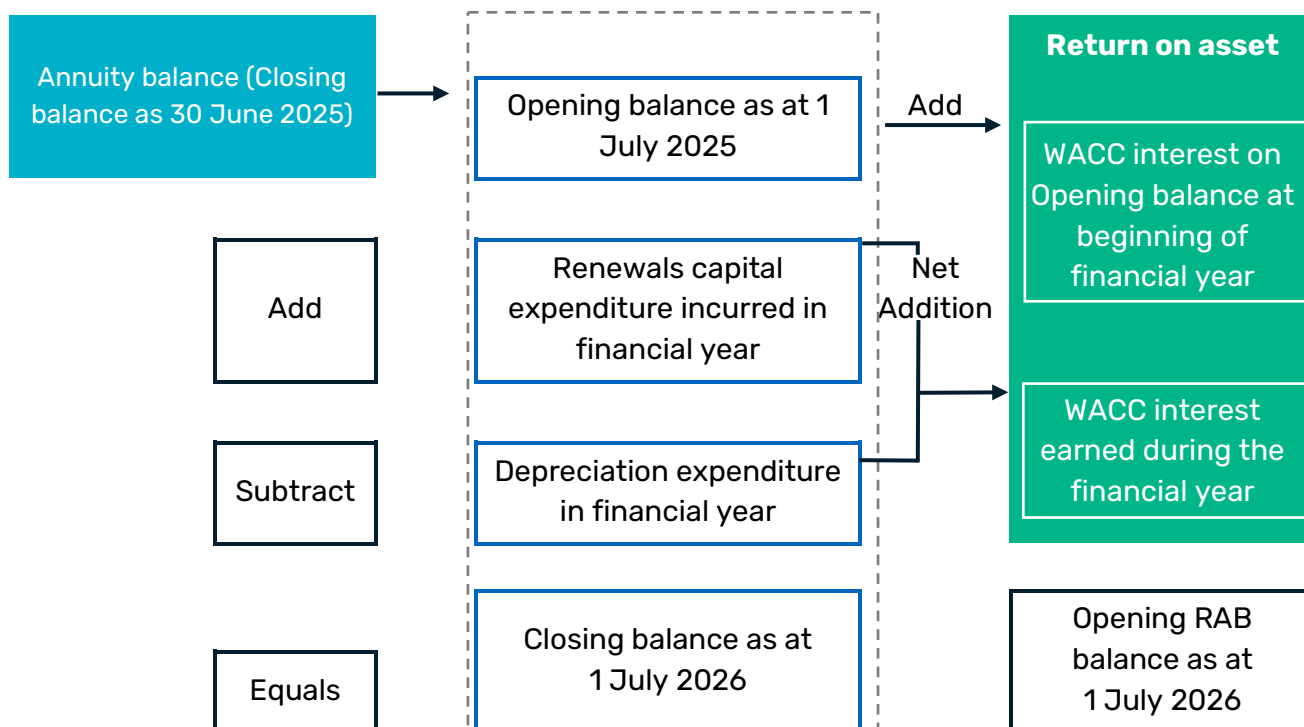
An important element of Sunwater’s proposed RAB approach is the establishment of the opening RAB value in the first year (2025–26) of the price path period. The approach Sunwater has adopted is in line with the discussion provided by the QCA in its Final Report to the 2020 Review and is based on the expected annuity balance at the end of the current price path period (30 June 2025).

Most annuity balances are forecast to be negative – reflecting Sunwater having invested more to date than customers have paid via the annuity contribution component of their prices, while five are forecast to be positive – reflecting Sunwater receiving more from customers, via prices, than it has spent to date on renewals activities.

We engaged with customers (and our consultative committee) around the starting proposal that positive balances would be returned to customers via a revenue adjustment applied evenly across the four-year price path, while negative balances would be converted to an opening (1 July 2025) RAB balance.

²³ QCA 2023, Guideline for pricing proposals, Rural irrigation price review 2025–29, March, Page 23

Figure 31 - Illustrative representation of the RAB-based funding methodology



Direct customer feedback on this element of the proposal was limited but was supportive of the notion of returning positive balances and respectful of the need to recover funds already spent on behalf of customers. There was a general desire that the opening RAB balance not be recovered too quickly, which has informed the setting of our assumed life for the opening balance (**Section 6.2.1**).

Opening RAB balances and the annuity roll-forward process used to calculate them are presented in the Scheme Summaries and were presented to customers as part of our Stage 3 engagement as shown in **Figure 32**. Sunwater applied a standard regulatory roll-forward approach consistent with the 2020 Review. Closing balance (2018-19) values were taken from the 2020 irrigation pricing review.

Opening RAB balances by scheme and service are presented in Error! Reference source not found..

Figure 32 - Example of roll-forward calculation presentation from Eton Scheme Summary

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	Actual	Actual	Actual	Actual	Actual	Forecast	Forecast
Opening balance		-\$1,172.6	-\$959.1	-\$573.9	-\$489.1	-\$249.7	-\$595.6
Expenditure		-\$406.2	-\$328.1	-\$651.6	-\$515.2	-\$1,126.7	-\$1,408.0
Annuity Contribution		\$670.9	\$755.2	\$761.5	\$776.1	\$791.6	\$809.4
Interest		-\$51.3	-\$41.9	-\$25.1	-\$21.4	-\$10.9	-\$26.0
Closing balance¹	-\$1,172.6	-\$959.1	-\$573.9	-\$489.1	-\$249.7	-\$595.6	-\$1,220.3

Table 40 - Proposed Opening RAB values (\$'000) by water supply Schemes

Scheme	Service	1 July 2025 balance	Funds to be returned
Mareeba-Dimbulah	Water supply	141.9	
	<i>Distribution</i>	0.0	13,111.3
Bundaberg	Water supply	17,210.3	
	<i>Distribution</i>	11,113.9	
Burdekin Haughton	Water supply	0.0	4,588.9
	<i>Distribution</i>	0.0	4,012.0
Nogoa Mackenzie	Water supply	6,871.8	
Eton	Water supply	1,220.3	
St George	Water supply	6,593.3	
Lower Mary	Water supply	2,312.6	
	<i>Distribution</i>	4,869.9	
Barker Barambah	Water supply	4,030.7	
Bowen Broken Rivers	Water supply	3,984.4	
Boyne River and Tarong	Water supply	20,569.0	
Callide	Water supply	24,789.8	
Chinchilla Weir	Water supply	1,821.8	
Cunnamulla	Water supply	726.4	
Dawson Valley	Water supply	0.0	3,094.1
Lower Fitzroy	Water supply	96.6	
Macintyre Brook	Water supply	18,104.1	
Maranoa	Water supply	0.0	15.4
Pioneer	Water supply	6,038.8	
Proserpine	Water supply	519.5	
Three Moon Creek	Water supply	2,433.4	
Upper Burnett	Water supply	2,926.3	
Upper Condamine	Water supply	674.5	
Total		137,050.0	24,821.6

6.2.2 Weighted average cost of capital (WACC)

The weighted average cost of capital (WACC) is an important element of both a RAB approach and a renewals annuity approach. Where work is done by a business *prior* to being recovered from customers via prices, it must borrow to fund this expenditure. This is fundamental to the RAB methodology and important to the annuity methodology where negative annuity balances exist.

The WACC is a measure of what it would cost a “typical”, or “benchmark” business to borrow funds from the market. It assumes a benchmark business would source funds from a mixture of debt and equity, creating a weighted average of returns required from these sources.

Sunwater engaged a consultant to inform its proposed WACC for the next price path²⁴. This estimate was developed in accordance with the approach set out in the QCA’s *Rate of return review* (Version 2 July 2023) and took into consideration recent regulatory decisions made by the QCA and other jurisdictional regulators in Australia.

Sunwater believes that its proposed WACC for the next price path period is consistent with the concept of what a ‘reasonable’ overall rate of return is for Sunwater given its exposure to regulatory and commercial risks within its regulatory framework and the market within which it operates.

Table 41 sets out Sunwater’s proposed post-tax WACC and its associated inputs.

The consultant’s report supporting Sunwater’s proposal WACC for the price path period is presented in **Appendix G**.

Table 41 – Sunwater’s proposed Nominal WACC

Parameter	Proposal
End date	1-Sep-23
Risk-free rate	4.27%
Market risk premium	6.50%
Asset beta	0.393
Equity beta	0.725
Cost of equity	8.98%
Credit rating	BBB
Debt margin	0.1%
Cost of debt	4.95%
Capital structure	60%
Gamma	0.484
Nominal post-tax WACC	6.56%

6.2.3 Asset lives and regulatory depreciation

The treatment of depreciation is an important element of Sunwater’s proposed RAB approach. Depreciation influences the return earned on renewal assets as regulatory depreciation is deducted from the RAB each year to ensure that a return on the underlying renewals assets is commensurate with its value over time. Depreciation is also one of the allowances under the building block cost methodology underlying the calculation of Sunwater’s revenue requirement.

²⁴ KBR 2023, Weighted Average Cost of Capital Sunwater, prepared for Sunwater, 7 September 2023.

Consistent with the guidance provided by the QCA²⁵, Sunwater propose to adopt a straight-line depreciation methodology for calculating the annual depreciation expense under the RAB approach.

Sunwater's depreciation capital return includes a component for the RAB opening balance as well as components for any new capital commissioned during the price path period. Both of these allowances require assumptions around the rate at which the capital should be recovered.

- Consistent with the dam improvement program approach adopted at the 2020 Review (and standard regulatory practice) Sunwater proposes to adopt a straight-line approach to depreciation.
- For the opening RAB balances Sunwater has adopted a 75-year asset life. This pragmatic approach has been applied across each scheme considering:
 - Shifting from an annuity to a RAB approach requires consideration of Sunwater's ability to carry its cumulative annuity debt (\$137.0 million at 1 July 2025)
 - A shorter asset life pushes up prices relative to a longer one
 - While the renewals annuity approach assumes a theoretical maintenance of the scheme in perpetuity, in practical terms the maximum life of a scheme is considered to be 150 years consistent with the QCA's consideration of dam improvement program expenditure at the 2020 Review

- Undertaking an historical review of individual component assets (and determining the extent to which they are represented in the annuity closing balance is considered prohibitively complex and time consuming
 - The majority of Sunwater's capitalisable assets have lives between 20 and 60 years (**Table 42**) – the weighted average life of assets expected to be capitalised in the next 12 years is less than 25 years
- New capital is depreciated using a standard asset life for each asset type - standard asset lives for our most common asset types are shown in **Table 42** (civil), **Table 43** (mechanical) and **Table 44** (electrical and meters).

For simplicity of modelling across multiple schemes Sunwater has applied a simple weighted average useful life for the purposes of calculating straight-line depreciation allowances in the next price path period. This approach is appropriate given the resource costs of a more detailed bottom-up approach is not expected to result in a materially different depreciation outcome over the useful life of the assets.

6.3 Tax allowance

Sunwater and other Government-owned businesses are required to make tax equivalent payments as participants in the National Tax Equivalent Regime, consistent with Queensland Government's obligations under the *Competition Principles Agreement*.²⁶ Tax liabilities, including tax equivalent payment liabilities, are legitimate costs that should be recovered through regulated charges.

²⁵ QCA 2023, Guideline for pricing proposals, Rural irrigation price review 2025–29, March, Page 23

²⁶ Council of Australian Governments, Competition Principles Agreement, 11 April 1995 (as amended to 13 April

2007), cl. 3. To meet competitive neutrality principles, the regime notionally applies the tax laws to government-owned businesses as though they were subject to federal income tax (see Australian Taxation Office, Manual for the National Tax Equivalent Regime, January 2022).

Table 42 - Standard asset lives – civil assets (predominant asset types only)

Asset type (Sub-type)	Standard life (years)	By material type						
		T	P	F/S	R	M	C	E
Access ways	50-150	50				60	80	150
Balancing storage	30-150			30	50	60	80	150
Barrage	100							
Bridges	50-80	50				60	80	
Buildings	50-80	50					80	
Channels/Drains	80-150			20			80	150
Channel structure	30	Footbridges / Walkways / Trash Racks						
	80	Culverts / Access Crossings / Control Structures / Siphons						
Cone dissipator	100							
Grids / Weed deflectors	50-60							
Pipelines	20-80		50	20		60 ^A	80 ^B	
Valve / flow meter pit	80							
Water tanks	30-80		30	30		60	80	
Weirs	50-125	50				75 ^C	125	100

Note A includes mild steel / asbestos cement; Note B includes ductile iron; Note C includes sheet pile

T Timber F/S Fibreglass / synthetic R Rockfill M Metal C Concrete E Earth
P Plastic, including polyethylene, high density polyethylene and related materials

Table 43 - Standard asset lives – mechanical assets (predominant asset types only)

Asset type (Sub-type)		Standard life (years)
Cranes (including winches)		30
Crane Lifts		50
Filters / strainers / air conditioners		10
Wire ropes / gearboxes / couplings, brakes		25
Hydraulic systems / pressure vessels / cooling and dewatering systems		60
Gate and sluice		40
Gates (regulating – channel, knife)		50
Gates (headworks)		100
Valves	Pressure reducing, relieve, non-return, needle	30
	Butterfly	80
Pumps	Vacuum	20
	Chemical, submersible, small centrifugal	30
	Large centrifugal, hydraulic and concrete volute	60
Motors (electrical / hydraulic)		60
Motors (diesel)		30

Table 44 - Standard asset lives – electrical assets and meters (predominant asset types only)

Asset type (Sub-type)		Standard life (years)
Actuators / Alarms / Antenna / Aux. Power / Battery Chargers / Radios / Data Loggers /Sensors		15
UPS / Load Banks / Motor Starters / Interface & Control Units		20
Circuit Breakers / Capacitors / Power Supplies		30
Cables & Switchboards (HV & LV)		35
Cable trays / ways		60
Cable pits		80
Substation / Power Poles / Lightning Arrestors		60
Meters	Propellor Actuated / Paddle Wheel / Ultrasonic / Electromagnetic	20
	Dethridge wheel / Differential Pressure / Gate	50
	Meter structure / unmetered outlet	60

As set out in **Table 39** the QCA did not include a tax allowance in Sunwater’s revenue requirement under an annuity approach to the recovery of renewals expenditure because this expenditure is considered ‘operational’ rather than capital and is deductible for tax purposes. As a result, there is no tax liability associated with renewing existing assets under this approach.

As part of its proposed RAB-based building block methodology, Sunwater proposes to include an annual tax allowance building block. The QCA acknowledged a tax allowance may be applicable if a RAB approach is used in deriving the capital expenditure allowance.²⁷

Sunwater’s proposed approach to forecast tax allowances in the next price path period is based on a standard tax calculation taking into account forecasts of taxable revenue, tax expenses (such as depreciation, interest, opex) and the statutory corporate income tax rate of 30 per cent.

Table 45 below shows how Sunwater’s proposed tax allowances have been calculated for the price path period. Sunwater believes that these proposed allowances are consistent with the efficient costs of a firm meeting its tax obligations, based on the proposed revenue and costs.

Under current tax rules, Sunwater is considered an irrigation water provider and applies subdivision 40-F of the *Income Tax Assessment Act 1997* and fully deducts all capital costs for tax purposes in the year in which the capital cost is incurred.

This applies to capital expenditure during the price path only as the expenditure which is embodied in the opening RAB balance was not considered capital under the annuity methodology.

²⁷ QCA, Guideline for pricing proposals, Rural irrigation price review 2025-29, March 2023, page 27

Table 45 - Tax Allowance worked example using illustrative data ('000s)

Inputs, profit and loss, and taxable income calculations		2025-26	2026-27	2027-28	2028-29
		(\$)	(\$)	(\$)	(\$)
Inputs					
Opex		1,688.7	1,667.0	1,738.6	2,064.8
RAB RoA		2,278.9	2,446.7	2,603.1	2,695.0
Debt for interest calculations					
<i>RAB opening balance</i>	(A)	46,224.0	48,471.9	49,275.4	50,640.0
<i>Capex (new)</i>	(B)	1,518.3	144.2	792.9	354.4
<i>Funded by debt</i>	$C = (A+B)*60\%$	28,645.4	29,169.6	30,041.0	30,596.7
Profit and loss					
Income					
Customer revenue (excluding tax allowance)		3,967.6	4,113.7	4,341.7	4,759.8
Government grants / customer contributions		0	0	0	0
<i>Total income</i>		3,967.6	4,113.7	4,341.7	4,759.8
Expenses					
Operating & maintenance expenditure		-1,688.7	-1,667.0	-1,738.6	-2,064.8
Tax depreciation		-1,518.3	-144.2	-792.9	-354.4
Interest		-1,394.4	-1,441.0	-1,474.4	-1,508.4
<i>Total expenses</i>		-4,601.4	-3,252.2	-4,005.9	-3,927.6
Taxable income and tax payable					
Taxable income (before deduction for prior losses)		-633.8	861.5	335.8	832.2
Deduction – tax losses brought forward		0.0	-633.8	0.0	0.0
<i>Taxable income (excluding endogenous tax)</i>		-633.8	227.8	335.8	832.2
Tax payable (effective tax rate 18.3%)		0.0	41.7	61.5	152.4
<i>Assumes statutory tax rate of 30% and gamma of 0.484</i>					

The scheme in the illustrative example is forecast to have a tax allowance due to having a relatively high opening RAB value, which results in the return on assets under the RAB funding method being the largest component of the annual revenue requirement.

Unlike other revenue components, such as opex that are tax neutral, the return on assets only impacts taxable income. This results in the hypothetical scheme forecast to incur income tax due to the absence of offsetting expenses in the form of tax losses (through depreciation) brought forward and new capital expenditures.

Using the calculation approach described above, Sunwater is forecasting that none of its schemes will have a tax allowance building block under the RAB funding method in the next price path period.

6.4 Revenue transfers and adjustments

Sunwater makes a number of revenue transfers and adjustments to ensure that prices within a scheme reflect the user-pays principle and the operational rules within each scheme.

6.4.1 Distribution loss transfers

Distribution losses are discussed in **Section 3.4.2**, including establishing that each loss entitlement is allocated an equal share of costs associated with the water supply service, with those costs intended to be borne by users of those losses – namely, customers using the distribution service within a scheme.

The only schemes with distribution losses relevant to the setting of irrigation prices are those with associated distribution services – Bundaberg, Burdekin Haughton, Lower Mary and Mareeba-Dimbulah. Actual (and pricing adjusted) distribution losses that exist in each scheme are set out in the **Scheme Summaries**.

The **Scheme Summaries** also contain a detailed flow chart showing how revenue building blocks (at their lowest sub-component level) flow through to prices, including the treatment of revenue assigned to loss entitlements.

Distribution loss revenue “removed” from the water supply service and the calculation of Part A and Part B prices and is “added” to the revenue requirement for the distribution service. In this way customers using the distribution service and benefiting from the scheme’s distribution loss entitlements, pay the cost of these entitlements through their Part C and Part D charges.

Sunwater is not proposing any change to the way in which distribution loss revenue is managed.

6.4.2 Non-loss transfers

Revenue transfers (or exclusions) are also made in the three schemes set out in **Table 46**. In Bundaberg and Lower Mary this reflects assets that serve a dual water supply and distribution service purpose, while in Mareeba-Dimbulah a portion of opex is allocated to the Barron Falls Hydroelectric Power Station.

6.4.3 Revenue offsets

Sunwater also recovers revenue from miscellaneous fees and charges, notably access and drainage charges. These account for less than two per cent of Sunwater’s total (pre revenue adjustments) revenue requirement.

Revenue from these charges is derived from services that are wholly or significantly enabled by Sunwater’s core services. Consistent with good regulatory practice revenue earned from these sources is treated as a revenue offset and is deducted from the overall revenue requirement for each scheme and sub-service.

Table 46 - Non-loss revenue transfers by scheme ('000s)

Scheme	Basis of transfer	Transfer
Bundaberg	<p>The Gin Gin main channel primarily supports the Bundaberg distribution service. It also performs (via provision in the water plan) a water supply function allowing Sunwater to transfer releases from Fred Haigh Dam via the Gin Gin main channel into Sheepstation Creek to supplement entitlements that access a water supply service from the Burnett River.</p> <p>At the 2020 Review a portion of the total revenue requirement (opex and annuity contribution building blocks) derived from these assets was transferred from the distribution service to the water supply service.</p> <p>Sunwater proposed (and the QCA accepted) a cost allocation of five per cent since there had been minimal releases since 2012–13. On the basis that this situation has not materially changed since the 2020 Review Sunwater has adopted a five percent allocation for this review.</p>	\$233.7
Lower Mary	<p>The Owanyilla pump station and main channel primarily support the Lower Mary distribution service, however they also perform a water supply function, as they supplement the Tinana Barrage and Teddington Weir.</p> <p>At the 2020 Review a portion of the total revenue requirement (opex and annuity contribution building blocks) derived from these assets was transferred from the distribution service to the water supply service (where it is applied only to the Tinana and Teddington tariff group).</p> <p>Sunwater has adopted the same approach for the development of this proposal and calculated the transfer amount as a function of:</p> <ul style="list-style-type: none"> • 53 per cent of the water pumped by the Owanyilla pump station supports Tinana Barrage and Teddington Weir customers (down from 59 per cent at the 2020 Review). • 21 per cent of non-electricity opex allocated to the Lower Mary distribution service are attributable to the Owanyilla pump station (36 per cent at the 2020 Review). • 41 per cent of electricity costs allocated to the Lower Mary distribution service are attributable to the Owanyilla pump station • Renewals revenue (both capital returns and renewals opex) has been transferred using the 53 per cent volumetric factor. 	\$1,539.9
Mareeba-Dimbulah	<p>The Tinaroo Falls Dam releases (unallocated) water to the Barron Falls Hydroelectric Power Station. While environmental releases to meet river flow requirements can be used to generate hydro-electricity, additional releases for hydro purposes may be made.</p> <p>At the 2020 Review the QCA confirmed that the HUF incorporates expected volumes to be released to the power station. It reiterated that a portion opex that is not allocated via the HUF should be allocated to the power station. The basis of this cost allocation was the most recent six years of actual annual water releases to the Barron Falls Hydroelectric Power Station. Sunwater proposes to adopt the same approach in relation to the Barron Falls Hydro power station for the price path period extending the averaging period to include more recent data and resulting in a transfer of 24 per cent of relevant operating costs.</p>	\$734.6

Sunwater notes that the QCA’s forecast revenue offset in the current price path period, which was based on an inflation-based escalation of revenue from the prior price path period, is not materially different from the actual revenue earned by Sunwater from miscellaneous fees and charges, adjusting for inflation.

Sunwater proposes to continue to maintain in real terms – applying a general inflation escalation – the existing allowance for miscellaneous revenue offsets in the price path period, as shown in **Table 47** below.

6.4.4 QCA fees

Irrigation customers cover the cost of the QCA’s review activities via their prices. This is opex incurred by Sunwater but these costs do not form part of the scheme level revenue requirement as they are recovered only from irrigation customer entitlements.

The QCA has indicated that Sunwater’s share of its fees (capped by the Notice of Referral) for the 2025-26 to 2028-29 irrigation price review cannot exceed \$3.35 million. Sunwater has adopted this value for price modelling and apportioned it to each scheme on the basis of irrigation entitlements as shown in **Table 48**.

Sunwater has included this amount in the pricing model adjusted for the time value of money consistent with the approach applied in the 2020 Review. These non-controllable fees are not included in the base year and are not subject to the efficiency factor.

The QCA’s fees have been applied as a revenue adjustment in the pricing model in line with the approach taken for the 2020 Review.

6.5 Proposed (RAB) revenue requirement

Sunwater’s proposed revenue requirement is set out in **Table 49**. This table replicates the scheme level revenue requirement tables published in each of our Scheme Summary documents and shared with irrigation customers as part of our Stage 3 engagement activities. It is based on a RAB methodology for the recovery of renewals expenditure and includes the upper limit of the QCA’s fees for the conduct of this review.

Table 47 - Forecast annual revenue offsets 2025-26 to 2028-29 – Nominal – \$ 000s

Type	Scheme	2025-26	2026-27	2027-28	2028-29
Drainage services	Burdekin Haughton distribution	-929	-956	-982	-1,007
Access charges	Mareeba-Dimbulah	-700	-720	-740	-758
Termination fees	Multiple	-105	-108	-111	-114
Land leases	Multiple	-51	-52	-54	-55
Other fees and charges	Multiple	-30	-31	-32	-33
Drainage diversion charges	Burdekin Haughton distribution Nogoa	-4	-4	-4	-4
Eton Risk A tariff revenue	Eton	-2	-2	-2	-2
Total		-1,821	-1,873	-1,925	-1,973

Note: Other fees and charges includes expected revenue from Eton Risk priority charges

Table 48 - QCA fees apportioned to scheme level for recovery via Part A irrigation tariffs

Scheme	Total irrigation entitlements	Irrigation entitlements as a percentage total	Fee apportioned to scheme
	(ML)	(%)	(\$'000s)
Barker Barambah	31,277	1.9	74.3
Bowen Broken	5,676	0.3	13.5
Boyne River	9,134	0.6	21.7
Bundaberg	185,478	11.2	440.4
Burdekin Haughton	646,581	39.1	1,535.4
Callide	13,437	0.8	31.9
Chinchilla	2,533	0.2	6.0
Cunnamulla	2,412	0.1	5.7
Dawson Valley	54,534	3.3	129.5
Eton	61,512	3.7	146.1
Lower Fitzroy	3,101	0.2	7.4
Lower Mary River	22,577	1.4	53.6
Macintyre Brook	17,902	1.1	42.5
Maranoa River	800	0.0	1.9
Mareeba-Dimbulah	162,347	9.8	385.5
Nogoa Mackenzie	192,362	11.6	456.8
Pioneer River	47,390	2.9	112.5
Proserpine	40,817	2.5	96.9
St George	81,334	4.9	193.1
Three Moon Creek	14,239	0.9	33.8
Upper Burnett	27,062	1.6	64.3
Upper Condamine	30,362	1.8	72.1
Total			3,924.9

Table 49 – Proposed revenue requirement – RAB-based approach (\$'000s)

Building block (Units)	2025-26	2026-27	2027-28	2028-29	Aggregate	
	(\$)	(\$)	(\$)	(\$)	(\$)	(%)
Price path related expenditure						
Opex	83,427	85,254	87,051	88,793	344,525	74.8
Renewals opex	10,742	18,698	17,630	15,117	62,186	13.5
Capital returns	8,252	11,003	12,731	13,756	45,742	9.9
Tax allowance	0	0	0	0	0	0.0
<i>Sub-total</i>	<i>102,421</i>	<i>114,955</i>	<i>117,411</i>	<i>117,666</i>	<i>452,452</i>	<i>98.2</i>
Revenue adjustments						
Revenue offsets	-1,821	-1,873	-1,925	-1,973	-7,593	-1.6
Insurance review	2,832	2,913	2,993	3,068	11,805	2.6
QCA Fee ¹	941	967	994	1,022	3,925	0.9
<i>Sub-total</i>	<i>1,952</i>	<i>2,007</i>	<i>2,062</i>	<i>2,116</i>	<i>8,136</i>	<i>1.8</i>
Total	104,373	116,961	119,473	119,782	460,589	100.0
Annuity Positive Balance Returns	-6,391	-6,574	-6,755	-6,923	-26,642	
Total (net of returns)	97,982	110,388	112,719	112,858	433,947	

Note 1: The QCA fee is apportioned to each scheme on the basis of irrigation entitlements

Sunwater's proposed total revenue requirement for the four-year price path is \$433.9 million inclusive of the return of \$26.6 million to customers in schemes with a positive annuity balance.

For more information on the price impact of the RAB proposal at an individual scheme level, refer to the scheme summaries.

The pricing benefits (and costs) of the RAB approach to customers and the State (via the CSO payment they make to Sunwater on behalf of irrigation customers on a transition price) are discussed in **Section 7**.

6.6 Alternate (annuity) revenue requirement

Table 50 shows the proposed revenue requirement under an annuity-based recovery of renewals expenditure. The aggregate four-year revenue requirement under this approach is \$52 million higher than the proposed RAB approach (**Table 49**) inclusive of positive annuity balance returns.

Table 50 – Alternate (annuity based) revenue requirement (\$'000s)

Building block (Units)	2025-26	2026-27	2027-28	2028-29	Aggregate	
	(\$)	(\$)	(\$)	(\$)	(\$)	(%)
<i>Price path related expenditure</i>						
Opex	83,427	85,254	87,051	88,793	344,525	70.9
Annuity contribution	32,121	32,833	33,660	34,442	133,056	27.4
<i>Sub-total</i>	<i>115,548</i>	<i>118,087</i>	<i>120,711</i>	<i>123,235</i>	<i>477,581</i>	<i>98.3</i>
<i>Revenue adjustments</i>						
Revenue offsets	-1,821	-1,873	-1,925	-1,973	-7,593	-1.6
Insurance review	2,832	2,913	2,993	3,068	11,805	2.4
QCA Fee ¹	941	967	994	1,022	3,925	0.8
<i>Sub-total</i>	<i>1,952</i>	<i>2,007</i>	<i>2,062</i>	<i>2,116</i>	<i>8,137</i>	<i>1.7</i>
Total	117,500	120,093	122,773	125,351	485,717	100.0

Note 1: The QCA fee is apportioned to each scheme on the basis of irrigation entitlements

7 Proposed prices

This section describes the cost reflective, and transition prices that arise from Sunwater’s proposed costs and RAB-based building block approach.

It also sets out our approach to tariff reform generally and for the price path period.

Our online customer bill calculator has been available since late October to help irrigation customers understand the impact of our proposal on their business, enabling them to enter their actual entitlements and expected usage to see their annual bill under both the proposed (RAB) and alternate (annuity) building block methodologies.

7.1 Tariff reform

Clause 1 of the Referral includes the following statement in its definition of “Price Target”:

“Where new tariff groups are to be considered, the Authority is to avoid shifting costs from one customer or group of customers to another within a [scheme], in the absence of [Sunwater] having significant commercial interest in the change, and in the absence of agreement from customers”.

Sunwater acknowledges this policy direction / intent and has adopted the view that it is reasonable to apply this to reforms associated with pre-existing tariff groups. That is, changes to the sharing of costs between already existing tariff groups should not be pursued in the absence of a compelling commercial reason on Sunwater’s part, and customer support or acceptance of the need for a change.

This has implications for tariff groups identified by the QCA as being targets for future review / consideration at the 2020 Review and tariff groups where customer groups express a desire to revert to historical (pre-2020 Review) pricing practices / policies.

Since the conclusion of the 2020 Review Sunwater’s engagement with customers has not identified any customer-led desires for tariff reform that would meet this requirement. From a strategic and operational perspective our priorities have been managing the business through the COVID pandemic and continuing to deliver our purpose and strategic goals. Sunwater has not identified (with the exception of the Risk A priority tariff group in the Eton scheme) any tariff reforms for discussion with customers as part of this pricing proposal.

Issues raised by the QCA at the 2020 Review and customer groups during our ongoing engagement activities and Sunwater’s position at this review are set out in **Table 51**.

Table 51 - Tariff reform queries and Sunwater's position at this review

Scheme	Tariff group	Issue for discussion / consideration	Sunwater's position
Mareeba-Dimbulah	Access charge	The cost-reflectivity of the access charge has been questioned at previous price reviews. In 2024-25 the access charge is set at \$751.5/customer.	Sunwater does not propose any changes to the tariff groups or cost allocators for these tariff groups at this review. Sunwater's priorities in the Mareeba-Dimbulah scheme during the period have included the continuation of service during the COVID pandemic and the delivery of the Mareeba-Dimbulah Water Supply Scheme Efficiency Improvement Project and a reduction in distribution losses. This priority benefits all customers in the distribution service via downward pressure on prices. Customer engagement has not identified a strong desire for tariff reform, however Sunwater will continue to engage and may explore these issues further at a future review.
	Channel – outside a relift	The cost-reflectivity of the three-part declining block tariff for customers has been questioned at previous price reviews.	
	River Supplemented Streams & Walsh's River	The QCA recommended Sunwater explore the appropriate basis for the apportionment of costs to this tariff group and engage with customers if there are grounds for a change from the current 60 per cent allocator.	
Eton	Risk A	<p>Risk A priority entitlement holders taking water from the Mirani Diversion Channel have engaged with Sunwater over the reform of their tariff given past practice included reference to Part C and Part D price elements associated with Sunwater's former management of the distribution service in this scheme.</p> <p>Sunwater has identified a structural under-recovery that has arising from the practice of assigning fixed costs to the 504 ML in entitlements held by this group, the 100 per cent volumetric tariff applied, and the typically low usage in this group.</p>	<p>Sunwater's proposal addresses both customer concerns, and the structural under-recovery via:</p> <ul style="list-style-type: none"> the calculation of the Risk A tariff using only Part A and Part B components, and the continuation of a 100 per cent volumetric tariff removal of the 504 ML in Risk A priority entitlements from the price calculation process to address the structural under-recovery of fixed costs treatment of any revenue earned from Risk A priority entitlements as a revenue offset <p>This proposal formed part of our engagement material with Eton customers. No concerns have been raised.</p>

Scheme	Tariff group	Issue for discussion / consideration	Sunwater's position
Burdekin Haughton	Burdekin Channel Burdekin Channel – Glady's Lagoon (other than natural yield) Burdekin Channel – Giru Groundwater	<p>Customers in the Burdekin Channel – Giru Groundwater (Giru customers) continue to raise concerns with the alignment of their cost reflective price with the other two tariff groups in the distribution service.</p> <p>Giru customers are seeking a lower target price on the basis of one or both of lower cost to serve and lower standards of service.</p> <p>Reference continues to be made to matters that are no longer relevant under the current version of the water plan.</p>	<p>Sunwater does not propose any changes to the way in which costs are assigned and cost-reflective prices are calculated for the Burdekin Haughton distribution service.</p> <p>Sunwater's view is that current pricing practices reflect an appropriate pricing response to the policy settings contained in the <i>Water Plan (Burdekin Basin) 2007</i>. Sunwater does not have any information that would support the QCA rescinding the findings it made at the 2020 Review in relation to cost-to-serve and service levels.</p> <p>There is clear disagreement from customers in the Giru and non-Giru tariff groups around the nature of the issues and any proposed pricing solutions.</p> <p>Sunwater's preference is for the continuation of current cost allocation and pricing practices in this scheme, and notes that any holistic review of cost allocation would require considerable time (at least two years) given the competing customer positions, and may lead to unexpected outcomes including the creation of more than two effective tariff groups within the distribution service.</p>

7.2 Proposed tariff groups

Consistent with our approach to tariff reform set out in **Section 7.1**, Sunwater is not proposing any changes to existing tariff groups as part of this proposal. There are, however, a number of current tariff groups that exist for historical pricing practice / policy reasons. Where prices in these tariff groups have reached parity by 1 July 2025 there is no longer an ongoing basis for their continued differentiation. Sunwater proposes they be replaced by a single tariff group going forward. These are identified (along with current tariff groups) in **Table 52**.

For more information on the tariff groups that apply to each individual scheme, refer to the Scheme Summaries.

7.3 Price calculation process

Sunwater has adopted the 2020 Review approach to the calculation of cost reflective lower bound prices for the next price path period, as described in **Figure 33**.

This flowchart formed the basis for engagement material shared with customers throughout our engagement for this proposal. It was designed to help increase customer understanding of the process followed by Sunwater in calculating its proposed prices.

We have not changed allocation categories or percentages from the 2020 Review. In replacing the annuity contribution building block with renewals opex, capital returns, and taxation building blocks we have maintained the same approach to the allocation to tariffs. All of the revenue from these building blocks is allocated to fixed charges and all of it has been allocated via the HUF allocator.

Table 52 – Irrigation tariff groups by scheme and service

Scheme	Service	Tariff group	Review	
Mareeba-Dimbulah	Access charge	Access charge	x	
	Water supply	River Tinaroo/Barron	x	
	Distribution	River supplemented streams and Walsh River		x
		Mareeba-Dimbulah – relift		x
		Mareeba-Dimbulah – outside a relift	Up to 100ML	x
			100ML to 500ML	x
Over 500ML	x			
Bundaberg	Water supply	Bundaberg	x	
	Distribution	Bundaberg Channel	x	
Burdekin Haughton	Water supply	Burdekin Haughton	x	
	Distribution	Burdekin Channel	=	
		Burdekin Channel – Glady’s Lagoon		
		Burdekin Channel – Giru Groundwater	x	

Table 54 - Irrigation tariff groups by scheme and service (continued)

Scheme	Service	Tariff group	Review
Nogoa Mackenzie	Water supply	Nogoa Mackenzie (high priority LMS)	=
		Nogoa Mackenzie (high priority)	=
		Nogoa Mackenzie (medium priority LMS)	x
		Nogoa Mackenzie (medium priority)	x
Eton	Water supply	Eton (high A priority LMS)	x
		Eton (high B priority LMS)	=
		Eton (high B priority)	=
		Eton (Risk A priority) [new]	x
St George	Water supply	St George (high priority LMS)	x
		St George (medium priority LMS)	=
		St George (medium priority)	=
Lower Mary	Water supply	Mary Barrage	x
		Tinana & Teddington	x
	Distribution	Lower Mary Channel	x
Barker Barambah	Water supply	Barker Barambah - River	x
		Barker Barambah - Redgate relift	x
Bowen Broken Rivers	Water supply	Bowen Broken Rivers	x
Boyne River and Tarong	Water supply	Boyne River and Tarong	x
Callide	Water supply	Callide - Callide and Kroombit Creek	=
		Callide - Benefited Groundwater Area	=
Chinchilla Weir	Water supply	Chinchilla Weir	x
Cunnamulla	Water supply	Cunnamulla	x
Dawson Valley	Water supply	Dawson Valley - River (high priority LMS)	=
		Dawson Valley - River (high priority)	=
		Dawson Valley - River (medium priority LMS)	=
		Dawson Valley - River (medium priority)	=
Lower Fitzroy	Water supply	Lower Fitzroy	x
Macintyre Brook	Water supply	Macintyre Brook	x
Maranoa	Water supply	Maranoa River	x
Pioneer	Water supply	Pioneer River	x
Proserpine	Water supply	Proserpine River	=
		Proserpine River - Kelsey Creek Water Board	=
Three Moon Creek	Water supply	Three Moon Creek	
Upper Burnett	Water supply	Regulated Section of the Nogo/Burnett River	x
		John Goleby Weir	x
Upper Condamine	Water supply	Sandy Creek or Condamine River	x
		North Branch	x
		North Branch - Risk A	x

Figure 33 - Step-by-step process for calculating prices



7.4 Proposed prices (RAB methodology)

The price calculation process described above results in proposed smoothed lower bound cost reflective prices for each year of the next price path period. Transition prices have also been calculated according to the methodology set out in the Notice of Referral.

For schemes where an electricity cost pass-through is proposed Sunwater has included cost reflective indicative Part E and Part F charges in its Scheme Summary documents. During the design of the proposed mechanism were clear with customers that we did not believe the calculation of a quarter-by-quarter price could be implemented in conjunction with the Pricing Principles contained in Schedule 2 of the Notice of Referral. For this reason there is no transition price proposed for the electricity cost pass through tariffs.

Proposed cost reflective and transition prices are shown for each irrigation tariff group in the following tables. These prices are also contained in the Scheme Summaries and the online customer bill calculator.

In the tables below cost reflective (or target) prices are shown against a ☉ symbol, while transition prices are shown against a ↗ symbol.

For transparency and completeness, Sunwater has also produced prices for the next price path period under the alternate (annuity) building block methodology.

These are presented in **Appendix A**.

Table 53 - Proposed Cost Reflective Prices by tariff group – Mareeba-Dimbulah

Tariff group		Charge	2024-25	2025-26	2026-27	2027-28	2028-29	
Access charge (\$/connection)			751.50	772.31	793.70	815.67	838.26	
Part A (\$/ML entitlements)	River Tinaroo/Barron	⊙	6.03	6.43	6.61	6.79	6.98	
		↗	6.03	6.43	6.61	6.79	6.98	
	River supplemented streams and Walsh River	⊙	6.03	6.43	6.61	6.79	6.98	
		↗	5.90	6.43	6.61	6.79	6.98	
	Mareeba-Dimbulah – relift	⊙	6.03	6.43	6.61	6.79	6.98	
		↗	5.90	6.43	6.61	6.79	6.98	
	Mareeba-Dimbulah – outside a relift	Up to 100ML	⊙	6.03	6.43	6.61	6.79	6.98
			↗	5.90	6.43	6.61	6.79	6.98
		100ML to 500ML	⊙	6.03	6.43	6.61	6.79	6.98
			↗	5.90	6.43	6.61	6.79	6.98
Over 500ML		⊙	6.03	6.43	6.61	6.79	6.98	
		↗	5.90	6.43	6.61	6.79	6.98	
Part B (\$/ML usage)	River Tinaroo/Barron	⊙	0.70	0.60	0.62	0.64	0.65	
		↗	0.70	0.60	0.62	0.64	0.65	
	River supplemented streams and Walsh River	⊙	0.70	0.60	0.62	0.64	0.65	
		↗	0.68	0.60	0.62	0.64	0.65	
	Mareeba-Dimbulah – relift	⊙	0.70	0.60	0.62	0.64	0.65	
		↗	0.64	0.60	0.62	0.64	0.65	
	Mareeba-Dimbulah – outside a relift	Up to 100ML	⊙	0.70	0.60	0.62	0.64	0.65
			↗	0.68	0.60	0.62	0.64	0.65
		100ML to 500ML	⊙	0.70	0.60	0.62	0.64	0.65
			↗	0.68	0.60	0.62	0.64	0.65
Over 500ML		⊙	0.70	0.60	0.62	0.64	0.65	
		↗	0.68	0.60	0.62	0.64	0.65	
Part C (\$/ML entitlements)	River supplemented streams and Walsh River	⊙	27.77	20.58	21.15	21.73	22.33	
		↗	27.16	20.58	21.15	21.73	22.33	
	Mareeba-Dimbulah – relift	⊙	57.44	42.66	43.84	45.06	46.31	
		↗	51.02	42.66	43.84	45.06	46.31	
	Mareeba-Dimbulah – outside a relift	Up to 100ML	⊙	58.92	47.33	48.75	50.21	51.71
			↗	57.63	47.33	48.75	50.21	51.71
		100ML to 500ML	⊙	51.96	42.15	43.43	44.74	46.09
			↗	50.82	42.15	43.43	44.74	46.09
Over 500ML		⊙	40.34	33.52	34.56	35.62	36.72	
		↗	39.46	33.52	34.56	35.62	36.72	
Part D (\$/ML usage)	River supplemented streams and Walsh River	⊙	3.87	4.50	4.63	4.75	4.89	
		↗	3.79	3.99	4.63	4.75	4.89	
	Mareeba-Dimbulah – relift	⊙	97.31	127.02	130.54	134.15	137.87	
		↗	94.21	108.82	114.44	120.29	126.38	
	Mareeba-Dimbulah – outside a relift	Up to 100ML	⊙	6.45	7.50	7.71	7.92	8.14
			↗	6.31	6.58	7.71	7.92	8.14
		100ML to 500ML	⊙	6.45	7.50	7.71	7.92	8.14
			↗	6.31	6.58	7.71	7.92	8.14
		Over 500ML	⊙	6.45	7.50	7.71	7.92	8.14
			↗	6.31	6.58	7.71	7.92	8.14

Table 54 - Proposed Cost Reflective Prices by tariff group - Bundaberg

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Bundaberg	⊙	13.43	17.63	18.12	18.62	19.13
	↗	13.13	16.03	18.12	18.62	19.13
Bundaberg Channel	⊙	13.43	17.63	18.12	18.62	19.13
	↗	13.13	16.03	18.12	18.62	19.13
Part B (\$/ML usage)						
Bundaberg	⊙	1.11	1.50	1.55	1.59	1.63
	↗	1.08	1.11	1.55	1.59	1.63
Bundaberg Channel	⊙	1.11	1.50	1.55	1.59	1.63
	↗	1.08	1.50	1.55	1.59	1.63
Part C (\$/ML entitlements)						
Bundaberg Channel	⊙	75.70	105.40	108.32	111.32	114.40
	↗	54.54	56.05	58.57	62.88	67.38
Part D (\$/ML usage)						
Bundaberg Channel	⊙	59.39	53.80	55.29	56.82	58.40
	↗	58.08	53.80	55.29	56.82	58.40

Table 55 - Proposed Cost Reflective Prices by tariff group - Burdekin

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Burdekin Haughton	⊙	4.19	5.87	6.03	6.20	6.37
	↗	4.19	5.87	6.03	6.20	6.37
Burdekin Channel (incorporating Gladys's Lagoon)	⊙	4.19	5.87	6.03	6.20	6.37
	↗	4.10	5.87	6.03	6.20	6.37
Burdekin Channel - Giru Groundwater	⊙	4.19	5.87	6.03	6.20	6.37
	↗	4.10	5.87	6.03	6.20	6.37
Part B (\$/ML usage)						
Burdekin Haughton	⊙	0.37	0.76	0.78	0.80	0.82
	↗	0.37	0.76	0.78	0.80	0.82
Burdekin Channel (incorporating Gladys's Lagoon)	⊙	0.37	0.76	0.78	0.80	0.82
	↗	0.36	0.76	0.78	0.80	0.82
Burdekin Channel - Giru Groundwater	⊙	0.37	0.76	0.78	0.80	0.82
	↗	0.36	0.37	0.38	0.39	0.40
Part C (\$/ML entitlements)						
Burdekin Channel (incorporating Gladys's Lagoon)	⊙	46.90	47.73	49.05	50.41	51.80
	↗	45.87	47.73	49.05	50.41	51.80
Burdekin Channel - Giru Groundwater	⊙	46.90	47.73	49.05	50.41	51.80
	↗	29.40	31.10	34.57	38.21	42.03
Part D (\$/ML usage)						
Burdekin Channel (incorporating Gladys's Lagoon)	⊙	25.44	20.30	20.87	21.45	22.04
	↗	24.88	20.30	20.87	21.45	22.04
Burdekin Channel - Giru Groundwater	⊙	25.44	20.30	20.87	21.45	22.04
	↗	16.43	16.88	17.35	17.83	18.33

Table 56 - Proposed Cost Reflective Prices by tariff group – Nogo Mackenzie

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Nogo Mackenzie (high priority) (incorporating LMS)	⊙	50.85	82.18	84.45	86.79	89.20
	↗	41.73	45.43	49.29	53.34	57.58
Nogo Mackenzie (medium priority LMS)	⊙	7.25	12.51	12.86	13.22	13.58
	↗	7.09	9.83	12.71	13.22	13.58
Nogo Mackenzie (medium priority)	⊙	7.25	12.51	12.86	13.22	13.58
	↗	7.25	9.99	12.86	13.22	13.58
Part B (\$/ML usage)						
Nogo Mackenzie (high priority) (incorporating LMS)	⊙	0.92	1.99	2.05	2.10	2.16
	↗	0.90	0.92	0.95	0.98	1.00
Nogo Mackenzie (medium priority LMS)	⊙	0.92	1.99	2.05	2.10	2.16
	↗	0.90	0.92	0.95	2.10	2.16
Nogo Mackenzie (medium priority)	⊙	0.92	1.99	2.05	2.10	2.16
	↗	0.92	0.95	0.99	2.10	2.16

Table 57 - Proposed Cost Reflective Prices by tariff group – Eton

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Eton (high A priority LMS)	⊙	136.91	161.01	165.47	170.05	174.76
	↗	133.91	140.16	146.65	153.39	160.40
Eton (high B priority) (incorporating LMS)	⊙	36.67	43.71	44.92	46.16	47.44
	↗	35.87	39.40	43.10	46.16	47.44
Part B (\$/ML usage)						
Eton (high A priority LMS)	⊙	4.49	5.48	5.63	5.78	5.95
	↗	4.39	4.51	4.64	4.76	4.90
Eton (high B priority) (incorporating LMS)	⊙	4.49	5.48	5.63	5.78	5.95
	↗	4.39	4.51	4.64	5.58	5.95
100 per cent volumetric (\$/ML usage)						
Eton (risk A priority) [new]	⊙/↗		1.91	2.08	2.25	2.33

Table 58 - Proposed Cost Reflective Prices by tariff group – St George

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
St George (high priority LMS)	⊙	40.84	42.16	43.32	44.52	45.76
	↗	39.94	42.16	43.32	44.52	45.76
St George (medium priority) (incorporating LMS)	⊙	25.03	27.31	28.06	28.84	29.64
	↗	24.48	27.31	28.06	28.84	29.64
Part B (\$/ML usage)						
St George (high priority LMS)	⊙	1.19	1.63	1.68	1.73	1.77
	↗	1.16	1.63	1.68	1.73	1.77
St George (medium priority) (incorporating LMS)	⊙	1.19	1.63	1.68	1.73	1.77
	↗	1.16	1.58	1.68	1.73	1.77

Table 59 – Proposed Cost Reflective Prices by tariff group – Lower Mary

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Mary Barrage	⊙	6.79	7.84	8.06	8.28	8.51
	↗	6.79	7.84	8.06	8.28	8.51
Tinana & Teddington	⊙	19.26	25.26	25.95	26.67	27.41
	↗	19.26	22.33	25.56	26.67	27.41
Lower Mary Channel	⊙	6.79	7.84	8.06	8.28	8.51
	↗	6.64	7.84	8.06	8.28	8.51
Part B (\$/ML usage)						
Mary Barrage	⊙	0.94	1.18	1.21	1.24	1.28
	↗	0.94	1.18	1.21	1.24	1.28
Tinana & Teddington	⊙	30.01	27.39	28.15	28.92	29.73
	↗	12.93	13.29	13.66	16.31	19.52
Lower Mary Channel	⊙	0.94	1.18	1.21	1.24	1.28
	↗	0.92	0.95	0.97	1.00	1.03
Part C (\$/ML entitlements)						
Lower Mary Channel	⊙	60.39	116.60	119.83	123.15	126.56
	↗	59.07	62.23	66.56	71.09	75.81
Part D (\$/ML usage)						
Lower Mary Channel	⊙	73.22	76.04	78.15	80.31	82.54
	↗	71.62	73.60	75.64	77.74	79.89

Table 60 – Proposed Cost Reflective Prices by tariff group – Barker Barambah

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Barker Barambah - River	⊙	47.63	50.57	51.97	53.41	54.89
	↗	38.51	42.12	45.89	49.85	53.98
Barker Barambah - Redgate relift	⊙	53.12	51.41	52.84	54.30	55.80
	↗	38.51	42.12	45.89	49.85	53.98
Part B (\$/ML usage)						
Barker Barambah - River	⊙	4.65	8.85	9.10	9.35	9.61
	↗	4.55	4.68	4.81	4.94	5.08
Barker Barambah - Redgate relift	⊙	58.42	39.98	41.09	42.23	43.39
	↗	24.65	25.33	26.03	26.75	27.50

Table 61 – Proposed Cost Reflective Prices by tariff group – Bowen Broken

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Bowen Broken Rivers	⊙	7.80	9.76	10.03	10.31	10.59
	↗	7.80	9.76	10.03	10.31	10.59
Part B (\$/ML usage)						
Bowen Broken Rivers	⊙	8.04	7.46	7.67	7.88	8.10
	↗	8.04	7.46	7.67	7.88	8.10

Table 62 - Proposed Cost Reflective Prices by tariff group – Boyne

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Boyne River and Tarong	⊙	19.05	18.10	18.60	19.12	19.65
	↗	19.05	18.10	18.60	19.12	19.65
Part B (\$/ML usage)						
Boyne River and Tarong	⊙	2.14	3.27	3.36	3.45	3.55
	↗	2.14	2.20	3.36	3.45	3.55

Table 63 - Proposed Cost Reflective Prices by tariff group – Callide

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Callide (incorporating Callide and Kroombit Creek and Benefited Groundwater)	⊙	77.06	103.98	106.86	109.82	112.86
	↗	30.39	33.77	37.32	41.03	44.93
Part B (\$/ML usage)						
Callide (incorporating Callide and Kroombit Creek and Benefited Groundwater)	⊙	9.71	13.27	13.64	14.02	14.41
	↗	9.50	9.76	10.03	10.31	10.60

Table 64 - Proposed Cost Reflective Prices by tariff group – Chinchilla Weir

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Chinchilla Weir	⊙	21.32	30.18	31.02	31.88	32.76
	↗	21.32	24.45	27.74	31.19	32.76
Part B (\$/ML usage)						
Chinchilla Weir	⊙	4.03	5.40	5.55	5.70	5.86
	↗	4.03	4.14	4.26	4.37	5.86

Table 65 - Proposed Cost Reflective Prices by tariff group – Cunnamulla

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Cunnamulla	⊙	36.64	41.32	42.47	43.64	44.85
	↗	35.84	39.37	42.47	43.64	44.85
Part B (\$/ML usage)						
Cunnamulla	⊙	2.12	1.40	1.44	1.48	1.52
	↗	2.07	1.40	1.44	1.48	1.52

Table 66 - Proposed Cost Reflective Prices by tariff group – Dawson Valley

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Dawson Valley – River (high priority) (incorporating LMS)	⊙	123.70	52.39	53.84	55.33	56.87
	↗	56.91	52.39	53.84	55.33	56.87
Dawson Valley – River (medium priority) (incorporating LMS)	⊙	23.65	13.66	14.04	14.43	14.83
	↗	23.13	13.66	14.04	14.43	14.83
Part B (\$/ML usage)						
Dawson Valley – River (high priority) (incorporating LMS)	⊙	1.77	2.01	2.07	2.12	2.18
	↗	1.73	1.78	2.07	2.12	2.18
Dawson Valley – River (medium priority) (incorporating LMS)	⊙	1.77	2.01	2.07	2.12	2.18
	↗	1.73	1.78	2.07	2.12	2.18

Table 67 - Proposed Cost Reflective Prices by tariff group – Lower Fitzroy

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Lower Fitzroy	⊙	13.22	15.19	15.61	16.04	16.49
	↗	13.22	15.19	15.61	16.04	16.49
Part B (\$/ML usage)						
Lower Fitzroy	⊙	1.08	1.73	1.78	1.83	1.88
	↗	1.08	1.73	1.78	1.83	1.88

Table 68 - Proposed Cost Reflective Prices by tariff group – Macintyre Brook

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Macintyre Brook	⊙	67.89	127.79	131.33	134.96	138.70
	↗	63.30	67.59	72.07	76.75	81.64
Part B (\$/ML usage)						
Macintyre Brook	⊙	4.49	8.00	8.22	8.45	8.68
	↗	4.39	4.51	4.64	4.76	4.90

Table 69 - Proposed Cost Reflective Prices by tariff group – Maranoa

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Maranoa River	⊙	103.88	119.77	123.09	126.50	130.00
	↗	68.27	72.70	77.32	82.15	87.18
Part B (\$/ML usage)						
Maranoa River	⊙	81.03	105.81	108.74	111.75	114.85
	↗	71.03	73.00	75.02	77.10	79.23

Table 70 - Proposed Cost Reflective Prices by tariff group – Pioneer

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Pioneer River	⊙	22.40	24.09	24.76	25.44	26.15
	↗	21.90	24.09	24.76	25.44	26.15
Part B (\$/ML usage)						
Pioneer River	⊙	4.10	4.26	4.37	4.50	4.62
	↗	4.01	4.26	4.37	4.50	4.62

Table 71 - Proposed Cost Reflective Prices by tariff group – Proserpine

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Proserpine River (incorporating Kelsey Creek Water Board)	⊙	15.50	18.88	19.40	19.94	20.49
	↗	15.16	18.12	19.40	19.94	20.49
Part B (\$/ML usage)						
Proserpine River (incorporating Kelsey Creek Water Board)	⊙	3.80	4.72	4.85	4.98	5.12
	↗	3.71	3.81	4.85	4.98	5.12

Table 72 - Proposed Cost Reflective Prices by tariff group – Three Moon Creek

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Three Moon Creek	⊙	55.72	78.44	80.61	82.85	85.14
	↗	37.25	40.82	44.56	48.48	52.58
Part B (\$/ML usage)						
Three Moon Creek	⊙	6.61	11.34	11.66	11.98	12.31
	↗	5.22	5.36	5.51	5.67	5.82

Table 73 - Proposed Cost Reflective Prices by tariff group – Upper Burnett

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Regulated Section of the Nogo/Burnett River	⊙	47.31	47.98	49.31	50.67	52.07
	↗	43.59	47.34	49.31	50.67	52.07
John Goleby Weir	⊙	47.31	47.98	49.31	50.67	52.07
	↗	41.82	45.52	49.31	50.67	52.07
Part B (\$/ML usage)						
Regulated Section of the Nogo/Burnett River	⊙	5.01	7.08	7.27	7.48	7.68
	↗	4.46	4.58	6.66	7.48	7.68
John Goleby Weir	⊙	5.01	7.08	7.27	7.48	7.68
	↗	4.46	4.58	4.79	7.48	7.68

Table 74 - Proposed Cost Reflective Prices by tariff group – Upper Condamine

Tariff group	Charge	2024-25	2025-26	2026-27	2027-28	2028-29
Part A (\$/ML entitlements)						
Sandy Creek or Condamine River	⊙	16.89	24.42	25.09	25.79	26.50
	↗	16.89	19.90	23.06	25.79	26.50
North Branch	⊙	16.97	25.55	26.26	26.99	27.73
	↗	16.97	19.98	23.14	26.47	27.73
North Branch – Risk A	⊙	14.17	23.29	23.93	24.60	25.28
	↗	13.86	16.78	19.86	23.09	25.28
Part B (\$/ML usage)						
Sandy Creek or Condamine River	⊙	6.33	11.22	11.53	11.85	12.18
	↗	6.33	6.51	6.69	7.46	10.43
North Branch	⊙	21.16	31.85	32.73	33.64	34.57
	↗	19.14	19.67	20.21	20.77	23.57
North Branch – Risk A	⊙	21.16	31.85	32.73	33.64	34.57
	↗	20.69	21.26	21.85	22.46	24.29

7.4.1 CSO implications

The QCA’s guidance paper asks Sunwater to consider the implications for the rural irrigation water price subsidy (CSO payment) of any business decision that impact on the expected revenue shortfall from irrigation prices. Sunwater’s decision to propose the adoption of a RAB-based revenue requirement and prices has implications for the CSO payment which are summarised in **Table 75**. The annualised values have been calculated as the difference between the cost reflective and transition price, multiplied by total irrigation entitlements (and the assumed scheme usage for variable charges).

7.4.2 Proposed miscellaneous fees and charges

Sunwater also provides a range of other services to irrigators as introduced in **Section 6.4.3**. These charges are referred to as miscellaneous charges and fees and include:

- drainage / diversion charges
- early termination fees that apply, for example, when a distribution system entitlement is permanently transferred to another section of the scheme
- water harvesting charges

A more detail discussion on Sunwater’s proposed price-setting approach is provided below.

Table 75 – Difference in expected CSO payments following shift to RAB approach (\$'000s)

Expected CSO payment amounts	2025-26	2026-27	2027-28	2028-29
<i>RAB approach</i>				
Part A + Part C charges	\$8,850	\$8,567	\$8,261	\$7,931
Part B + Part D charges	\$276	\$196	\$188	\$179
<i>Total revenue shortfall</i>	<i>\$9,126</i>	<i>\$8,763</i>	<i>\$8,449</i>	<i>\$8,111</i>
<i>Annuity approach</i>				
Part A + Part C charges	\$13,875	\$12,634	\$11,367	\$10,303
Part B + Part D charges	\$337	\$346	\$346	\$356
<i>Total revenue shortfall</i>	<i>\$14,212</i>	<i>\$12,980</i>	<i>\$11,713</i>	<i>\$10,659</i>
Difference (RAB less annuity)	-\$5,086	-\$4,217	-\$3,264	-\$2,548

7.4.3 Drainage charges

This charge recover the cost of drainage services provided to customers in the Burdekin River drainage area as a result of farm run-off and stormwater. This charge is levied on applicable customers under section 993 of the *Water Act 2000* (Qld) and section 136 of the *Water Regulation 2016* (Qld).

From 1 July 2022, the Queensland Government introduced a new mechanism for how fees are updated annually to reflect indexation. All regulatory fees in legislation have changed from fee dollars to fee units, with the fee unit value prescribed in the *Acts Interpretation (Fee Unit) Regulation 2022*.

The fee unit value (\$31.54 per hectare of irrigable land in 2023-24) is updated annually in line with the Government Indexation Rate (GIR) which Sunwater does not control. As outlined in **Section 6.4.3** Sunwater has assumed an inflation rate for the increase of its revenue from this source.

Sunwater's view is that the effort involved in developing an accurate bottom-up estimate to determine cost reflective drainages charges exceeds the likely benefit from doing so.

Diversion charge revenue is expected to be less than \$4,000 per annum as set out in **Table 47**. This is separate to the drainage charge and recovers (in part) the costs of water use from the drainage network In the Burdekin-Haughton distribution system. These charges are increased by an inflation escalator in each year of the next price path period. The 2023-24 price is \$187.71 per pump.

7.4.4 Early termination fee

The purpose of the Sunwater's termination fee is to provide revenue adequacy and protect existing customers from any price increases from the permanent transfer of entitlements. Sunwater proposes to make no changes to the calculation basis for this fee in the next price path period. In other words, Sunwater believes that it is appropriate for this fee to be calculated by multiplying the relevant cost reflective fixed charge by a multiplier of 11.

Maximum termination fees per tariff group are presented in **Table 76**. A termination fee for the Eton scheme was calculated at the 2020 Review as Sunwater, at that time, owned and managed the distribution service in that scheme. Eton has been removed from this table as Sunwater no longer owns and manages the distribution service.

7.4.5 Water harvesting charges

Sunwater currently holds distribution system water harvesting entitlements for the Burdekin-Haughton distribution system. The purpose of these charges is to recover the cost associated with distribution customers accessing water – in excess of their entitlements – from a channel or pipeline during authorised or announced high flow periods, such as flood events.

Sunwater proposes no change to the current pricing arrangements for distribution system water harvesting charges.

Table 76 - Maximum termination fees per tariff group (\$/ML Entitlements – excluding GST)

Tariff group		2025-26	2026-27	2027-28	2028-29
Bundaberg Channel		\$1,353	\$1,391	\$1,429	\$1,469
Burdekin Channel		\$590	\$606	\$623	\$640
Burdekin Channel – Gladys’s Lagoon		\$590	\$606	\$623	\$640
Burdekin Channel – Giru Groundwater		\$590	\$606	\$623	\$640
Lower Mary – Tinana & Teddington		\$278	\$286	\$293	\$302
Lower Mary Channel		\$1,369	\$1,407	\$1,446	\$1,486
Mareeba-Dimbulah – River supplemented streams and Walsh River		\$297	\$305	\$314	\$322
Mareeba-Dimbulah – relift		\$540	\$555	\$570	\$586
Mareeba-Dimbulah – outside a relift	Up to 100ML	\$591	\$609	\$627	\$646
	100ML to 500ML	\$534	\$550	\$567	\$584
	Over 500ML	\$439	\$453	\$467	\$481

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