

sunwater



Irrigation Price Path

1 July 2025 to 30 June 2029

Dawson Valley Water Supply Scheme

18 April 2023

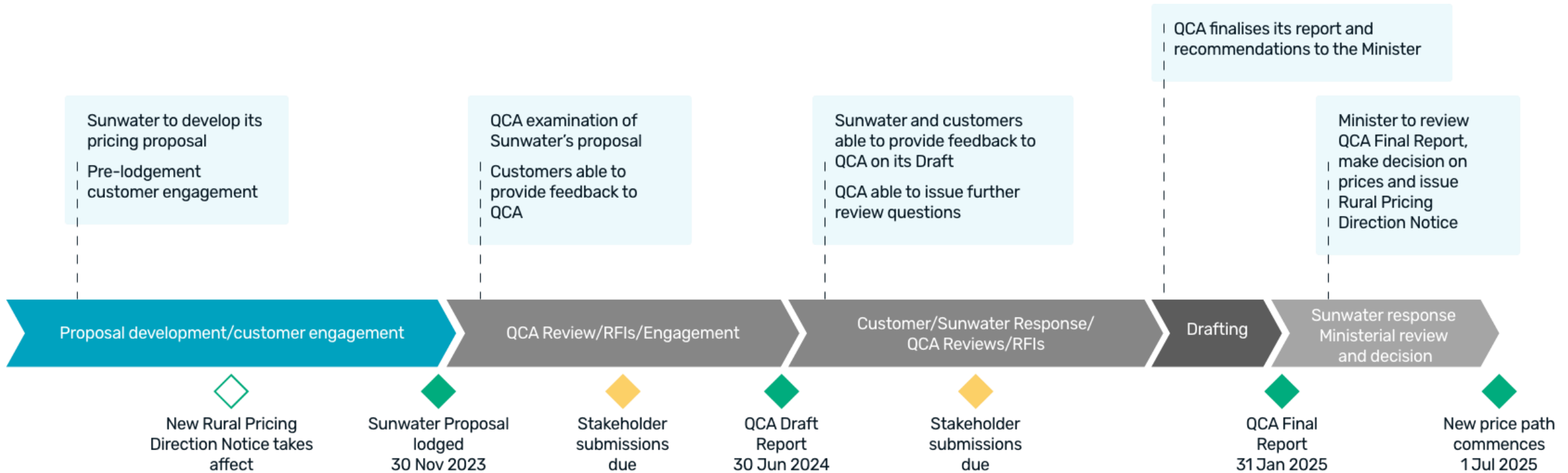
Agenda

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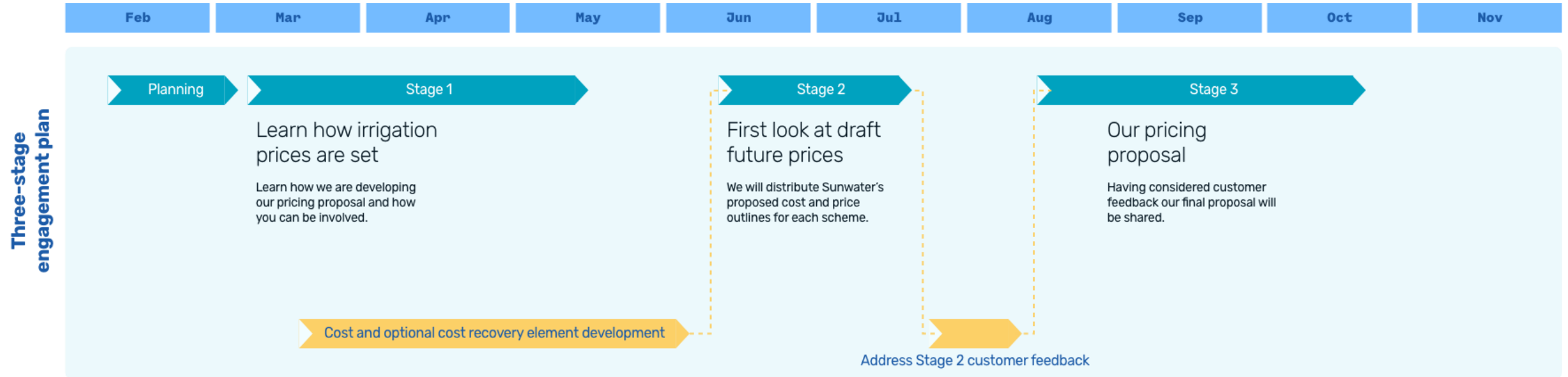
Overview of the price path process

Overview of the price path process



What to expect from Sunwater

What to expect from Sunwater



Scheme Level Overview

Overview of the price setting process

Step 1

Allocate revenue by charge type (Variable or fixed)

Includes operating expenditure, annuity contribution and revenue offset revenue building blocks.

Fixed (Part A/C)

- ✓ **All schemes**
- ✓ 80 percent of operations and maintenance direct costs
- ✓ all other costs (including electricity)
Large electricity using schemes
- ✓ Varies according to scheme

Variable (Part B / D)

- ✓ **All schemes**
- ✓ 20 percent of operations and maintenance direct costs
Large electricity using schemes
- ✓ Varies according to scheme

Step 2

Allocate fixed revenue to priority group allocation buckets

Allocation factors are relatively static, only changing when scheme operating parameters change, such as when entitlements are converted from one priority to another.

Fixed (Part A/C)

- ✓ **Bucket 1**
Allocation by entitlement percentage
- ✓ 50 percent of operations (direct and indirect) and revenue offsets
- ✓ **Bucket 2**
Allocation by headworks utilization factor
- ✓ All other categories

Step 3

Allocate fixed revenue to priority group

Apply the fixed revenue allocators to set the revenue requirement by Part A / Part C priority. For distribution schemes, revenue associated with customer loss entitlements are added here.

Fixed (Part A/C)

- ✓ **Bucket 1**
Allocation by entitlement percentage
- ✓ Costs x percentage = priority group revenue
- ✓ **Bucket 2**
Allocation by headworks utilization factor
- ✓ Costs x percentage = priority group revenue

Step 4

Calculate cost reflective prices

Cost reflective prices are set first using a assigned revenue and volumes to produce \$/ML prices.

Part A/C High Priority (\$/ML)
= High priority costs (\$) / gross entitlements (ML WAE)

Part A/C Medium Priority (\$/ML)
= Medium priority costs (\$) / gross entitlements (ML WAE)

Part B / D (\$/ML)
= Variable costs (\$) / [Entitlements (net of losses) ML WAE x usage % (ML / ML WAE)]

Step 5

Calculating recommended prices

Cost reflective prices are then smoothed across the four-year price path period to set target prices. Recommended prices are set with reference to current prices, target prices and the price path principles.

Dawson Valley Water Supply Scheme

Scheme Overview



61,737 ML in entitlements, with an average annual usage of 38,001 ML



91 irrigation customers

Major assets



Glebe Weir Concrete /
Gyranda Weir / Neville Hewitt Weir /
Moura Weir / Orange Creek Weir



Theodore Weir &
Moura Off-stream Storage

Key operations and maintenance activities



Comprehensive dam and weir inspections



Upgrading/replacing customer meters to meet regulatory compliance



Infrastructure refurbishments e.g. regulating valve hydraulic system

Pricing tariffs



Single tariff group, with fixed (Part A) charges for high and medium priority entitlements and a common variable (Part B) charge



No risk or other forms of entitlements or usage (e.g. water harvesting)

Dawson Valley Water Supply Scheme

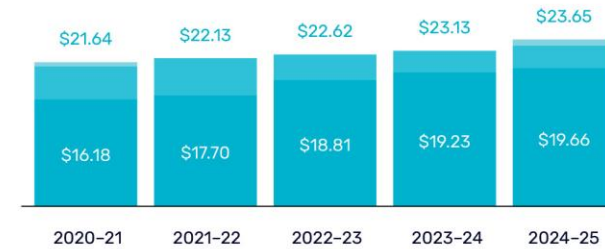
Entitlements overview

Entitlements		Customer losses	Irrigation
High	5,679 ML	0 ML	618 ML
Medium	56,058 ML	0 ML	54,690 ML
Total	61,737 ML	0 ML	55,308 ML

Pricing breakdown

Part A

Medium priority (MP)



Part B

High priority (HP)



Legend



*This is a breakdown of your current prices.
*A negative (or below the line) segment reflects the amount paid by customers that was above the lower bound cost reflective price.

Price setting process (2023-24 price example)

Step 1

Allocate revenue by charge type

		Variable	Fixed	WAE Priority %	HUF %
Revenue offsets	-2.2		100% -2.2	High 9.2%	High 39.0%
Operations - D	231.8	20% 46.36	80% 185.4	50% -1.1	50% -1.11
Operations - I	340.7		100% 340.7	50% 92.7	50% 92.72
Operations - IGEM	76.1			50% 170.3	50% 170.34
Maintenance - D	98.2	20% 19.65	80% 78.6		100% 76.06
Maintenance - I	110.2				100% 78.60
Insurance	162.1				100% 110.16
Electricity	56.17	0.00% 0.00			100% 162.14
Annuity	956.6				100% 56.17
	2,029.68	66.01		261.9	1701.72

Key inputs	WAE	WAE%	Usage	HUF
High priority	5,679	9.2%		39.0%
Medium priority	56,058	90.8%		61.0%
Total	61,737		61.6%	
Customer losses	0			
Sub-scheme splits	0			

Step 2

Allocate fixed revenue to priority group allocation buckets

	Fixed	WAE Priority %	HUF %
Revenue offsets	100% -2.2	High 9.2%	High 39.0%
Operations - D	80% 185.4	50% -1.1	50% -1.11
Operations - I	100% 340.7	50% 92.7	50% 92.72
Operations - IGEM		50% 170.3	50% 170.34
Maintenance - D	80% 78.6		100% 76.06
Maintenance - I			100% 78.60
Insurance			100% 110.16
Electricity			100% 162.14
Annuity			100% 56.17
		261.9	1701.72

Distribution losses

Calculated in bulk scheme and picked up in distribution system

High priority	x	0.00	=	0.00
Medium priority	x	0.00%	=	0.00
Variable	x	0.00%	=	0.00

Step 3

Allocate revenue to priority group

	Revenue requirement by priority group	Losses	Revenue requirement after losses conversion	Entitlements	Usage %
Part A - HP	$9.2\% \times 261.9 + 39.0\% \times 1,701.72 = 687.8$	- 0.00	= 687.8	$1,000 / 5,679.00$	= \$121.11
Part A - MP	$90.8\% \times 261.9 + 61.0\% \times 1,701.72 = 1,275.90$	- 0.00	= 1,275.90	$1,000 / 56,058.00$	= \$22.76
Part B		- 0.00	= 66.01	$1,000 / [61,737.00 \times 61.6\%]$	= \$1.74

Step 4

Calculate cost reflective prices

Step 5

(worked example)

Price setting process

Water Supply Scheme (generic) worked example using 2020-21 to 2023-24 QCA recommended costs

Step 5a

Calculate smoothed target prices

Cost reflective prices are then smoothed across the four-year price path period to set target prices

Add QCA Fee			Target prices Unsmoothed				Target prices Smoothed			
			2020/21	2021/22	2022/23	2023/24	2020/21	2021/22	2022/23	2023/24
Part A HP	\$50.71/ML + \$0.47/ML = \$51.19/ML		\$45.93	\$48.18	\$50.07	\$51.19	\$47.19	\$48.25	\$49.33	\$50.44
Part A MP	\$21.73/ML + \$0.47/ML = \$22.21/ML		\$19.99	\$20.92	\$21.72	\$22.21	\$20.50	\$20.96	\$21.42	\$21.90
Part B	\$4.02/ML + \$0.00/ML = \$4.02/ML		\$3.75	\$3.83	\$3.92	\$4.02	\$3.75	\$3.84	\$3.92	\$4.01

Steps 1 through 4 apply to each year of the forecast pricing period

Smoothed revenues (or prices) are set with a defined rate of escalation (e.g. the expected inflation rate) from Year 1 to Year 4. They are calculated on the basis that the present value (PV) of smoothed revenues (or revenues arising from smoothed prices) is equivalent to the PV of the building blocks revenues.

Step 1

Convert four years of revenue requirement (inclusive of QCA fees) into \$2019-20
 = NPV(4.37%, (946.8; 990.9; 1,028.5; 1,051.6)) = 3,529.7 (\$ thousands) [nominal WACC]

Step 2

Convert the denominator (WAE ML) into present value terms
 = NPV(2.09%, (47,357; 47,357; 47,357; 47,357)) = 179,948.98 (ML WAE) [real WACC]

Step 3

Divide step 1 result by step 2 result and multiply by 1,000
 = 20.047 (\$/ML WAE) – the Year 0 price (in 2019-20 dollars)

Step 4

Compound Year 0 price by forecast inflation (2.24%) for each year of the price path

Year 0	Year 1	Year 2	Year 3	Year 4
2019/20	2020/21	2021/22	2022/23	2023/24
\$20.47	$\times (1+2.24\%)^1$	$\times (1+2.24\%)^2$	$\times (1+2.24\%)^3$	$\times (1+2.24\%)^4$
	= \$20.50	= \$20.96	= \$21.42	= \$21.90

Price setting process

Water Supply Scheme (generic) worked example using 2020-21 to 2023-24 QCA recommended costs

Step 5b

Calculate recommended prices

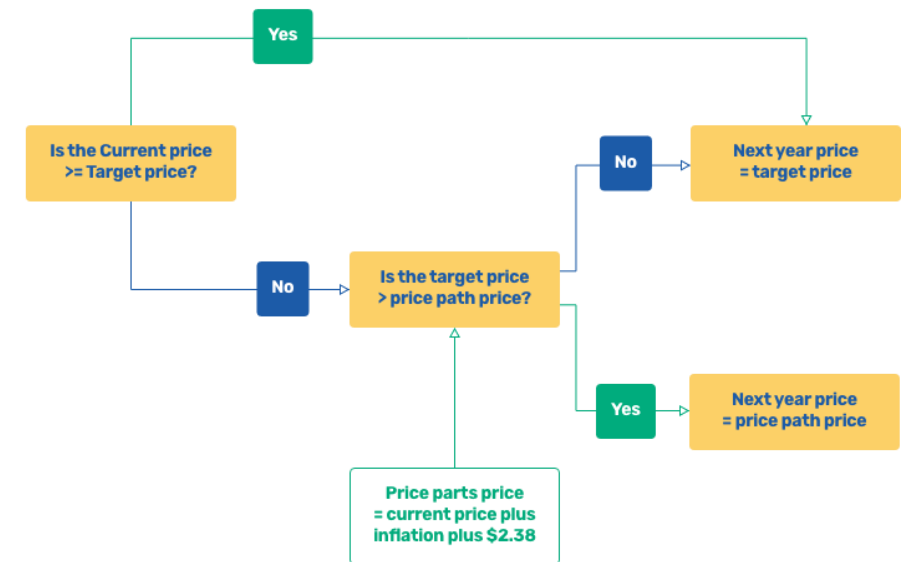
Customer prices are then set with reference to current prices, target prices and the pricing principles

Target prices Smoothed					Transition path prices				
	2020/21	2.24%	2.24%	2.24%	Actual	Price path			
	2020/21	2021/22	2022/23	2023/24	2020/21	2020/21	2021/22	2022/23	2023/24
Part A HP	\$47.19	\$48.25	\$49.33	\$50.44	Not set	Not set	Not set	Not set	Not set
Part A MP	\$20.50	\$20.96	\$21.42	\$21.90	\$14.89	\$20.50	\$20.96	\$21.42	\$21.90
Part B	\$3.75	\$3.84	\$3.92	\$4.01	\$3.13	\$3.75	\$3.84	\$3.92	\$4.01

Smoothed revenues (or prices) are set with a defined rate of escalation (e.g. the expected inflation rate) from Year 1 to Year 4. They are calculated on the basis that the present value (PV) of smoothed revenues (or revenues arising from smoothed prices) is equivalent to the PV of the building blocks revenues.

Recommended prices are set using target (smoothed) prices and applying the price path principles outlined in the referral notice.

Note the flowchart shown reflects the current (as at 21 March 2023) rural pricing direction notice where prices above lower bound immediately transition to lower bound.





Thank you.

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