

31 March 2023

Mr Andrew Nicholls
Chief Executive Officer
Independent Pricing and Regulatory Tribunal
By email: matthew_mansell@ipart.nsw.gov.au

Dear Mr. Nicholls

In response to your letter dated 16 February 2023 on the Special Information Request for the IPART Annual review of WaterNSW's Rural Bulk Water Charges for 2023-24, we are pleased to submit our application to vary WaterNSW's 2023-24 Murray Darling Basin (MDB) regulated charges in accordance with the *Water Charge Rules 2010 Cth (WCR)*.

This letter and its attachments constitute our application for the IPART Annual Review and includes:

- Proposed Regulated Charges for the 2023-24 financial year as requested under the WCR;
- Any arguments required under rule 37(2) (where applicable) regarding whether or not prices should change from those set in the 2021 Determination, if it is reasonably necessary having regard to changes in the demand or consumption forecasts and price stability; and
- A declaration from the CEO certifying the accuracy of the information provided.

The criteria in the WCR authorises IPART to consider whether it is reasonably necessary to make variations to the 2023-24 charges having regard to 1) *changes in demand or consumption forecast* and 2) *price stability*. The variations to be considered by IPART are mechanical and formulaic updates to the demand forecasts and regulatory inputs including the 20-year rolling average of actual water sales, entitlements volumes and the high security premium.

In the prior financial year, WaterNSW submitted that it was not reasonably necessary to vary the MDB regulated charges to account for changes in the demand forecast. WaterNSW proposed that IPART cap the 2022-23 MDB regulated charges (in line with the CPI factor in the Determination) to provide much needed pricing relief to the regions amid the economic uncertainty caused by the flooding rains and raising cost pressures at the time.

However, WaterNSW considers that there are now compelling reasons to make variations to the 2023-24 MDB Bulk Water Charges IPART determined in its 2021 IPART Rural Valley Final Determination, having regard to changes in demand or consumption forecasts, including for:

- The effects of updating the 20-year rolling average of water sales incorporating 2020-21 and 2021-22 data in 2023-24 in line with the recent IPART determination; and
- The effects of updating the entitlement forecast and the high security premium with the latest actual data.

For example, updating the 20-year rolling average is demonstrated in the figure below, where the large variation between the volumes entering and exiting the calculation is likely to lead to further volume reductions (and the need for price increases) in future years.

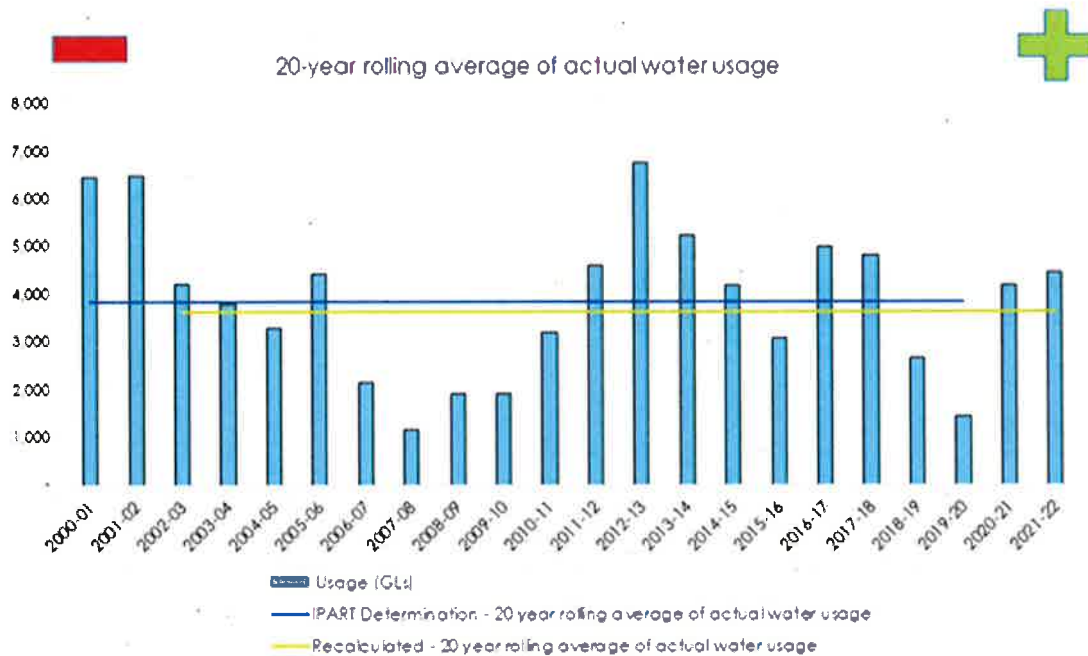


Figure 1 20-year rolling average of actual water sales 2000-01 to 2021-22: High levels of demand in the early 2000s (which will 'roll off' the 20-year rolling average calculation) are unlikely to be repeated in the current 2021-25 regulatory period.¹

As illustrated above, we observe that the rolling average is likely to decline significantly by the end of the 2021-25 regulatory period² resulting in significant and or sudden increases in the usage charge at the next 2025 price review leading to potential price shocks for customers. This price shock will be among other potential price increases in the MDB, including a potential increase in the Weighted Average Cost of Capital (WACC) from the current rate of 1.8% to 3.7% (excluding the impact of inflation) as forecast by NSW Treasury.

Annual updates to the rolling average would allow the MDB usage charges to increase gradually over the 2021-25 regulatory period and reset the charges to recover the variable revenues assessed by IPART at the 2021 determination. This approach will also avoid any sudden and untenable price shocks that would result from a significant variation to the 20-year rolling average at the next 2025 price review. The bill impacts that will be gradually introduced (and therefore avoid price shocks in the next price review) are shown in the attachment.

Other significant benefits of updating the 2023-24 demand forecast include:

- **More accurate demand forecasting:** Updating the rolling average is likely to produce a more accurate sales forecast, as the latest set of actual data is incorporated into the averaging calculation; and
- **Improved financeability and closer alignment to regulatory expectations at the 2021 determination:** Unfortunately, due to the methodology used to set the usage charge, WaterNSW is forecasting an increasing shortfall in the recovery of IPART's forecast variable revenue requirement.

¹ For instance, usage of approx. 6,500 GLs occurred only once since the early 2000s in 2012-13.

² This observation is based on our current understanding of climatic conditions, the downward trend in demand as noted in the 20-year data set, and the observation that droughts are generally sustained over multiple financial years and occur more regularly compared to wet years as observed in the 20-year data set. For example, the scientific consensus is that it is reasonable to expect longer periods of drought due to global warming, particularly in dry regions e.g. inland/regional Australia (Ref: state of the Climate report 2020, CSIRO <http://www.csiro.au/en/Showcase/state-of-the-climate>)

WaterNSW will recover insufficient revenue to fund its prudent and efficient costs over the 2021-25 regulatory period in the absence of either:

- o A variation to the 2023-24 regulated charges to account for changes in the demand forecast; or
- o A Community Service Obligation (CSO) from the NSW Government to contribute to the balance of costs that should be funded by the water user (as specified in the IPART determination),

It is in customers' long-term interests to ensure that WaterNSW has a reasonable opportunity to recover our efficient costs associated with providing regulatory services as determined by IPART at the 2021 determination. Updating the 2023-24 variable charges for changes in demand would therefore be in the long-term interests of customers as it would more likely result in WaterNSW having adequate funding to undertake our required investment programs and maintenance activities in the valleys.

If you have any questions regarding this application, please do not hesitate to contact Michael Martinson, Manager Economic Regulation on [REDACTED]

Yours sincerely



Andrew George
Chief Executive Officer

Attachments

- Proposed Regulated Charges and estimated bill impacts for 2023-24 financial year
- Information on demand and consumption forecasts
- Statement on the expected voluntary telemetry take-up rate for 2023-24
- Signed Responsibility Statement
- Completed IPART *WaterNSW - Annual update model 2023-24*

2023-24 MDB Regulated Charges Updated by CPI + updated volumes

WaterNSW has calculated the 2023-24 MDB Regulated Charges by converting the charges presented in IPART's 2022-25 Rural Valley Bulk Water Determination from 2021-22 dollars into nominal dollars using IPART's estimate of the change in the CPI index from 2021-22 to 2023-24 of 6.7% and updating the usage & fixed charges to include:

- The effects of updating the 20-year rolling average of water sales incorporating 2020-21 & 2021-22 data in 2023-24 in line with the recent IPART determination; and
- The effects of updating the entitlement forecast and the high security premium with the latest actual data.

The charges are presented in the tables below:

	2022-23	2023-24	% Variance
Table 1 Entitlement charges for MDB Valleys (\$/ML or \$/unit share)			
	nominal \$	nominal \$	
High Security Charge			
Border	6.92	7.75	12.0%
Gwydir	18.29	18.53	1.3%
Namoi	30.41	33.33	9.6%
Peel	64.49	69.66	8.0%
Lachlan	26.38	28.83	9.3%
Macquarie	21.21	25.79	21.6%
Murray	2.38	2.63	10.5%
Murrumbidgee	4.38	4.71	7.5%
General Security Charge			
Border	2.53	2.70	6.7%
Gwydir	4.25	4.57	7.5%
Namoi	10.62	11.29	6.3%
Peel	6.12	6.08	-0.7%
Lachlan	3.90	4.09	4.9%
Macquarie	4.14	4.20	1.4%
Murray	1.04	1.10	5.8%
Murrumbidgee	1.50	1.59	6.0%
Lowbidgee	1.81	1.93	6.6%

	2022-23	2023-24	% Variance
Table 2 Usage charges for MDB Valleys (excluding Lowbidgee) (\$/ML)			
	nominal \$	nominal \$	
Border	7.39	8.50	15.0%
Gwydir	18.07	20.99	16.2%
Namoi	32.45	38.19	17.7%
Peel	25.76	28.78	11.7%
Lachlan	32.76	40.88	24.8%
Macquarie	22.74	28.33	24.6%
Murray	3.08	3.46	12.3%
Murrumbidgee	5.22	5.72	9.6%

	2022-23	2023-24	% Variance
Table 3 MDBA/BRC entitlement charges (\$/ML of entitlement or \$/unit share)			
	nominal \$	nominal \$	nominal \$
High Security Licence (\$/ML of Entitlement or \$/unit share)			
Border	5.09	5.69	11.8%
Murray	9.08	10.10	11.2%
Murrumbidgee	1.95	2.11	8.2%
General Security Licence (\$/ML of Entitlement or \$/unit share)			
Border	1.86	1.98	6.5%
Murray	3.99	4.23	6.0%
Murrumbidgee	0.67	0.71	6.0%

	2022-23	2023-24	% Variance
Table 4 MDBA/BRC usage charges (\$/ML)			
	nominal \$	nominal \$	nominal \$
Border	0.90	1.04	15.6%
Murray	1.94	2.19	12.9%
Murrumbidgee	0.39	0.43	10.3%

	2022-23	2023-24	% Variance
Table 5 Irrigation corporations and districts discount (\$)			
	nominal \$	nominal \$	
Murray Irrigation Limited	735,204.98	762,422.37	3.7%
Western Murray Irrigation Limited	18,573.27	19,261.02	3.7%
West Cororgan	36,766.08	38,126.33	3.7%
Moira Irrigation Scheme	19,401.46	20,119.71	3.7%
Eagle Creek Scheme	6,945.01	7,202.43	3.7%
Murrumbidgee Irrigation Limited	624,258.27	655,280.55	5.0%
Coleambally Irrigation Limited	267,536.25	280,831.80	5.0%
Jemalong Irrigation Limited	59,223.85	58,483.69	-1.2%

	2022-23	2023-24	% Variance
Table 6 Entitlement charges for Coastal Valleys (\$/ML of entitlement or \$/unit share)			
	nominal \$	nominal \$	nominal \$
High Security Licence (\$/ML of Entitlement or \$/unit share)			
North Coast	13.47	14.37	6.7%
Hunter	20.96	22.35	6.6%
South Coast	35.27	37.62	6.7%
General Security Licence (\$/ML of Entitlement or \$/unit share)			
North Coast	10.45	11.14	6.6%
Hunter	26.28	17.36	6.6%
South Coast	18.50	19.73	6.6%

	2022-23	2023-24	% Variance
Table 7 Usage charges for Coastal Valleys (\$/ML)			
	nominal \$	nominal \$	
North Coast	19.95	21.28	6.7%
Hunter	20.11	21.44	6.6%

South Coast	19.76	21.07	6.6%
-------------	-------	-------	------

	2022-23	2023-24	% Variance
Table 8 Fish River Supply Scheme customers - bulk raw water (\$/kL)			
	nominal \$	nominal \$	
Access Charge			
Major Customers (except Oberon Council)	0.51	0.55	7.8%
Oberon Council	0.44	0.47	6.8%
Minor Customers	0.51	0.55	7.8%
First tier usage charge			
Major Customers (except Oberon Council)	0.35	0.41	17.1%
Oberon Council	0.27	0.29	7.4%
Minor Customers	0.35	0.37	5.7%
Second tier usage charge			
Major Customers (except Oberon Council)	0.86	0.96	11.6%
Oberon Council	0.71	0.76	7.0%
Minor Customers	0.86	0.92	7.0%

	2022-23	2023-24	% Variance
Table 9 Fish River Supply Scheme customers - bulk filtered water (\$/kL)			
	nominal \$	nominal \$	nominal \$
Access Charge			
Major Customers	0.90	0.96	6.7%
Minor Customers	0.90	0.96	6.7%
First tier usage charge			
Major Customers	0.56	0.59	5.4%
Minor Customers	0.56	0.68	21.4%
Second tier usage charge			
Major Customers	1.46	1.55	6.2%
Minor Customers	1.46	1.64	12.3%

	2022-23	2023-24	% Variance
Table 10 Meter service charges (\$ per meter)			
	nominal \$	nominal \$	
50mm	505.70	539.38	6.7%
80mm	508.05	541.89	6.7%
100mm	508.04	541.88	6.7%
150mm	514.01	548.25	6.7%
200mm	516.97	551.40	6.7%
250mm	519.70	554.31	6.7%
300mm	526.76	561.85	6.7%
350mm	558.49	595.69	6.7%
400mm	577.39	615.84	6.7%
450mm	581.02	619.72	6.7%
500mm	596.51	636.23	6.7%
600mm	616.34	657.39	6.7%
700mm	639.90	682.52	6.7%
750mm	672.90	717.72	6.7%
800mm	695.20	741.51	6.7%
900mm	702.27	749.04	6.7%
1,000mm	715.31	762.95	6.7%

Channel	6,627.66	7,069.08	6.7%
---------	----------	----------	------

	2022-23	2023-24	% Variance
Table 11 Meter accuracy testing charges (\$ per meter)			
	nominal \$	nominal \$	
Refundable meter accuracy deposit	1,750.00	1,750.00	0.0%
Total charge (if meter is found to be within accuracy standards)			
Verification and testing in situ	4,915.82	5,243.23	6.7%
Lab verification and testing	7,355.98	7,845.91	6.7%

	2022-23	2023-24	% Variance
Table 12 Other Miscellaneous Charges (\$ per meter)			
	nominal \$	nominal \$	nominal \$
Trade processing charge per application	52.47	55.96	6.7%
Fish River Connection Charge			
Low complexity connection	973.63	1,038.47	6.7%
Medium complexity connection	3,691.52	3,937.39	6.7%
High complexity connection	7,547.57	8,050.26	6.7%
Fish River Disconnection Charge	274.10	292.36	6.7%

	2022-23	2023-24	% Variance
Table 13 Annual Scheme Management Charge			
	(\$)		
	nominal \$	nominal \$	
Proportion of voluntary telemetry uptake			
0% - 25%	77.00	82.12	6.6%
>25% - 50%	69.38	74.00	6.7%
>50% - 75%	61.75	65.86	6.7%
>75% - 100%	54.12	57.72	6.7%

	2022-23	2023-24	% Variance
Table 14 Annual Government-Owned Meter service charges			
	nominal \$	nominal \$	
Meter service charge - operating costs (\$ per Government-Owned Meter)	944.69	1,007.61	6.7%
Meter service charge for channel meters-operating costs (\$ per Government-Owned Meter)	6,627.65	7,069.07	6.7%
Meter service charge - capital costs (\$ per Government-Owned Meter)	0.00	0.00	N/A

	2022-23	2023-24	% Variance
Table 15 Annual telemetry service charge (\$ per meter)			
	nominal \$	nominal \$	
Proportion of voluntary telemetry uptake			
0% - >25%	238.04	253.90	6.7%
25% - >50%	219.39	234.00	6.7%
50% - >75%	201.17	214.57	6.7%
75% or more	191.40	204.15	6.7%

	2022-23	2023-24	% Variance
Table 16 Annual non-telemetry service charge (\$ per meter)			
	nominal \$	nominal \$	
Proportion of voluntary telemetry uptake			
25% - >50%	229.72	245.02	6.7%
50% - >75%	229.72	245.02	6.7%
75% or more	229.72	245.02	6.7%

	2022-23	2023-24	% Variance
Table 17 Exit fee (\$ per meter)			
	nominal \$	nominal \$	
Average capital expenditure (\$ per meter)	0.00	0.00	N/A
Daily depreciation (\$ per meter)	0.00	0.00	N/A

Bill Impacts – Charges Updated by CPI + Updated volumes

WaterNSW has calculated the 2023-24 bill impacts as shown below:

TABLE 18- INDICATIVE BILLS FOR HIGH SECURITY CUSTOMERS - WaterNSW CHARGES			
	2022-23 Bills	2023-24 Bills	% Variance
	nominal \$	nominal \$	
Small consumption customers			
Border	1,431	1,625	13.6%
Gwydir	3,636	3,952	8.7%
Namoi	6,286	7,152	13.8%
Peel	9,025	9,844	9.1%
Lachlan	5,914	6,971	17.9%
Macquarie	4,395	5,412	23.1%
Murray	546	609	11.5%
Murrumbidgee	960	1,043	8.6%
Lowbidgee	0	0	N/A
Medium consumption customers			
Border	7,155	8,125	13.6%
Gwydir	18,180	19,760	8.7%
Namoi	31,430	35,760	13.8%
Peel	45,125	49,220	9.1%
Lachlan	29,570	34,855	17.9%
Macquarie	21,975	27,060	23.1%
Murray	2,730	3,045	11.5%
Murrumbidgee	4,800	5,215	8.6%
Lowbidgee	0	0	N/A
Large consumption customers			
Border	14,310	16,250	13.6%
Gwydir	36,360	39,520	8.7%
Namoi	62,860	71,520	13.8%
Peel	90,250	98,440	9.1%
Lachlan	59,140	69,710	17.9%
Macquarie	43,950	54,120	23.1%
Murray	5,460	6,090	11.5%
Murrumbidgee	9,600	10,430	8.6%
Lowbidgee	0	0	N/A
<i>Note: based on a 100% utilisation rate for High Security customers.</i>			

TABLE 19 - INDICATIVE BILLS FOR GENERAL SECURITY CUSTOMERS - WaterNSW CHARGES			
	2022-23 Bills	2023-24 Bills	% Variance
	nominal \$	nominal \$	
Small consumption customers			
Border	696	780	12.0%
Gwydir	1,509	1,716	13.7%
Namoi	3,009	3,420	13.7%
Peel	2,158	2,335	8.2%
Lachlan	2,356	2,862	21.5%
Macquarie	1,778	2,120	19.2%
Murray	289	318	10.0%
Murrumbidgee	463	502	8.4%
Lowbidgee*	181	193	6.6%
Medium consumption customers			
Border	3,482	3,900	12.0%
Gwydir	7,546	8,582	13.7%
Namoi	15,045	17,102	13.7%
Peel	10,788	11,674	8.2%
Lachlan	11,778	14,309	21.5%
Macquarie	8,892	10,599	19.2%
Murray	1,444	1,588	10.0%
Murrumbidgee	2,316	2,511	8.4%
Lowbidgee*	905	965	6.6%
Large consumption customers			
Border	6,964	7,800	12.0%
Gwydir	15,092	17,164	13.7%
Namoi	30,090	34,204	13.7%
Peel	21,576	23,348	8.2%
Lachlan	23,556	28,618	21.5%
Macquarie	17,784	21,198	19.2%
Murray	2,888	3,176	10.0%
Murrumbidgee	4,632	5,022	8.4%
Lowbidgee*	1,810	1,930	6.6%
* refers to supplementary licences holders in the Lowbidgee Note: based on a 60% utilisation rate for General Security customers.			

TABLE 20 - INDICATIVE BILLS FOR HIGH SECURITY AND GENERAL SECURITY CUSTOMERS - MDBA/BRC CHARGES

	2022-23 Bills	2023-24 Bills	% Variance
	nominal \$	nominal \$	
HIGH SECURITY			
Small consumption customers			
Border	599	673	12.4%
Murray	1,102	1,229	11.5%
Murrumbidgee	234	254	8.5%
Medium consumption customers			
Border	2,995	3,365	12.4%
Murray	5,510	6,145	11.5%
Murrumbidgee	1,170	1,270	8.5%
Large consumption customers			
Border	5,990	6,730	12.4%
Murray	11,020	12,290	11.5%
Murrumbidgee	2,340	2,540	8.5%
GENERAL SECURITY			
Small consumption customers			
Border	240	260	8.5%
Murray	515	554	7.6%
Murrumbidgee	90	97	7.1%
Medium consumption customers			
Border	1,200	1,302	8.5%
Murray	2,577	2,772	7.6%
Murrumbidgee	452	484	7.1%
Large consumption customers			
Border	2,400	2,604	8.5%
Murray	5,154	5,544	7.6%
Murrumbidgee	904	968	7.1%

TABLE 21 - INDICATIVE BILLS FOR CUSTOMERS IN THE FRWS

	2022-23 Bills	2023-24 Bills	% Variance
	nominal \$	nominal \$	
Energy Australia	4,797,222	5,231,448	9.1%
Raw water - minor customer	490.2	524.4	7.0%
Filtered water - minor customer	612	687	12.3%

Notification of the Proportion of Voluntary Telemetry Uptake

Pursuant to clause 6 of Schedule 5 of the IPART Final Determination on WaterNSW Prices for Bulk Water Services from 1 October 2021 and clause 6 of schedule 6 of the IPART Final Determination on Water Administration Ministerial Corporation Maximum prices for water management services from 1 October 2021, WaterNSW hereby notifies IPART of the Proportion of Voluntary Telemetry Uptake for the 2023-24 financial year in accordance with the following calculation:

$$\frac{A}{B} = C$$

Where:

- A is 3,162 meters which represents WaterNSW's best estimate of the total number of voluntary telemetric meters that will operate in the 2023-24 financial year; and
- B is 17,612 meters which represents WaterNSW's best estimate of the total number of potential voluntary telemetric meters that will operate in the 2023-24 financial year.
- C is 18 per cent which represents the Proportion of Voluntary Telemetry Uptake for the 2023-24 financial year

** These estimates are based upon the compliance dates and assumptions set out in our IPART 2020-21 Supplementary Submission on WaterNSW's non-urban metering reform costs and charges (factoring actual voluntary telemetry take up rates)*

Information on consumption forecasts

WaterNSW's forecast of demand for, or consumption of, infrastructure services for the 2023-24 financial year

The following information on WaterNSW's demand and consumption forecasts is disclosed for IPART's consideration in the event that IPART decides that it is reasonably necessary to make variations to the 2023-24 charges having regard to changes in demand or consumption forecasts related to:

- Updated 20 year rolling average of actual water usage
- Updated Entitlement volumes
- Updated High Security Premium

WaterNSW's forecast of 2023-24 expected demand is based on:

- the 20-year rolling average of actual water sales (with a two-year lag) from 2002-03 to 2021-22.
- Actual entitlement volumes in the 2021-22 financial year.

The results are shown below.

Table 22: 2023-24 usage and entitlements forecast

Valley	Usage (ML)	Entitlement volumes (ML)*
Border	129,321	266,359
Gwydir	202,456	536,885
Namoi	125,303	265,532
Peel	12,053	46,678
Lachlan	155,656	690,436
Macquarie	199,133	675,129
Murray	1,306,110	2,345,286
Murrumbidgee	1,492,183	2,706,285
Lowbidgee	N/A	747,000
Total	3,622,216	8,279,590

* Entitlement volumes which are billable under the fixed charge. For example, excludes supplementary licences except for the Lowbidgee, where WaterNSW levies a fixed charge on supplementary water holders.

WaterNSW's forecast of expected demand in the Fish River Water Scheme (FRWS) for the 2023-24 financial year is based on:

- For Energy Australia: the 20-year rolling average of actual water sales (with a two-year lag) from 2002-03 to 2021-22, excluding past usage from the Wallerawang Power Plant.
- For minor customers: the 20-year rolling average of actual water sales (with a two-year lag) from 2002-03 to 2021-22.
- Minimum Annual Quantity (MAQ) levels as defined in WaterNSW's licence to operate the FRWS issued under the *Water Act 1912 NSW*.

The results are shown below:

Table 23: 2023-24 usage and minimum annual quantity forecast FRWS

Customer	Usage (ML)	Minimum Annual Quantity (ML)*
Fish River – Energy Australia	1,648	8,184.0
Fish River – Raw Water Minor customers	51	18.0
Fish River – Filtered Water Minor customers	97	47.8
Total	1,796	8,249.8

* MAQ (Minimum Annual Quantity) for minor customers is 200KLs for each minor customer multiplied by the number of minor customers. For instance, 18.0 MAQ MLs is derived by multiplying 90 raw water customers by 200KLs per customer. 47.80 MAQ is derived by multiplying 239 filtered water customers by 200KLs per customer

WaterNSW's estimate of the updated high security premium is determined by multiplying the following factors:

- the reliability ratio – which is the ratio of the 1) 20-year rolling average of water allocation rates for high security licences and 2) the 20-year rolling average of water allocation rates for general security licences, with a two-year lag; and
- the conversion factor – which is a fixed factor set by IPART, using information sourced from each valley's water sharing plan. The factor represents the 'units' of general security water required to secure one 'unit' of high security water.

The updated high security premium is shown in the table below:

Table 24: Calculation of updated HS premium

Valley	Updated 20-year average of actual annual water allocations				Reliability Ratio		Conversion factor		High Security Premium
	HS Licences	/	GS Licences	=					
Border	100%	/	44%	=	2.30	X	1.25	=	2.87
Gwydir	100%	/	34%	=	2.90	X	1.40	=	4.06
Namoi	100%	/	42%	=	2.36	X	1.25	=	2.95
Peel	97%	/	55%	=	1.75	X	6.54	=	11.47
Lachlan	82%	/	29%	=	2.82	X	2.50	=	7.04
Macquarie	100%	/	31%	=	3.25	X	1.88	=	6.13
Murray	94%	/	52%	=	1.83	X	1.31	=	2.39
Murrumbidgee	97%	/	55%	=	1.75	X	1.69	=	2.96

WaterNSW's estimate of demand or consumption for infrastructure services for the current, 2022-23 financial year

The WCIR requires WaterNSW to disclose its estimate on current year demand as part of the annual review process.

The recent severe rainfall and flood events in NSW has created significant uncertainty in 2022-23 demand. WaterNSW's forecast of expected demand for the 2022-23 financial year is based on its estimated demand under the 'minimum scenario', which considers:

- the amount of water remaining in our customers' accounts;
- the BoM's forecast to the end of the financial year, including the extent to which rainfall may suppress demand;

- water usage trends observed in similar seasons in the past; and
- Verbal information on expected usage from key/large customers.

As entitlements are typically stable, forecast entitlements are based on year-to-date figures.

These estimates are shown below:

Table 25: 2022-23 usage and entitlements forecast

Valley	2022-23 Year End Usage (ML)	2022-23 YTD Entitlements (ML)*
Border	80,000	266,359
Gwydir	180,000	536,885
Namoi	102,000	265,595
Peel	6,000	46,565
Lachlan	53,000	690,436
Macquarie	50,000	675,129
Murray	1,225,000	2,345,350
Murrumbidgee	1,400,000	2,706,285
Lowbidgee	N/A	747,000
Total	3,096,000	8,279,604

* Entitlement volumes which are billable under the fixed charge. For example, excludes supplementary licences except for the Lowbidgee, where WaterNSW levies a fixed charge on supplementary water holders.

WaterNSW's forecast of expected demand in the FRWS is based on the average year to date monthly consumption during 2023.

The estimates are shown below:

Table 26: 2022-23 usage and minimum annual quantity forecast FRWS

Customer	Usage (ML)	Minimum Annual Quantity (ML)
Fish River – Energy Australia	330	8,184.0
Fish River – Raw Water Minor customers	43	18.0
Fish River – Filtered Water Minor customers	69	47.8
Total	442	8,248.0

* MAQ (Minimum Annual Quantity) for minor customers is 200KLs for each minor customer multiplied by the number of minor customers. For instance, 18.0 MAQ MLs is derived by multiplying 90 raw water customers by 200KLs per customer. 47.8 MAQ is derived by multiplying 239 filtered water customers by 200KLs per customer