Attachment 19

RAB, asset lives, regulatory depreciation and Return on Capital (WACC)

30 September 2024

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1. Introduction

1.1 Summary

The Regulatory Asset Base (RAB) is used to calculate the regulatory depreciation (capital investment / asset life) and return on assets (WACC X RAB) under the IPART Building Blocks Approach.

Under the Greater Sydney Determination, WaterNSW proposes to roll forward the RAB under each Greater Sydney Asset Class, including Dams, Other Storages, Pipelines, Buildings, Major Mechanical & Roads/Minor Civil, Meters, Plant & Machinery, ICT Systems & Systems/Controls & Lease Assets and Vehicles & 5 yearly Inspections, and Desalination planning costs.

Under the Rural Valley determination, WaterNSW proposes to roll forward the RAB by valley and User and Government Share/RAB, with specific short-lived asset RABs for Corporate, IT and other short lived assets. Asset lives are assigned to IPART cost categories which correspond to the asset utilised under the relevant cost category (for example, Dam Safety Expenditure is assigned the asset life of a major dam).

A closing RAB is established in each year of the current and upcoming determination period, which is rolled forward on an annual basis. The closing RAB in each year is calculated as the RAB in the beginning of the year, plus capital expenditure (net of cash capital contributions), minus asset disposals and depreciation. The process is highlighted in the following formula

$Opening\ RAB_{t+1} = Opening\ RAB_t + Actual/Forecast\ Expenditure_t - Disposals_t - Depreciation_t + Inflation_t$

$Inflation = (Opening\ value + 50\%\ of\ capex - 50\ \%\ of\ disposals)\ x\ June\ to\ June\ inflation\ factor$ (only applies to the RAB roll forward to financial year 2024-25)

$Closing\ RAB = Opening\ RAB + Actual/Forecast\ Capex - Actual/Forecast\ Depreciation - Actual/Forecast\ Disposals$

Actual/Forecast expenditure consists of all expenditure incurred by WaterNSW to 2024-25, and forecast capital expenditure from 2025-26 to 2029-30, as outlined in the Pricing Proposal and the capital expenditure attachments (such as Attachment 6).

The RAB is indexed by June-to-June inflation (CPI) for each year of the current period (2020-21 to 2024-25), which includes indexation applied on 50% of the opening value, 50% of the value of capital expenditure (net of cash capital contributions) and 50% of the value of asset disposals (noting that indexation on disposals is subtracted from other indexation additions).

1.2 Greater Sydney RAB Summary

The forecast value of the Greater Sydney RAB at the end of the 2025-30 Determination period in 2029-30 is $3.4 billion in 2024-25 real terms, increasing from $2.3 billion in 2025 in nominal terms, as shown below:

Table 1 – Greater Sydney RAB – RAB Roll Forward

Step 1 – RAB Roll Forward ($millions, $nominal)					
	2020-21	**2021-22**	**2022-23**	**2023-24**	**2024-25**
Opening RAB	$1,707	$1,824	$1,940	$2,077	$2,215
+ Capex/Additions	$85	$45	$67	$111	$137
– Disposals	$0	$0	$0	$0	$22
– Depreciation	$35	$42	$48	$55	$55
+ Indexation*	$66	$113	$118	$81	$68
Closing RAB	**$1,824**	**$1,940**	**$2,077**	**$2,215**	**$2,344**

Table 2 – Greater Sydney RAB – Forecast RAB

Step 2 - Opening RAB at 2024-25 ($millions, $2024-25)					
	2025-26	**2026-27**	**2027-28**	**2028-29**	**2029-30**
Opening RAB	$2,344	$2,430	$2,643	$2,917	$3,179
+ Capex/Additions	$164	$301	$371	$368	$282
– Disposals	$0	$0	$0	$0	$0
– Depreciation	$78	$87	$97	$105	$89
+ Indexation*	$0	$0	$0	$0	$0
Closing RAB	**$2,430**	**$2,643**	**$2,917**	**$3,179**	**$3,371**

The increasing value of the Greater Sydney RAB is mostly driven by significant increases to additions in the RAB for high value capital projects such as Warragamba Dam Climate Resilience and E-flows projects, relative to the current period.

1.2.1 Significant disposals – Greater Sydney

For significant asset sales and write offs, IPART's Asset Disposals Policy Paper 2018 states that IPART will consider any adjustments to the RAB on a case-by-case basis. WaterNSW has adjusted the RAB for one significant asset disposal event in the current period. In 2024-25, $21.5 million in drought planning desalination works will be transferred to Sydney Water Corporation as part of an equity transfer as the responsibility for this function no longer resides with WaterNSW. This is shown below:

Table 3 – SDP disposal to Sydney Water

Financial year nominal $m	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Inflation rate to roll forward RAB (actual to June)	1.60%	-0.30%	3.80%	6.10%	6.00%	3.80%	3.00%
– Desal planning costs - SDP							
Opening value	$0.0	$0.2	$10.8	$14.6	$15.2	$15.8	$16.0
Capex (net of cap cons)	$0.2	$10.6	$3.5	$0.0	$0.0	$0.0	$0.0
Disposals	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$16.0
Allowed depreciation	$0.0	$0.0	$0.2	$0.3	$0.3	$0.3	
Indexation	$0.0	-$0.0	$0.5	$0.9	$0.9	$0.6	
Closing value	**$0.2**	**$10.8**	**$14.6**	**$15.2**	**$15.8**	**$16.0**	**$0.0**
Calculation of allowed depreciation							
Allowed depreciation adjusted for actual inflation	-	-	$0.2	$0.3	$0.3	$0.3	$0.4
– Desal planning costs - IDP							
Opening value	$0.0	$0.2	$2.5	$5.6	$5.6	$5.6	$5.5
Capex (net of cap cons)	$0.2	$2.4	$3.1	$0.0	$0.0	$0.0	$0.0
Disposals	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$5.5
Allowed depreciation	$0.0	$0.0	$0.2	$0.3	$0.3	$0.3	
Indexation	$0.0	-$0.0	$0.2	$0.3	$0.3	$0.2	
Closing value	**$0.2**	**$2.5**	**$5.6**	**$5.6**	**$5.6**	**$5.5**	**$0.0**
Calculation of allowed depreciation							
Allowed depreciation adjusted for actual inflation	-	-	$0.2	$0.3	$0.3	$0.3	$0.4
Closing Balance						**$21.5**	**$0.0**

1.3   Rural Valley RAB Summary

The forecast value of the Rural Valley RAB at the end of the 2025-30 Determination period in 2029-30 is $1.7 billion in 2024-25 real terms, increasing from $1.3 billion in 2025 in nominal terms, as shown below:

Table 4 – Rural Valley RAB Roll Forward

Rural Valleys	Step 1 - RAB Roll Forward (nominal)				
$000	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**
Opening RAB	**$920,776**	**$971,560**	**$1,046,886**	**$1,129,050**	**$1,225,747**
+ Capex/Additions	$54,081	$39,364	$45,057	$81,334	$73,319
- Depreciation	$18,644	$23,899	$26,825	$28,857	$30,499
- Disposals	$20,285	$587	$225	$225	$225
+ Indexation	$35,632	$60,448	$64,158	$44,445	$37,869
Closing RAB	**$971,560**	**$1,046,886**	**$1,129,050**	**$1,225,747**	**$1,306,210**

Table 5 – Rural Valley Forecast RAB

Rural Valleys	Step 2 - Forecast RAB ($2024-25)				
$000	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**2029-30**
Opening RAB	**$1,306,210**	**$1,391,238**	**$1,522,248**	**$1,620,592**	**$1,658,949**
+ Capex/Additions	$113,819	$164,668	$136,149	$78,868	$59,559
- Depreciation	$28,565	$33,433	$37,580	$40,285	$42,107
- Disposals	$225	$225	$225	$225	$225
+ Indexation	$0	$0	$0	$0	$0
Closing RAB	**$1,391,238**	**$1,522,248**	**$1,620,592**	**$1,658,949**	**$1,676,176**

1.3.1 Rural Valley User RAB

The Rural Valley RAB is split between the user RAB (funded by customers), and the Government RAB (funded by Government under the IPART Cost Shares Framework – Impactor Pays).

WaterNSW notes an increasing trend towards costs being allocated to the User RAB over the upcoming determination period compared with the current period. This is due to the following factors:

- Under the 2018 IPART Cost Share Review, IPART attributed 80% of the cost of environmental planning and protection expenditure as well as 80% of dam safety expenditure to the User Revenue Requirement.[1]
- The wind down of Government Funded Projects, such as drought capital expenditure (including disposal of drought capital expenditure to the Government) and higher levels of investment in user funded assets per the IPART Cost Shares Framework.

The Rural Valley User RAB is shown below.

Table 6 – Rural Valley User RAB Roll Forward

Rural Valleys – User RAB	Step 1 - RAB Roll Forward (nominal)				
$000	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RAB	**$352,906**	**$405,277**	**$456,570**	**$514,122**	**$596,310**
+ Capex/Additions	$47,147	$35,440	$40,251	$73,826	$66,434
- Depreciation	$8,440	$9,698	$11,080	$12,359	$13,391
- Disposals	$630	$245	$214	$214	$214
+ Indexation	$14,294	$25,795	$28,595	$20,935	$18,883
Closing RAB	**$405,277**	**$456,570**	**$514,122**	**$596,310**	**$668,022**

The forecast value of the User Share Rural Valley RAB at the end of the 2025-30 Determination period in 2029-30 is $1.0 billion in 2024-25 real terms, increasing from $0.7 billion in 2025 in nominal terms as shown below.

Table 7 – Rural Valley User Forecast RAB

Rural Valleys – User RAB	Step 2 - Forecast RAB ($2024–25)				
$000	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	**$668,022**	**$751,381**	**$875,266**	**$972,182**	**$1,017,545**
+ Capex/Additions	$98,512	$143,131	$119,690	$70,462	$55,676
- Depreciation	$14,939	$19,033	$22,560	$24,884	$26,466
- Disposals	$214	$214	$214	$214	$214
+ Indexation	$0	$0	$0	$0	$0
Closing RAB	**$751,381**	**$875,266**	**$972,182**	**$1,017,545**	**$1,046,541**

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[1] increasing the share from 50/50

1.3.2 Rural Valley Government RAB

Table 8 – Rural Valley RAB – Government RAB Roll Forward

Rural Valleys – Government RAB	Step 1 - RAB Roll Forward (nominal)				
$000	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RAB	**$567,870**	**$566,282**	**$590,316**	**$614,929**	**$629,437**
+ Capex/Additions	$6,934	$3,924	$4,807	$7,508	$6,884
- Depreciation	$10,204	$14,201	$15,745	$16,498	$17,108
- Disposals	$19,655	$342	$11	$11	$11
+ Indexation	$21,337	$34,652	$35,563	$23,510	$18,986
Closing RAB	**$566,282**	**$590,316**	**$614,929**	**$629,437**	**$638,188**

The forecast value of the User Share Rural Valley RAB at the end of the 2025-30 Determination period in 2029-30 is $0.63 billion in 2024-25 real terms, reducing slightly from $0.64 billion in 2025 in nominal terms due to a $19.6 million disposal of a significant asset in 2020-21.

Table 9 – Rural Valley RAB – Government Forecast RAB

Rural Valleys – Government RAB	Step 2 - Forecast RAB ($2024-25)				
$000	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	**$638,188**	**$639,857**	**$646,982**	**$648,410**	**$641,404**
+ Capex/Additions	$15,307	$21,537	$16,459	$8,406	$3,883
- Depreciation	$13,627	$14,401	$15,019	$15,401	$15,641
- Disposals	$11	$11	$11	$11	$11
+ Indexation	$0	$0	$0	$0	$0
Closing RAB	**$639,857**	**$646,982**	**$648,410**	**$641,404**	**$629,635**

1.3.3 Significant disposals – Rural Valleys Government RAB

($19.9M for drought assets transferred to the Government)

For significant asset sales and write offs, IPART's Asset Disposals Policy Paper 2018 states that IPART will consider any adjustments to the RAB on a case-by-case basis. WaterNSW has adjusted the RAB for one significant asset disposal events in the current period. In 2020-21 and 2021-22, $19.9 million of drought infrastructure assets were transferred to the NSW Government under a Ministerial Transfer Order. This is shown in the table below.

Table 10 – Rural Valleys disposals ($000, $nominal)

Activity	Valley	2020-21	2021-22	Total
Drought projects (3 dams)	Border	$4,310	$8.5	$4,318
	Peel	$5,775		$5,775
	Lachlan	$7,270		$7,270
Subtotal		**$17,355**	**$8.5**	**$17,363**
Drought projects (other)	Namoi		$208	$208
	Peel	$221	$33	$255
	Lachlan		$80	$80
	Macquarie	$2,018		$2,018
Drought projects (other)	Namoi		$208	$208
Subtotal		**$2,239**	**$321**	**$2,560**
	Total	**$19,594**	**$329**	**$19,923**

1.3.4 Rural Valley RAB – Long lived assets

WaterNSW's 2021-25 RAB for the Rural valleys consists of a single pooled RAB for new and existing assets split by the Government and User Share and by valley. This means that valley specific capital expenditure will enter the relevant valley RAB using a single weighted average life for both new and existing assets (split by Government and User Share).

WaterNSW notes that the effect of using an average life on a single pooled RAB of long lived assets is to artificially extend the life of short-lived assets such as IT and corporate assets. This produces a pricing outcome where higher RAB revenues are recovered over a longer period of time, artificially placing downward pressure on prices and deferring the impact to future generations, which is not in the long-term interest of customers.

As discussed with IPART during the Water Pricing Framework Review, WaterNSW considers that there was merit in taking a more disaggregated approach to the calculation of WaterNSW's regulatory depreciation allowance by unbundling its RAB into separate asset categories with an asset specific asset life.

Benefits include:

- **Consistent with regulatory precedents and best practice regulation**: Disaggregating the RAB is commonplace and consistent with the approach for most other companies (e.g. Sydney Water, Hunter Water, SDP, all major energy distributors and transmission companies). In IPART's recent 2020 draft determination on Hunter Water prices, IPART agreed with Hunter Water's proposal to disaggregate its RAB to both reduce the economic lives of Hunter Water's infrastructure and increase the depreciation allowance for Hunter Water. This follows IPART's 2008 decision to disaggregate Sydney Water's RABs into 20 subcategories on the basis that the methodology would better reflect the efficiency recover of investment over the life of an asset.

- **Avoid intergenerational equity issues**: Separating out future capex into separate RAB asset categories better aligns to the life of the underlying assets thereby not deferring recovery to future generations.

- **Cost reflective**: as mentioned above, separating out future capex into separate RAB asset categories better aligns to the life of the underlying assets, ensuring that customers who receive a benefit from the asset contribute to the cost of the asset when the asset in service.

- **Ability to benchmark**: as mentioned above, disaggregating the RAB is commonplace and consistent with the approach for most other companies and would facilitate comparisons and benchmarking of asset values against other water infrastructure assets.

- **Long term interests of customers:** More accurate forecasting of cash flows to align to the economic life of the assets results in a pricing calculation which is more equitable, cost reflective and consistent with the long-term interests of customers.

To maintain a balance between the benefits of RAB disaggregation (per above) and administrative simplicity, WaterNSW proposes to establish long-lived (operations capital expenditure) and short-lived (corporate capital expenditure) RABs for each rural valley by Government and User Share over the upcoming determination period.

The Rural Valley RAB for Long lived assets are summarised below, which mostly consists of operations (infrastructure) assets.

Table 11 – Rural Valleys RAB – Long lived assets – Roll Forward

Rural Valleys – Long lived assets	Step 1 - RAB Roll Forward (nominal)				
$000	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RAB	**$920,776**	**$971,560**	**$1,046,886**	**$1,129,050**	**$1,225,747**
+ Capex/Additions	$54,081	$39,364	$45,057	$81,334	$73,319
- Depreciation	$18,644	$23,899	$26,825	$28,857	$30,499
- Disposals	$20,285	$587	$225	$225	$225
+ Indexation	$35,632	$60,448	$64,158	$44,445	$37,869
Closing RAB	**$971,560**	**$1,046,886**	**$1,129,050**	**$1,225,747**	**$1,306,210**

Table 12 – Rural Valleys RAB – Long lived assets – Forecast RAB

Rural Valleys – Long lived assets	Step 2 - Forecast RAB ($2024-25)				
$000	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	**$1,306,210**	**$1,366,744**	**$1,481,635**	**$1,574,774**	**$1,614,760**
+ Capex/Additions	$87,440	$143,252	$123,191	$71,275	$52,625
- Depreciation	$26,681	$28,135	$29,826	$31,064	$31,848
- Disposals	$225	$225	$225	$225	$225
+ Indexation	$0	$0	$0	$0	$0
Closing RAB	**$1,366,744**	**$1,481,635**	**$1,574,774**	**$1,614,760**	**$1,635,311**

Table 13 – Rural Valleys RAB – Long lived assets – RAB Roll Forward User RAB

Rural Valleys – Long lived assets (User RAB)	Step 1 - RAB Roll Forward (nominal)				
$000	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RAB	**$352,906**	**$405,277**	**$456,570**	**$514,122**	**$596,310**
+ Capex/Additions	$47,147	$35,440	$40,251	$73,826	$66,434
- Depreciation	$8,440	$9,698	$11,080	$12,359	$13,391
- Disposals	$630	$245	$214	$214	$214
+ Indexation	$14,294	$25,795	$28,595	$20,935	$18,883
Closing RAB	**$405,277**	**$456,570**	**$514,122**	**$596,310**	**$668,022**

The Long lived RAB Roll Forward and Forecast RAB is shown below by User and Government Share.

Table 14 – Rural Valleys RAB – Long lived assets – Forecast User RAB

Rural Valleys – Long lived assets (User RAB)	Step 2 - Forecast RAB ($2024-25)				
$000	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	**$668,022**	**$731,252**	**$841,816**	**$934,355**	**$981,049**
+ Capex/Additions	$76,834	$125,451	$108,922	$64,183	$49,966
- Depreciation	$13,390	$14,673	$16,168	$17,275	$18,000
- Disposals	$214	$214	$214	$214	$214
+ Indexation	$0	$0	$0	$0	$0
Closing RAB	**$731,252**	**$841,816**	**$934,355**	**$981,049**	**$1,012,800**

Table 15 – Rural Valleys RAB – Long lived assets – RAB Roll Forward Forecast Government RAB

Rural Valleys – Long lived assets (Government RAB)	Step 1 - RAB Roll Forward (nominal)				
$000	2020-21	2021-22	2022-23	2023-24	2024-25
Opening RAB	**$567,870**	**$566,282**	**$590,316**	**$614,929**	**$629,437**
+ Capex/Additions	$6,934	$3,924	$4,807	$7,508	$6,884
- Depreciation	$10,204	$14,201	$15,745	$16,498	$17,108
- Disposals	$19,655	$342	$11	$11	$11
+ Indexation	$21,337	$34,652	$35,563	$23,510	$18,986
Closing RAB	**$566,282**	**$590,316**	**$614,929**	**$629,437**	**$638,188**

Table 16 – Rural Valleys RAB – Long lived assets – Forecast Government RAB

Rural Valleys – Long lived assets (Government RAB)	Step 2 - Forecast RAB ($2024-25)				
$000	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	**$638,188**	**$635,492**	**$639,819**	**$640,419**	**$633,711**
+ Capex/Additions	$10,606	$17,801	$14,269	$7,092	$2,659
- Depreciation	$13,291	$13,462	$13,658	$13,789	$13,848
- Disposals	$11	$11	$11	$11	$11
+ Indexation	$0	$0	$0	$0	$0
Closing RAB	**$635,492**	**$639,819**	**$640,419**	**$633,711**	**$622,511**

1.3.5   Rural Valley RAB – Short lived assets

WaterNSW proposes to establish short-lived RABs for the rural valleys commencing 2025-26 for all short lived assets created from 2025-26.

To ensure consistent treatment with the current period IPART allowance and regulatory depreciation allowance, which was determined under the valley based pooled RABs, all short lived assets that were created between the 2020-21 and 2024-25 financial year will enter the existing long-lived RABs in the current period.

The Rural Valley RAB for short lived assets are summarised below and consists of IT and corporate assets. The short-lived RABs have a starting value of nil in 2025-26 and are rolled-forward to 2029-30 using our capital expenditure forecast for short lived assets.

Table 17 – Rural Valleys RAB – Short lived assets – Forecast RAB

Rural Valleys – Short lived assets	Step 2 - Forecast RAB ($2024–25)				
$000	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	$0	$24,495	$40,613	$45,818	$44,189
+ Capex/Additions	$26,379	$21,416	$12,958	$7,593	$6,934
- Depreciation	$1,884	$5,298	$7,753	$9,221	$10,259
- Disposals	$0	$0	$0	$0	$0
+ Indexation	$0	$0	$0	$0	$0
Closing RAB	$24,495	$40,613	$45,818	$44,189	$40,864

Table 18 – Rural Valleys RAB – Short lived assets – Forecast RAB User Share

Rural Valleys – Short lived assets (User RAB)	Step 2 - Forecast RAB ($2024–25)				
$000	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	$0	$20,130	$33,450	$37,827	$36,497
+ Capex/Additions	$21,678	$17,680	$10,769	$6,279	$5,710
- Depreciation	$1,548	$4,360	$6,392	$7,610	$8,466
- Disposals	$0	$0	$0	$0	$0
+ Indexation	$0	$0	$0	$0	$0
Closing RAB	$20,130	$33,450	$37,827	$36,497	$33,741

Table 19 – Rural Valleys RAB – Short lived assets – Forecast RAB Government Share

Rural Valleys – Short lived assets (Government RAB)	Step 2 - Forecast RAB ($2024–25)				
$000	2025-26	2026-27	2027-28	2028-29	2029-30
Opening RAB	$0	$4,365	$7,162	$7,991	$7,693
+ Capex/Additions	$4,701	$3,736	$2,190	$1,314	$1,225
- Depreciation	$336	$938	$1,362	$1,612	$1,793
- Disposals	$0	$0	$0	$0	$0
+ Indexation	$0	$0	$0	$0	$0
Closing RAB	$4,365	$7,162	$7,991	$7,693	$7,124

2. Asset Lives

Asset lives are used to calculate the RAB depreciation for the IPART regulatory depreciation allowance.

In simple terms, the regulatory deprecation allowance allows WaterNSW to recover its capital investment in equal installments over the useful life of the asset (capital investment / asset live). This calculation has a significant impact on our forecast revenue requirement, as higher levels of proposed capital investments on shorter lived asset may lead to large increases in the regulatory depreciation allowance and revenue requirement over the upcoming determination period.

For the Greater Sydney Determination, WaterNSW proposes to apply the existing RAB subcategories by asset class, including:

- Dams
- Other Storages
- Pipelines

- Buildings

- Major Mechanical & Roads/ Minor Civil

- Meters

- Plant & machinery

- ICT systems & Systems/ Controls & Lease Assets

- Vehicles & 5 yearly Inspections

- Depreciating assets up to 1 July 2021 (consisting of the GS pooled RAB for assets prior to 1 July 2021)

- Land (non-depreciating)

- Desalination Planning

For the Rural Valley Determination, WaterNSW proposes to apply the current methodology, which assigns an asset live to each IPART cost category, with a proposed amendment to ring-fence the calculation of the corporate and IT regulatory depreciation allowance using short-lived RABs from 2025-26 to 2029-30.

WaterNSW has adopted the straight-line method for calculating forecast depreciation of the RAB over the 2025 Determination period for both the Rural Valley and Greater Sydney Determinations, ensuring the value of WaterNSW's assets are depreciated in equal instalments over their useful life.

2.1   Greater Sydney Useful Lives – Existing Assets

The table below sets out the useful lives of each asset class over five years of the determination period for existing in the Greater Sydney Determination. The calculations have been derived by rolling forward the existing asset calculations from 2020-21 to 2024-25.

Table 20 – Greater Sydney Useful Lives – Existing Assets

Asset class	Remaining lives of existing assets
- Depreciating assets up to 1 July 2021	49.5
Dams	197.3
Other Storages	74.5
Pipelines	117.2
Buildings	38.0
Major Mechanical & Roads/ Minor Civil	27.5
Meters	11.7
Plant & machinery	9.9
ICT systems & Systems/ Controls & Lease Assets	4.3
Vehicles & 5 yearly Inspections	3.7

* The asset life for desalination planning costs are excluded from the table above, as the desalination RAB is disposed of under an equity transfer to Sydney Water.

2.2   Greater Sydney Useful Lives – New Assets

The table below sets out the useful lives of each asset class over five years of the determination period for new assets in the Greater Sydney Determination.

Table 21 – Greater Sydney Useful Lives – New Assets

Asset class	Average expected life of new assets
- Depreciating assets up to 1 July 2021	49.5
Dams	200.0
Other Storages	80.0
Pipelines	120.0
Buildings	40.0
Major Mechanical & Roads/ Minor Civil	30.0
Meters	15.0
Plant & machinery	12.0
ICT systems & Systems/ Controls & Lease Assets	8.7
Vehicles & 5 yearly Inspections	5.0

* The asset life for desalination planning costs are excluded from the table above, as the desalination RAB is disposed of under an equity transfer to Sydney Water.

As shown below, from 2025-26 onwards, the major component of our proposed capital expenditure program is on the 30 year "*Major Mechanical & Roads/Minor Civil*" asset class. This is discussed further in the pricing proposal and attachment 6. WaterNSW notes that higher levels of proposed investment on shorter lived assets will result in a larger depreciation allowance for WaterNSW compared to the current 2020-25 determination period.

Table 22 – Components of Greater Sydney Capital Expenditure Program by Asset ($millions, $2024-25)

Asset Class	Average current Determination ($2024-25)	2025-26	2026-27	2027-28	2028-29	2029-30	Total	Average
Dams	$10.0	$36.3	$94.5	$171.5	$209.6	$226.0	$737.9	$147.6
Other Storages	$0.4	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Pipelines	$7.1	$38.0	$33.4	$29.5	$25.9	$12.9	$139.7	$27.9
Buildings	$5.1	$1.8	$4.4	$1.8	$1.1	$1.0	$10.1	$2.0
Major Mechanical & Roads/ Minor Civil	$72.4	$42.9	$128.9	$129.6	$98.3	$17.3	$417.0	$83.4
Meters	$1.5	$1.6	$1.5	$1.5	$1.5	$1.6	$7.7	$1.5
Plant & machinery	$1.4	$3.7	$4.6	$5.8	$4.2	$3.5	$21.8	$4.4
ICT systems & Systems/ Controls & Lease Assets	$14.1	$36.8	$28.4	$26.4	$25.0	$18.0	$134.6	$26.9
Vehicles & 5 yearly Inspections	$1.4	$2.9	$4.9	$4.4	$2.1	$1.3	$15.7	$3.1
Desal planning costs	$3.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Non-depreciating assets (eg land)	$0	$0.3	$0.3	$0.3	$0.3	$0.3	$1.3	$0.3
Total	**$116.4**	**$164.3**	**$300.9**	**$370.8**	**$367.9**	**$281.9**	**$1,485.8**	**$297.2**

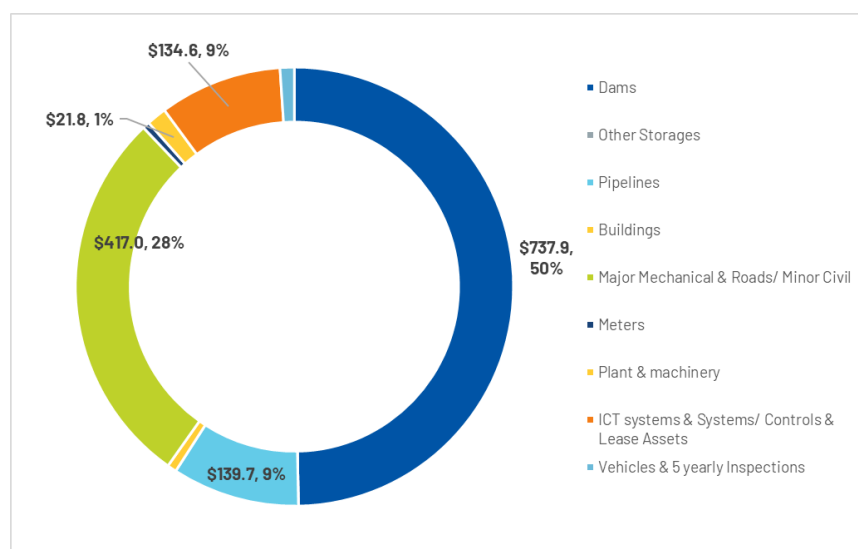Figure 1 – Greater Sydney Capital Expenditure by asset

Table 23 – Greater Sydney Useful Lives – Average Remaining Life (closing RAB / depreciation during the year of both new and existing

Average Remaining Asset life – Greater Sydney (years)						
	2025-26	2026-27	2027-28	2028-29	2029-30	Weighted Avg
Average remaining asset life	31	31	30	30	38	**31.9**

2.3   Rural Valley Useful Lives – New Assets

WaterNSW proposes a continuation of current methodology which assigns an asset live to each IPART cost category with an amendment for corporate and IT regulatory depreciation to be calculated under the newly established short-lived RABs from 2025-26.

The proposed interaction between the IPART cost categories, asset life and the long (operations capital expenditure) and or short-lived (corporate capital expenditure) RAB is shown below:

Table 24 – Rural Valley Useful Lives – New Assets by Activity

Activity	Asset life (years) – new assets	Regulatory Depreciation Calculated Under
Water Delivery & Other Operations	6.0	Long lived RAB (operations capex, insignificant minor amounts forecasted)
Flood Operations	15.0	
Hydrometric Monitoring	15.0	
Water Quality Monitoring	15.0	
Metering and compliance	15.0	
Environmental Delivery	80.0	Long lived RAB (e.g. operations capex)
Corrective Maintenance	80.0	
Routine Maintenance	80.0	
Asset Management Planning	80.0	
Dam Safety Compliance	100.0	

Activity	Asset life (years) – new assets	Regulatory Depreciation Calculated Under
Environmental Planning & Protection	80.0	
Drought projects (3 dams)	100.0	
Drought projects (other)	80.0	
Renewals and Replacement	80.0	
Dam safety compliance on pre 1997 capital projects	100.0	
Structural and other enhancements	80.0	
Corporate Systems	7.0	Short lived RAB (e.g. IT and corporate assets)
Customer support	5.0	
Corporate Systems-Lease	7.0	

The asset live calculations for new assets are shown below by valley and the short or long lived RABs.

Table 25 – Rural Valley Useful Lives – New Assets by valley

WaterNSW Proposed Average Life of Assets 2025-26				
Valley	New Assets-Long lived Asset		New Assets-Short lived Asset	
	User share	Government share	User share	Government share
Border	82	86	7	7
Gwydir	81	84	7	7
Namoi	77	80	7	7
Peel	63	80	7	7
Lachlan	80	80	7	7
Macquarie	70	77	7	7
Murray	91	97	7	7
Murrumbidgee	81	83	7	7
Lowbidgee	80	n/a	7	n/a
North Coast	70	81	7	7
Hunter	81	84	7	7
South Coast	84	90	7	7
Fish River	76	n/a	7	n/a

2.4   Rural Valley Useful Lives – Existing Assets

The asset life calculations for existing assets in the rural valleys are shown below by valley. The calculations have been derived by rolling forward the existing asset calculations from 2020-21 to 2024-25.

Table 26 – Rural Valley Useful Lives – Existing Assets

WaterNSW Proposed Average Life of Assets 2025-26		
Valley	Existing Assets	
	User share	Government share
Border	53	75
Gwydir	42	48

WaterNSW Proposed Average Life of Assets 2025–26		
Valley	Existing Assets	
	User share	Government share
Namoi	46	51
Peel	56	64
Lachlan	56	51
Macquarie	53	53
Murray	45	40
Murrumbidgee	51	32
Lowbidgee	48	n/a
North Coast	66	99
Hunter	69	105
South Coast	44	69
Fish River	56	n/a

*short-lived RABs are not established in 2020-21 to 2024-25.

3. Rate of return

3.1 Proposed method and rate of return

The return on capital covers the cost of servicing our debt and provides a return to our shareholders for their equity investment in our business. It is calculated by multiplying the value of our regulated asset base by the rate of return on capital. WaterNSW is proposing to apply IPART's 2018 Weighted Average Cost of Capital (WACC) method for determining the rate of return on capital.

The WACC is the minimum ('benchmark') rate of return an investor requires to commit capital to an investment given its risk. It is the weighted average of the required return on debt capital and the required average equity capital.

3.1.1 Why is it important?

The return on capital (based on the regulatory asset base multiplied by the WACC) contributes to approximately 30% of the revenue allowance for Greater Sydney and 51% for Rural Valleys that we need to provide bulk water services to meet our customer and statutory obligations.

In determining the appropriate rate of return, regulators seek to set an allowance that is commensurate with the *true* WACC, which must be estimated because it cannot be observed directly. This ensures that customers do not pay more than the efficient cost of capital that the business must pay to finance the assets required to deliver regulated services.

1. If IPART sets the allowed rate of return below the true WACC, the business may not be able to attract the capital it requires to invest in water infrastructure for bulk water services. This could encourage inefficient under-investment and negatively impact on quality of service outcomes for customers.

2. If IPART sets the allowed rate of return above the true WACC, consumers would pay more than the efficient cost of delivering regulated services, and the business would be incentivised to over-invest.

Since neither of these outcomes would promote the long-term interests of customers, IPART should seek to adopt methodologies for estimating the WACC that are as accurate as possible.

In this section, we outline an approach to estimating the WACC based on IPART's standard methodology from the 2018 WACC Method. As part of IPART's methodology, market data will be updated closer to the Draft and Final Determinations, with the cost of debt allowance updated during the determination period.

Therefore the rate of returns proposed in this section should be considered '**placeholders**' as the estimates will be updated during the 2025 Determination review process.

3.2 Our rate of return proposal

We have estimated the rate of return by applying IPART's method for estimating and determining the WACC as published in the IPART Final WACC Report in 2018 (2018 WACC Method).[2] IPART has advised that it will not review the WACC methodology for the upcoming determinations and therefore we have assumed that IPART will maintain its current WACC method for the WaterNSW 2025 Determinations.

IPART's 2018 WACC Method is based on a 'post-tax real' framework. The method sets a fixed cost of equity allowance for the determination period and requires annual updates to the cost of debt during the determination period using updated market information. Whether the revenue impact of the annual cost of debt updates is addressed at each annual price change or held and adjusted at the subsequent determination is a separate consideration that is addressed below.

We consider that IPART's method is a reasonable proxy for our benchmark cost of capital and likely represents the best long term interests of customers for the 2025 WaterNSW determinations. WaterNSW proposes a **placeholder post-tax real WACC of 3.6%** for the 2025 Determination period for **Greater Sydney and the Coastal Valleys**.

The **placeholder post-tax real WACC for the MDB valleys is 4.3%**, which is higher due to the need to transition the current and long-term cost of debt allowances to the trailing average approach adopted by IPART in its standard method.

These placeholder WACCs represent an increase from the allowed rate of return of 3.4% for the 2020 Greater Sydney Determination and 1.8% from the 2021 Rural Valleys Determination. The increase in the placeholder estimates reflect the increase in government bond yields that have occurred since 2021.

Our proposed WACC is based on guidance from IPART in its letter to WaterNSW on 16 May 2024 on how IPART intends to calculate the WACC for the 2025 determinations.[3] In its letter, IPART confirmed that:

- IPART will apply its 2018 WACC method for all rural valleys from July 2025, including those that were previously subject to the ACCC WACC methodology

- The WACC calculations for all water price reviews for Greater Sydney will be based on an immediate change to a 5-year trailing average for current debt

- The WACC calculations for WaterNSW's MDBA valley prices (which have never previously been subject to IPART's WACC method) would commence a 5-year transition to a 5-year trailing average for current debt and a 10-year transition to a 10-year trailing average for long-term debt in the first year of the 2025 price determination.

Table 27 below presents WaterNSW's proposed placeholder WACC used in our calculation of the proposed revenue requirement in this pricing proposal for Greater Sydney and Coastal Valleys (North Coast, South Coast and Hunter Valley) by applying IPART's standard WACC method.

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[2] See *IPART Review of our WACC method – Final Report 20018*. https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/investigation-administrative-legislative-requirements-sea-wacc-methodology-2017/final-report-review-of-our-wacc-method-february-2018.pdf
[3] IPART letter to the WaterNSW CEO on 16 May 2024 on *WACC implementation for 2025 price review*.

Table 27 – Proposed WACC for the 2025 Determination period – Greater Sydney and Coastal Valleys

WACC Parameter	Current	Long-term	Midpoint
Nominal risk free rate	3.0%	2.6%	2.8%
Inflation forecast	2.5%	2.5%	2.5%
Debt margin	2.4%	2.4%	2.4%
Benchmark gearing	60%	60%	60%
Market risk premium	8.2%	6.0%	7.1%
Gamma	0.25	0.25	0.25
Corporate tax rate	30%	30%	30%
Equity beta	0.7	0.7	0.7
Cost of equity (nominal post-tax)	8.7%	6.8%	7.8%
Cost of equity (real post-tax)	6.1%	4.2%	5.1%
Cost of debt (nominal pre-tax)	5.4%	5.0%	5.2%
Cost of debt (real pre-tax)	2.8%	2.4%	2.6%
Nominal Vanilla WACC	6.7%	5.7%	6.2%
Post-tax real WACC	4.1%	3.1%	**3.6%**

Note: All estimates rounded to one decimal place.

The placeholder WACC for the rural MDB valleys is higher than the place holder WACC in Table 27 above. This is because in the previous determination for the rural MDB valleys, IPART was required to use the ACCC's WACC method to set the allowed rate of return (this is discussed in more detail in later in this section). The ACCC WACC method is to use an 'on the day' approach to set the cost of debt component of the WACC allowance. By contrast, IPART's 2018 WACC method involves setting the current cost of debt allowance using a 5-year trailing average, and the long-term cost of debt allowance using a 10-year trailing average.

A benchmark efficient business that sought to match its cost of debt as closely as possible to the allowance set using ACCC approach would need to refinance its entire debt portfolio at the start of each regulatory period, at the prevailing market cost of debt at that time. However, a benchmark efficient business that sought to match its cost of debt to the allowance set using the IPART approach would stagger the issuance of debt so that only a fraction of its debt matures each year. Our view is that the latter approach (consistent with the IPART method) would be more prudent than the former (on the day approach), as it would minimise the business's exposure to refinancing risk. Indeed, this was the main rationale for IPART's adoption of the trailing average approach in 2018.

A benchmark efficient business that had arranged its debt to match the allowance set using the ACCC method as closely as possible at the last regulatory period could not refinance its debt immediately to match IPART's trailing average allowance. A transitional period would be required to allow the business to gradually unwind its existing debt positions and construct a debt portfolio with debt issued on a staggered maturity basis. IPART also recognised this in its 2018 WACC method.

As such, what is required are a set of transitional arrangements whereby, for the forthcoming regulatory period for the rural MDB valleys:

1. The current cost of debt allowance is set equal to the prevailing market cost of debt in the first year of the regulatory period, with a gradual transition to a 5-year trailing average over 5 years, and

2. The long-term cost of debt allowance is set equal to the prevailing market cost of debt in the first year of the regulatory period, with a gradual transition to a 10-year trailing average over 10 years.

This is consistent with the approach set out in IPART's 16 May 2024 guidance to WaterNSW.

The resulting placeholder WACC for the MDB valleys (for the first year of the 2025 determination period – subject to changes in the cost of debt that might arise through IPART's cost of true-up decision as discussed below) is presented below in Table 28.

Table 28 – Proposed WACC for the 2025 Determination period – Rural Valleys (excl. Coastal Valleys)

WACC Parameter	Current	Long-term	Midpoint
Nominal risk free rate	3.3%	3.3%	3.3%
Inflation forecast	2.5%	2.5%	2.5%
Debt margin	2.7%	2.7%	2.7%
Benchmark gearing	60%	60%	60%
Market risk premium	8.2%	6.0%	7.1%
Gamma	0.25	0.25	0.25
Corporate tax rate	30%	30%	30%
Equity beta	0.7	0.7	0.7
Cost of equity (nominal post-tax)	9.0%	7.5%	8.3%
Cost of equity (real post-tax)	6.4%	4.9%	5.6%
Cost of debt (nominal pre-tax)	6.0%	6.0%	6.0%
Cost of debt (real pre-tax)	3.4%	3.4%	3.4%
Nominal Vanilla WACC	7.2%	6.6%	6.9%
Post-tax real WACC	4.6%	4.0%	**4.3%**

Note: All estimates rounded to one decimal place.

The placeholder WACCs in Table 27 and Table 28 will be updated by IPART in its final determination based on market data available at that time.

4   How to pass through annual changes in the cost of debt

Under IPART's trailing average approach for determining the allowances for the long-term and current cost of debt, IPART must update its decision on the cost of debt each year.[4]

IPART has indicated that it would decide whether to reflect the annual updates of the cost of debt allowance through annual price adjustments or via an end-of-period true-up on a case-by-case basis, as part of its review process. IPART indicated that in making this decision it would have regard to any evidence the regulated firm or its customers put forward to support one approach or the other, with neither option being viewed as the default.

WaterNSW proposes that IPART allow annual updates for the Greater Sydney and Rural Valleys determinations. We note that if IPART accepts WaterNSW's proposal to move to a revenue cap form of control, annual changes in the cost of debt could easily and mechanistically be incorporated into the annual price change process.

5   Applying IPART's standard WACC method for MDB Valleys

As noted above, for the 2025 Determinations, IPART will regulate the MDB valleys based on NSW state legislation rather than Commonwealth legislation.

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[4] IPART Review of our WACC method – Final Report, February 2018. Page 38.

In previous Rural Valleys determinations, the economic regulator (IPART in 2021 and 2017 and the ACCC in 2014) was required to apply the *Cth Water Charge Rules 2010* (or their predecessor the *Cth Water Charge Infrastructure Rules*) in setting WaterNSW's prices.

A requirement under the *Water Charge Rules 2010* was that the regulator was to set the WACC by applying pricing principles established by the ACCC based on an 'on the day' methodology (i.e. no trailing averages or an equal weighting of current and long-term interest rates or other market parameters) and specified certain values for the costs of equity and debt (e.g. an equity beta of 0.7 and a gearing ratio of 60%) that the regulator was required to apply.

A downside of the (ACCC's) approach is that the WACC is set based on the interest rate "on the day" that does not take into account longer term interest rates (as IPART's standard method does). This was no more evident than in the 2021 Determination where the on the day methodology resulted in a WACC of 1.8% derived from historically low interest rates. While this was a good outcome for customers in 2021, it was not sustainable and results in upward cost pressures as interest rates have risen.

For the 2025 Determinations, IPART has advised that it will apply its standard WACC method (including any transitional arrangements) that also applies to the other NSW water utilities. This will bring alignment to the WACC calculation across the state to provide a more consistent investment framework across the NSW water sector.