Disaggregating the Greater Sydney RAB for future capex

Disaggregating the RAB

WaterNSW's current regulated asset base (RAB) for Greater Sydney bulk water services consists of a single pooled RAB for new and existing assets under previous IPART determinations. All capital expenditure is rolled into the RAB using a single weighted average life for both new and existing assets. These assumptions were applied by WaterNSW to roll forward the Greater Sydney RAB to 2024 as proposed in the 2019 Greater Sydney Pricing Proposal.

In its Issues Paper, IPART sought feedback from stakeholders on whether there was any 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.

In response to the 2019 Issues Paper, WaterNSW stated that a detailed depreciation review could not be undertaken with sufficient robustness in the time available to warrant its consideration for the 2020 determination. WaterNSW stated that although it did not undertake a detailed disaggregation of the RAB, it has provided a detailed disaggregation of its forecast capital expenditure by asset class, which could be used by IPART to establish asset specific RABs for future capex.

WaterNSW would like to clarify that its comments to the 2019 Issues Paper were focused on the difficulties of splitting the existing RAB into asset classes. WaterNSW notes that there are several challenges in obtaining an accurate split of this nature. For example, the initial RAB value for the former Sydney Catchment Authority (SCA) did not represent the aggregation of the accounting value of its physical assets and hence it is not possible to identify the specific assets contributing to the initial RAB and in what proportion.

However, since the release of the 2019 Issues Paper, WaterNSW has undertaken a more detailed review of the benefits of disaggregating the forward-looking RAB. In particular, the benefits of a more comprehensive and detailed calculation for the regulatory depreciation allowance of *new assets*, future capex and any long-term benefits to the customer.

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. This produces a pricing outcome where higher RAB revenues are recovered over a longer period of time, which is not in the long-term interest of customers.

Although WaterNSW is not proposing to split the existing RAB by asset class at this time, WaterNSW supports the creation of asset specific RABs to calculate the regulatory depreciation allowances for future capex and new assets.

WaterNSW believes that there are several benefits in establishing asset specific RABs for future capex which could create a precedent for future regulatory decisions:

- **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[1]. 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:** WaterNSW's proposal is estimated to result in a revenue increase of approx. $4.3 million p.a. for Greater Sydney over the upcoming determination period. The bringing forward 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.

WaterNSW has grouped the asset classes presented to IPART in the 2019 Greater Sydney Pricing Proposal to form several proposed RABs for future capex and new assets. The grouping, as shown in the table below, results in RABs with weighted average lives that better reflect the economic lives of different types of assets.

[1] https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-metro-water-prices-for-hunter-water-corporation-from-1-july-2020/publications-prices-for-hunter-water-corporation-from-1-july-2019/draft-report-review-of-prices-for-hunter-water-corporation-from-1-july-2020-10-march-2020.pdf

Table 1 – Grouping of Asset Classes

Proposed RAB	Includes asset classes:	Weighted Average Asset Life (years) - disaggregation	Weighted Average Asset Life (years) - aggregated
Dams and Other Storages	•Dams •Other Storages	**99.7**	**61**
Meters	•Meters	**15.0**	
Corporate Assets	•IT systems •Vehicles	**5.9**	
Buildings	•Buildings	**40.0**	
Systems, controls and other equipment	•Systems / Controls •Plant & machinery	**10.6**	
Pipelines	•Pipelines	**80.0**	
Mechanical and civil assets	•Major Mechanical •Roads/Minor Civil •Major facilities	**30.0**	
Other	•5 yearly inspections	**5.0**	

In contrast, the current approach of a single RAB would apply a single weighted average asset life of approximately 61 years to all assets as per above, which may not adequately reflect variation in asset life between different asset classes.

The revenue impact of disaggregating the future RAB in this way is presented in Table 2 below. An increased depreciation allowance drives a **2.1% ($4.3m p.a.)** increase in revenues over the upcoming determination period which will be offset in the longer term by a lower return on RAB. The impacts below assume that shared corporate capex is allocated to the determinations using salaries as an allocator as per WaterNSW's pricing proposal.

Table 2– Impact of Disaggregating the Future RAB ($millions, $2019-20)

	Aggregated RAB	Disaggregated RAB	Variance ($, %)
Average Revenue Requirement FY20-24	202.10	206.38	$4.29 (2.1%)

*We have assumed a WACC of 3.2% for both our pricing proposal inputs and the scenarios. This is to align with the February 2020 WACC market updates and the 2020 Draft Determination for Hunter Water Prices and to present a more accurate assessment of the marginal impacts of WaterNSW's proposal

Tables 3 and 4 compare WaterNSW's RAB roll forward as initially presented in its 2019 Greater Sydney Pricing Proposal to the total RAB roll forward that would result from disaggregating the RAB. These demonstrate that the increased revenue requirement is primarily driven by increased depreciation.

Appendix A contains the RAB roll forwards of each proposed future RAB. An internal spreadsheet is also attached to this submission for IPART's consideration.

Existing assets, corporate assets, and mechanical and civil assets are the key drivers of this depreciation.

Table 3- RAB Roll Forward - Greater Sydney Pricing Proposal ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	1,820	1,935	2,117	2,295
Plus: Capex (net of cap cons)	147	217	217	101
Less: Asset Disposals	0.5	0.5	0.5	0.5
Less: Regulatory depreciation	32	35	38	41
Closing RAB	**1,935**	**2,117**	**2,295**	**2,356**

Table 4 – Sum of RAB Roll Forwards with a Disaggregated RAB ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	1,820	1,933	2,111	2,283
Plus: Capex (net of cap cons)	147	217	217	101
Less: Asset Disposals	0.5	0.5	0.5	0.5
Less: Regulatory depreciation	33	39	45	49
Closing RAB	**1,933**	**2,111**	**2,283**	**2,334**

WaterNSW notes that the disaggregation of the future Greater Sydney RAB will affect the marginal revenue impact resulting from WaterNSW's proposal to allocate shared corporate capex to Greater Sydney based on totex instead of salaries. This is discussed in WaterNSW's separate submission on this issue.

The below table shows the effect of changing the allocator of corporate wide capex from salaries to totex with a disaggregated RAB as proposed by WaterNSW.

The revenue impact to Greater Sydney with the change in RAB methodology is using salaries as an allocator is as presented in Table 2 (2.1%).

The combined revenue impact to Greater Sydney of both a change in RAB methodology and change in allocation driver is 0.9% (as shown in the last row), marginally higher than the revenue impact under an aggregated RAB of 0.3%.

Table 5 – Impact of updating our cost allocation with disaggregated future RABs ($millions, $2019-20)

Segment	Greater Sydney Allocation *	WAMC Allocation	Rural Valley Allocation
% allocation (Salaries)	37% ($36.47)	36% ($24.71)	28% ($32.81)
% allocation (Totex)	63% ($59.01)	13% ($12.27)	24% ($22.71)
% Variance	+26% ($22.54)	-23% (-$12.44)	-4% (-$10.10)
Marginal Revenue Impact ($m, %) - Salaries (disaggregated RAB)	**$3.03 (1.5%)**	**$3.99 (15.0%)**	• **Immaterial marginal impact at determination level.** • **Totex represents a more reliable and stable driver to allocate corporate capex within the Rural Valley Pricing Regions.**
Marginal Revenue Impact ($m, %) - Totex (disaggregated RAB)	**$4.85 (2.4%)**	**$2.01 (7.5%)**	
Revenue Impact of change in allocation ($m, %) (disaggregated RAB)	**$1.83 (0.9%)**	**-$1.98 (-7.4%)**	

*We have assumed a WACC of 3.2% for both our pricing proposal inputs and the scenarios. This is to align with the February 2020 WACC market updates and the 2020 Draft Determination for Hunter Water Prices and to present a more accurate assessment of the marginal impacts of WaterNSW's proposal

Appendix B contains the RAB roll forwards of each proposed future RAB including the effect of changing the allocator of corporate wide capex from salaries to totex.

Appendix A: Disaggregated RAB Roll Forwards (salaries allocator for corporate capex)

Table A.1 – Sum of RAB Roll Forwards with a Disaggregated RAB ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	1,820	1,933	2,111	2,283
Plus: Capex (net of cap cons)	147	217	217	101
Less: Asset Disposals	0.5	0.5	0.5	0.5
Less: Regulatory depreciation	33	39	45	49
Closing RAB	**1,933**	**2,111**	**2,283**	**2,334**

Table A.2 - Roll forward of RAB Existing at 2019-20 ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	1,820	1,789	1,759	1,728
Plus: Capex (net of cap cons)	0	0	0	0
Less: Asset Disposals	0.5	0.5	0.5	0.5
Less: Regulatory depreciation	30	30	30	30
Closing RAB	**1,789**	**1,759**	**1,728**	**1,697**

Table A.3 – Dams and Other Storages RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	19	67	109
Plus: Capex (net of cap cons)	19	48	44	26
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.1	0.4	0.9	1.2
Closing RAB	19	67	109	134

Table A.4 – Meters RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	1	2	3
Plus: Capex (net of cap cons)	1	1	1	1
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.0	0.1	0.2	0.3
Closing RAB	1	2	3	4

Table A.5 – Corporate Assets RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	13	19	23
Plus: Capex (net of cap cons)	14	9	8	9
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	1.2	3.1	4.6	6.1
Closing RAB	13	19	23	26

Table A.6 – Buildings RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	7	9	10
Plus: Capex (net of cap cons)	7	2	2	2
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.1	0.2	0.2	0.3
Closing RAB	7	9	10	11

Table A.7 – Systems, controls and other equipment RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	5	8	11
Plus: Capex (net of cap cons)	6	4	3	2
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.3	0.7	1.0	1.3
Closing RAB	5	8	11	12

Table A.8 - Pipelines RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	28	130	242
Plus: Capex (net of cap cons)	28	104	114	14
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.2	1.0	2.4	3.2
Closing RAB	28	130	242	253

Table A.9 - Mechanical and civil assets RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	71	116	156
Plus: Capex (net of cap cons)	72	48	45	46
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	1.2	3.2	4.8	6.3
Closing RAB	71	116	156	196

Table A.10 – Other RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	0	0	1
Plus: Capex (net of cap cons)	0	0	0	0
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.0	0.1	0.1	0.2
Closing RAB	0	0	1	1

Appendix B: Disaggregated RAB Roll Forwards (totex allocator for corporate capex)

Table B.1 – Sum of RAB Roll Forwards with a Disaggregated RAB ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	1,826	1,944	2,124	2,298
Plus: Capex (net of cap cons)	152	222	221	104
Less: Asset Disposals	0.5	0.5	0.5	0.5
Less: Regulatory depreciation	34	41	47	52
Closing RAB	**1,944**	**2,124**	**2,298**	**2,350**

Table B.2 - Roll forward of RAB Existing at 2019-20 ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	1,826	1,795	1,764	1,733
Plus: Capex (net of cap cons)	0	0	0	0
Less: Asset Disposals	0.5	0.5	0.5	0.5
Less: Regulatory depreciation	30	30	30	30
Closing RAB	**1,795**	**1,764**	**1,733**	**1,702**

Table B.3 – Dams and Other Storages RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	19	67	109
Plus: Capex (net of cap cons)	19	48	44	26
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.1	0.4	0.9	1.2
Closing RAB	19	67	109	134

Table B.4 – Meters RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	1	2	3
Plus: Capex (net of cap cons)	1	1	1	1
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.0	0.1	0.2	0.3
Closing RAB	1	2	3	4

Table B.5 – Corporate Assets RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	17	27	33
Plus: Capex (net of cap cons)	19	14	13	12
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	1.6	4.4	6.6	8.7
Closing RAB	17	27	33	37

Table B.6 – Buildings RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	7	9	10
Plus: Capex (net of cap cons)	7	2	2	2
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.1	0.2	0.2	0.3
Closing RAB	7	9	10	11

Table B.7 – Systems, controls and other equipment RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	5	8	11
Plus: Capex (net of cap cons)	6	4	3	2
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.3	0.7	1.0	1.3
Closing RAB	5	8	11	12

Table B.8 - Pipelines RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	28	130	242
Plus: Capex (net of cap cons)	28	104	114	14
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.2	1.0	2.4	3.2
Closing RAB	28	130	242	253

Table B.9 - Mechanical and civil assets RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	71	116	156
Plus: Capex (net of cap cons)	72	48	45	46
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	1.2	3.2	4.8	6.3
Closing RAB	71	116	156	196

Table B.10 – Other RAB Roll Forward ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24
Opening RAB	0	0	0	1
Plus: Capex (net of cap cons)	0	0	0	0
Less: Asset Disposals	0	0	0	0
Less: Regulatory depreciation	0.0	0.1	0.1	0.2
Closing RAB	0	0	1	1