

Submission to the Independent Pricing and Regulatory Tribunal

**Response to the IPART Draft Determination on the review of
bulk water prices for WaterNSW in the Rural Valleys from
1 July 2021**

16 April 2021



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Attachments:

1. Cold Water Pollution Options Study Brief & Regulatory Requirements (Initial Submission)
2. Cold Water Pollution Mitigation Options Development and Assessment All-in-One Business Case – Board Approved
3. Chaffey Dam environmental offset information package

1. Introduction

WaterNSW is pleased to respond to IPART's Draft Determination on the review of regulated bulk water charges for Rural Valleys from 1 July 2020 (the "**Draft Determination**") published on 16 March 2021.

WaterNSW continues to support the pricing proposal we submitted to IPART on 30 June 2020 (our "**Pricing Proposal**" or "**original proposal**") and as updated as part of our response to the IPART Issues Paper where four years of expenditure was requested by IPART under a request for information issued by IPART¹ (our "**four-year proposal**"). This submission does not seek to repeat the contents of our pricing proposal. Accordingly, we have only provided additional information to address the issues raised in the Draft Determination where we consider additional clarity will be useful to stakeholders and IPART.

While we consider the Draft Determination generally represents a well-balanced approach to the regulation of our Rural Valleys bulk water prices, we provide specific comments on a number of issues or concerns that we have identified. These key issues are summarised below and expanded on in the body of this submission.

Operating expenditure

The consultant's total proposed reductions of \$23.7 million over the 2021 Determination period are based on a combination of direct reductions and top-down efficiencies. These reductions in many cases are unachievable and do not recognise the increased demands on our organisation to increase (not decrease) our focus on maintaining or improving our performance to meet regulatory and customer service obligations. The justification and transparency of the "efficiency" saving percentages is insufficient to enable Water NSW to thoroughly critique Atkin's judgements.

In particular the catchup efficiencies fail to consider the operating environment Water NSW was operating in over the last four years, including assisting customers through drought and assisting the NSW Government with policy changes. As we have not had visibility as to which firms are comparable benchmark peers, and whether or not they operate in a comparable regulatory and operating environment to WaterNSW, we see these adjustments as being unsubstantiated.

- **Direct adjustments** - WaterNSW considers that the recommended direct operating expenditure reductions relating to multiple scope items such as reductions in direct salary costs, land tax, environmental expenditure have not been substantiated.
 - **Labour cost reductions** – IPART has proposed to reduce our direct salaries expenditure by \$3.9 million over the 2021 Determination period of which \$1.7 million relates to labour cost reductions excluding flood operations. WaterNSW considers the proposed reductions are not appropriate or achievable on the following grounds:
 - IPART has not considered our proposed reductions in total expenditure. Our pricing proposal results in a 3% reduction in total expenditure over the 2021 Determination period relative to 2019-20;
 - IPART has not assessed the reasons for the increase in direct labour nor has IPART considered the offsetting reductions in overhead costs. Compared to the 2017 Determination period, WaterNSW has implemented significant improvements to our cost coding framework and timesheet reporting practices. Reductions in overhead costs

¹ See <https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-rural-water-waternsw-rural-bulk-water-prices-from-1-july-2021/submissions-issues-paper-waternsw-rural-bulk-water-prices-from-1-july-2021/online-submission-waternsw-a.-george-16-oct-2020-165139607.pdf>

have been offset by increases in direct costs due to improvements in direct cost coding and increases in staff utilisation; and

- IPART has not considered the benefits of implementing a combined WaterNSW Enterprise Bargaining Agreement (EBA) and we question whether this has also been incorporated in the proposed catch-up efficiencies.
- **Flood operations** – IPART has reduced our flood operations proposal by \$2.2 million and has only allowed \$0.09 million in direct labour to fund the rural valley flood operations activity using 2019-20 as the base year. Not only is 2019-20 an inappropriate base year to set the 2021-2025 flood operations allowance due to the drought conditions at the time, but WaterNSW would also be unable to discharge its obligations under section 7 of the *Water NSW Act (NSW) 2014* to undertake flood mitigation and management based on this level of funding. We note the recent floods are likely to increase our costs well above the levels allowed by IPART in the Draft Determination.
- **Environmental Planning and Protection expenditure** – WaterNSW considers that the \$1.9 million reduction to our proposed Environmental Planning and Protection expenditure due to the misclassification of procurement costs should not be applied. The procurement management and purchasing function is one of the most important business support functions leading the purchasing of goods, services and works from external parties and sources. It is a vital part of ensuring WaterNSW receives value for money for services procured from the market and is key to achieving efficient supplier cost outcomes. There has been no “increase” in procurement spend after correcting for the misclassification – in fact, WaterNSW’s procurement function has been through a transformation program and operating model review over the recent determination period.
- **Top-down efficiencies (operating)** – We have concerns with IPART’s approach to determining its top-down ‘catch-up’ efficiency adjustments and request that these are revisited by IPART.
 - **Catch-up efficiencies** – Atkins has recommended \$5.5 million of catch-up efficiencies over the four years based on a catch-up efficiencies of 1.1% per annum (increasing to 4.33% per annum in 2024-25). We consider these efficiencies to be arbitrary and unachievable. They rely on a benchmarking analysis to set an efficiency ‘frontier’ that has not been undertaken and therefore lacks theoretical foundation. It also fails to consider the operating and regulatory environment WaterNSW has been operating in. For example, any the benchmarked entities would not have been operating throughout a drought and would likely not be operating in the same regulatory environment. It is also unlikely that the benchmark database has catered for the productivity implications of COVID 19.

Even accepting IPART’s findings and the results of any benchmarking analysis, there are still issues concerning the potential for double-counting when applying IPART’s ‘scope adjustments’:

- We have concerns over the precedent this approach sets and the impact it will have on businesses with respect to assessing future regulatory allowances (and therefore the incentives for efficiency) in future IPART Determinations when severing ties from the current ‘revealed costs’ methodology. We also seek clarity as to the calculation methodology and the modelling used, as without this information the adjustment can only be arbitrary.
- As a minimum, uncontrollable costs of \$26.9 million should be excluded from the base operating expenditure to which catch-up efficiencies are applied. These costs include compulsory Treasury Managed Fund insurance contributions for our infrastructure assets, land tax payments payable to the NSW Revenue Office, the dam safety levy and audit costs and fees. To the extent that these costs are outside of our control and/or are required by law, they should be excluded from the base operating expenditure to which IPART applies its catch-up efficiency adjustments.

WaterNSW considers the role of benchmarking and catch-up efficiencies should not be driven by the approach of one particular expenditure consultant and should instead be the product of a detailed review by IPART of efficiency incentives over a longer period of time based on an approach that is understood by all stakeholders (i.e. through detailed consideration as part of IPART's current review of how it sets water prices).

- **Continuing efficiencies** - WaterNSW proposes that when determining a continuing efficiency target, IPART should:
 - Give most weight to the measured productivity of the utility industry (rather than the market sector) since the utility industry most closely reflects the input and output characteristics of water businesses; and
 - Give most weight to multifactor productivity estimates over the most recent historical years (rather than 40 years) in order to produce more realistic estimates of the scope for productivity gains over the forthcoming regulatory period.

Based on the evidence provided above, WaterNSW proposes that a continuing efficiency target of 0-0.35% per annum, rather than the 0.7% per annum should be adopted in the Draft Determination. This matter is addressed in detail in Appendix 5.

- **Cold water pollution** – In our response to the Atkins draft efficiency report, WaterNSW proposed additional costs of \$3.75 million to address cold water pollution requirements in our Works Approval. However, the matter was not specifically addressed in the Draft Determination and Atkins sought more information on the proposed expenditure. To assist IPART and Atkins in their deliberations, WaterNSW has provided a detailed business case on the need for investment in cold water pollution-mitigating measures. This additional information is provided in Attachment 2.

Capital expenditure

Atkins has proposed capital expenditure reductions of \$72.1 million, or 19% relative to our proposed capital expenditure program. WaterNSW provides the following comments on IPART's direct reductions and its approach to applying top-down efficiencies.

- **Fish Passageways** - WaterNSW submits that direct capital cost reductions of \$56.4 million on Fish Passage offsets overstate the impacts of potential deliverability concerns. WaterNSW has revisited its cost and timing estimates and proposes that some reduction to fish passageway expenditures is appropriate.

WaterNSW notes IPART's concerns over the deliverability of our fish passageway program; however, the significant reductions to our proposed program would leave WaterNSW significantly under-funded to meet our regulatory obligations for fish passage offsets.

As discussed in Appendix 2, WaterNSW proposes a revised estimate of **\$43.1 million** as the prudent and efficient expenditure for fish passageways for the 2021 Determination period, reflecting a realistic delivery timeline. This expenditure will enable WaterNSW to meet our legislative obligations relating to fish passageways and therefore we request that IPART reviews and approves the revised program in its Final Decision.

- **Top-down efficiencies (capital)** - WaterNSW considers that the total efficiency reductions in capital expenditure of \$16.6 million are unachievable without compromising our financial and service standard outcomes. The consultant has provided less than two pages in the Draft Report to justify \$16.6 million of 'top-down efficiencies' for capital expenditures, with the analysis largely drawing on outdated international studies that do not readily reflect WaterNSW's circumstances.

IPART has also proposed catch-up efficiencies of between 2.1% to 7.4% per annum for our capital expenditures over the 2021 Determination period. We have concerns that IPART's decision has not taken into account progress on the development of a number of our capital

processes. WaterNSW considers that IPART should give further consideration to our position as a relatively young organisation, and questions whether the significant catch-up efficiencies that have been proposed are achievable.

WaterNSW's views on continuing efficiencies apply equally to capital and operating expenditures (as discussed above).

- **Reprofiling WAMC corporate capital expenditure** - IPART has proposed a 19% or \$6.9 million reduction in actual corporate capital expenditure in the WAMC determination to be reallocated to the other determinations (i.e. the Rural Valleys, Greater Sydney and Broken Hill Determinations). We are concerned that the decision to reprofile the WAMC corporate capex is not reflective of the costs of providing corporate systems and assets to the WAMC staff base. Notwithstanding, should IPART decide to reallocate WAMC corporate capex to the other determinations, including Rural Valleys as the subject of this submission, we request that the reallocation to the Rural Valleys needs to occur during the 2021 Determination period as required under the Water Charge Rules 2010 and that it should be revenue neutral to WaterNSW over the next four years.
- **WAVE capital expenditure** - In our Rural Valleys and WAMC pricing proposals, the WAVE program capital expenditure of \$39.9 million was understated by approximately \$3 million due to the exclusion of capitalised overheads in the program estimate. WaterNSW is seeking the inclusion of the capitalised overheads in the two final determinations (using the split between determinations as recommended by Atkins per the efficiency report) pro-rated between 2020-21 to 2022-23. The inclusion of the full costs of the program are integral to ensuring that the benefits included in the pricing proposals can be delivered.
- **Chaffey Dam environmental offsets** - WaterNSW is proposing to spend \$1.5 million in capital expenditure over the 2021 Determination period to meet the environmental approvals related to the Chaffey Dam Upgrade and Augmentation project, which was completed in 2016. We request that the additional capital be included in the 2021-25 IPART allowances.

The Chaffey Dam Upgrade and Augmentation (Stage 2) project involved raising the dam wall to enable it to store more water (62,000ML to 100,000ML) and to secure permanent water supplies for Tamworth and Peel Valley water users. The dam was also upgraded to meet NSW Dams Safety Committee standards for extreme floods. Detailed information on the justification for the project and the associated costs is provided in Attachment 3 of this response.

- **Reduction in Murrumbidgee Capital Expenditure** - A recent internal review of the Murrumbidgee capital program called into question the prudence of WaterNSW undertaking works on a 'legacy' fishway at Yanco Weir. There are also concerns that a future Yanco Sustainable Diversion Limit Adjustment Mechanism (SDLAM) project may render the works obsolete. WaterNSW considers it prudent to request the removal of the project from the capital allowances, resulting in a \$3.92 million reduction to the Murrumbidgee renewals provision.
- **Volatility allowance reductions** - WaterNSW does not support IPART's recommended approach to discontinue funding a risk transfer product (RTP) and to instead adopt a self-insurance approach to funding volume volatility for the Rural Valleys. IPART's proposed approach exposes WaterNSW to the financial risk of having to leverage our balance sheet to fund the under recovery of revenue for an undefined period of time. Financiers are unlikely to accept this credit risk without a significant increase in our cost of debt.

Self-insurance in no way would provide WaterNSW with a reasonable opportunity to recover its efficient costs over the upcoming regulatory period. It would require the Tribunal to commit to an approach that could span multiple regulatory periods, which IPART has recognised on many occasions that it is not possible to bind a future Tribunal under existing legislation. Even if applied over multiple regulatory periods, the approach would not ensure WaterNSW would recover its prudent and efficient costs due to error given the UOM balance is based on a forward looking theoretical assessment of the expected performance of the 20-year rolling average and subject to a high degree of forecasting risk.

- IPART’s proposed approach assumes that WaterNSW would only contribute to the payment of interest charged on the loan and that we would not accumulate significant under recovery of revenue. It does not consider the likelihood of low extractions events during the 2021 Determination period or the forecasting risks associated with the 20-year rolling average which is assigned to WaterNSW. In addition, the approach is inconsistent with the National Water Initiative principles which state that users should bear the risks of any reduction in, or less reliable, water allocations arising as a result of seasonal or long-term changes in climate and drought.²
- WaterNSW is currently seeking quotes from the market on both a one-way insurance product (as per the current RTP) and a two-way ‘swap’ product where the costs of mitigating downside risk are at least partially offset by any potential revenues above regulatory allowances. This would provide a symmetrical product whereby WaterNSW and customers both share the costs and benefits of volumes that depart from regulatory forecasts. WaterNSW will provide the outcome of this market sounding when available.
- In the absence of these quotes being available to be considered in sufficient time for the Final Determination, WaterNSW proposes that IPART adopts the lower of our proposed costs (\$2.3 million), or IPART’s volatility allowance from the 2010 determination updated to today’s dollar value (\$2.5 million in \$2020-21). Failing this, WaterNSW proposes that IPART adopts an unders and overs mechanism (“UOM”) for the upcoming review that previously had the support of WaterNSW and its customers.
- If IPART proceed with the self-insurance product we ask that IPART assess the impact on WaterNSW’s credit rating, and our cost of debt allowance, noting the current assumed Baa2 allowance would no longer be applicable.

Cost allocation

IPART proposes that WaterNSW changes its basis of allocation for corporate overheads from total expenditure (“**totex**”) to total operating costs. WaterNSW’s approach to allocating overhead by totex meets accounting standards, has been accepted by the Audit Office in reviewing our accounts, is used by other utilities and meets the criteria of IPART’s cost allocation guidelines.

- We submit that it would be overstepping the reasonable role of the regulator for IPART to mandate one particular accounting policy, particularly when our current methodology is fit-for-purpose. It also runs counter to IPART’s stated approach in the current review of how IPART regulates water businesses “to promote accountability of the businesses to deliver good outcomes for customers and the community by instead making decisions on the business’s behalf.
- Should IPART decide to mandate the change in cost allocation methodology, we consider that IPART needs to exclude non-core activities from calculation given we are unable to allocate additional overhead in an arbitrary manner to our non-core, and commercial customers.
- The proposed change has material implications on our accounting policies and WaterNSW has not had an opportunity to engage the Audit Office on these changes. As such we ask that the cost allocation approach be considered as part of the next Greater Sydney determination so that proper detailed analysis of the implications can be better understood, rather than prematurely entered into from 1 July 2021.
- Should IPART endorse the consultant’s recommendations, we seek funding to maintain a separate set of regulatory accounts and facilitate a reconciliation between WaterNSW Statutory accounts and Annual Information Returns/Regulatory accounts.

² COAG, Intergovernmental Agreement on a National Water Initiative, June 2004, p 8

Low WACC and Inflation forecasting risk impacting our financeability

While WaterNSW acknowledges that IPART is bound to follow the ACCC's Pricing Principles when setting the WACC for the Murray Darling Basin ("MDB") valleys, the impact of a 1.3% post-tax real WACC is significant on our financeability. This is exacerbated by the potential negative impact associated with differences between IPART's inflation estimates and market-based forecasts that suggests low inflation over the next four years. Maintaining IPART's current approach to forecasting for inflation that results in forecasts of between 2.1% and 2.3%, when the RBA annual inflation estimates are between 1.25%-1.75% further places WaterNSW at significant financial risk.³

- In response to inflation forecasting concerns, most economic regulators in Australia (including the QCA⁴, AER⁵, ERAWA, ESCOSA⁶, ICRC and ESC-V) have taken action to address this issue.
- WaterNSW proposes to adopt an alternative 'glidepath' approach to forecasting inflation based on the AER's recent decision on this matter. Applying the glidepath approach to IPART's standard inflation methodology leads to an inflation forecast of **1.7%**, which WaterNSW proposes is a more unbiased and accurate reflection of likely inflation than IPART's current forecasting methodology.
- It is open for IPART to apply this methodology and in no way should it constraint IPART's more detailed considerations on this matter as part of the upcoming WACC review commencing in February 2022.⁷
- If IPART is unwilling to adopt WaterNSW's proposed approach to inflation due to the timing of the WACC review, we ask that IPART allow for any changes to the inflation calculation arising from the review be accounted for during the Rural Valleys (and WAMC) Determination period(s).

Other matters for consideration for rural bulk water prices

WaterNSW would also like to bring to IPART's attention the following matters in response to the Draft Determination findings:

- **Update the 20-year rolling average** – It appears that IPART has not updated this calculation, which we suggest is required for the Final Determination. As data for the 2019-20 financial year is now available, we request that the 20-year rolling average be updated to include data from 2000-01 to 2019-20.
- **Disaggregating the RAB** - IPART notes in section 7.5.4 of its Draft Report that the methodology applied to calculate the current draft depreciation allowance may lead to an under-recovery of depreciation in the short term by
- aggregating short-lived and long-lived assets into a single RAB. IPART suggests that WaterNSW review its depreciation method in the future.

WaterNSW agrees with IPART and proposes that disaggregating the RAB into a short-lived and a long-lived RAB for each valley would provide a more accurate alignment of costs and revenues. Our calculations are provided as part of this response.

- **Volatility Allowance and Unders and Overs (UOM) Balance as a fixed charge** - WaterNSW considers that these allowances should be recovered through 100% fixed charges. The intention

³ See RBA Statement on Monetary Policy, February 2021. Table 5.1, page 63.

⁴ See <https://www.qca.org.au/project/inflation-forecasting/inflation-forecasting-review-2021/>

⁵ See <https://www.aer.gov.au/system/files/AER%20-%20Final%20position%20paper%20-%20Regulatory%20treatment%20of%20inflation%20-%20December%202020.pdf>

⁶ See ESCOSA SA Water Regulatory Determination 2020 – Final Determination: Statement of reasons. Page 5.

⁷ See IPART's November 2020 Water Pricing and Licensing – Regulating Water Businesses Special Review. Page 12.

for both of these allowances is to protect WaterNSW from revenue volatility. It is not consistent with this intention that the allowances themselves are subject to the same volatility. Both the VA and UOM charges being 100% fixed is consistent with the 2010 IPART determination. Not only does it further the objective of the Basin Water Charging Principles and Objectives, it is also consistent with the National Water Initiative which states that customers should bear the costs of the risk of low water availability in particular in relation to lower or less reliable water allocations.

Non-urban metering reform

There is expected to be a greater focus on the implementation of the NSW Government's metering reform agenda over the next determination period. At the time of finalising our Pricing Proposal, the policy arrangements for finalising the Water Reform changes relating to non-urban metering had not been settled and hence WaterNSW's Pricing Proposal excluded the costs of these reforms.

Information to support our proposal for the recovery of the metering implementation costs was provided to IPART on 30 November 2020 and has been discussed at length with IPART and Cardno since that time. WaterNSW notes that IPART has indicated that it requires additional information on the efficient costs before it is in a position to determine future metering charges.

- WaterNSW is engaging productively with IPART and Cardno to assess any actual (or perceived) information gaps and we are confident that IPART has (or will have) the information it needs to set non-zero metering implementation prices in the Final Determination; and
- This would provide customers, Government and WaterNSW with clarity on how metering charges will be set for the next four years to support and implement the NSW Government's non-urban metering policy.

Our detailed response to IPART's Draft Determination on metering charges is contained in a separate metering report called **Appendix B 'Costs of the non-urban metering reform'**.

We look forward to continuing our engagement with IPART and other stakeholders in the leadup to the Final Determination to ensure bulk water prices to our customers in Rural Valleys are set at efficient levels and that the determination meets all relevant regulatory and legislative obligations.

2. Detailed Response to Draft Determination

This section outlines WaterNSW's detailed responses to the Draft Determination.

2.1 Regulatory Framework

2.1.1 Length of regulatory period

In our Pricing Proposal, WaterNSW proposed a one-year determination period, from 1 July 2021 to 30 June 2022. We note IPART's preference for a four-year period for the reasons outlined in the IPART Issues Paper.

WaterNSW accepts IPART's draft finding that a four-year period is appropriate for our Rural Valleys Determination. A four-year determination period can provide increased certainty and minimise both regulatory burden and administrative costs associated with a shorter period. WaterNSW will consider whether a longer period (i.e. five years) is appropriate as part of the subsequent (i.e. 2025) determination process.

Our original Pricing Proposal for a one-year determination period was compliant with the requirements of the WCR, which is Commonwealth legislation that applies to the Murray Darling Basin ("MDB") valleys. IPART regulates the pricing arrangements for the MBD valleys under accreditation arrangements administered by the Australian Competition and Consumer Commission ("ACCC"). Under these accreditation arrangements, IPART is required to meet certain requirements, including the application of the ACCC's Pricing Guidelines.

The proposed one-year determination period was driven by the desire to facilitate broader customer consultation, noting many of our customers were managing through a significant drought, and enable an improved understanding of the pricing and cost implications arising from the non-urban metering reforms.

WaterNSW respects IPART's decision to adopt a four-year determination period. To support the determination of the four-year price path, we provided additional information on our forward expenditure programs (including the costs of non-urban metering reform) to assist IPART in its deliberations and to fully assess our proposal.

2.1.2 Impact of COVID-19

The rapid changes in macroeconomic indicators that the world experienced last year has impacted water utilities and is now posing unique challenges for the regulatory framework that IPART operates. In particular, the medium-term impacts of last year's lockdowns on the economy and the water sector are still unclear.

We already face significant risk to our financeability over the regulatory period as a result of the disconnect between IPART's assumed expected inflation rate and actual inflation. This issue is likely to be worse given the expected lower levels of inflation now prevailing. Further, it is questionable whether the efficient frontier used by the reviewer is still applicable given the downturn currently being experienced in the economy. We have seen our input costs increasing in a number of areas, and there are also potential declines to productivity as our workforce adapts to new working arrangements

Meanwhile, the impact of COVID-19 on water demand remains uncertain, with behavioural changes and economic growth factors yet to be revealed in actual consumption. Australia's transition to a post-COVID world is increasingly unclear with concerns around the supply, efficacy and safety of vaccines creating a significant risk to economic recovery. As we have noted, accurately forecasting

demand and costs in the current environment for the upcoming four year regulatory period presents considerable challenges.

Overall, we urge IPART to take these unprecedented levels of uncertainty into account in preparing its Final Determination. We believe this provides further support for our proposal for IPART to introduce additional mechanisms to manage risk in the regulatory framework, including:

- Addressing inflation forecasting risk and ensuring a return on capital that better reflects the need to attract capital to the water sector than the currently proposed post-tax real WACC of 1.3% for MDB valleys and 2.8% for the Coastal Valleys⁸ by adopting our proposed glidepath approach to inflation forecasting; and
- Not accepting the consultants' proposed catch-up efficiencies that lack theoretical foundation and any detailed analysis on the efficient frontier.

2.2 Operating expenditure

The efficiency of our operating expenditure program over the current 2017 Determination period and the upcoming 2021 Determination period has been the subject of a detailed technical review with IPART's consultants (Atkins). We have actively participated in the consultant's review and responded to over 300 requests for information to demonstrate the efficiency of our current and proposed programs. We are confident that our operating expenditure over the 2021 Determination period represents the efficient level to provide required services to our Rural Valleys customers.

Through the investigation process, WaterNSW provided a detailed analysis outlining the basis for operating cost increases over the current regulatory period, which highlighted increased costs due to under-forecasting at the 2017 Determination and responding to increased regulatory and legislative obligations. WaterNSW, rather than our customers, has borne the material financial impact of operating cost increases over the 2017 Determination period relative to IPART's regulatory allowances.

The 2021 Determination represents the opportunity to reset the regulatory allowances to reflect the efficient costs of providing rural bulk water services, and we welcome the robust assessment of our proposals as part of the expenditure review process.

WaterNSW has undergone a substantial transition over the current regulatory period, settling processes and systems from our initial formation following the merger in 2015, and incorporating the functions to provide new WAMC services from 2016. WaterNSW now has multiple business functions, with four separate regulatory periods and associated pricing submission processes.

WaterNSW's regulatory periods are not aligned and therefore requires consideration of how corporate support costs should be allocated across our various regulatory functions. This necessarily requires decisions to be made concerning shared costs and how these costs are appropriately reflected in our four regulatory determinations (i.e. Greater Sydney, Rural Valleys, WAMC and the Broken Hill Pipeline) and any non-regulated activities.

This creates significant complexity, unique to WaterNSW among its peers.

Some of the changes that have occurred in the treatment of shared costs (due to new business functions, or changes in allocators between them) have contributed to the operating expenditure variance between the IPART allowance and actual expenditure.

In addition, it was identified that WaterNSW had under-forecast several categories of operating expenditure (in total by approximately \$17 million) over the current 2017 Determination period,

⁸ IPART, Review of WaterNSW's rural bulk water prices, draft report, March 2021, pp 205-206.

as the costs for several activities were not included in the forecast submitted as part of the 2017 Regulatory Determination process. These categories include:

- Scheduled overtime;
- Land tax liability;
- Flood operations expenditure;
- Overhead labour related costs including actuarial adjustments for employee entitlements and redundancy payments;
- Direct labour related costs relating to an actuarial adjustment for long service leave and annual leave;
- Short-term incentive payments, which form a non-discretionary component of the salary package for contract employee;
- Higher insurance costs, primarily due to the costs of the Risk Transfer Product premiums, which provided important fiscal certainty during recent drought conditions;
- No allowance in the current period for land tax and energy cost increases; and
- Water management reforms resulting from a number of independent investigations into water management and compliance practices in New South Wales (e.g. the Ken Matthews Review).

These findings were collaborated by the 2017 efficiency consultants, Aither. As Aither identified in their report (emphasis added):

*This information provides a high level indication that WaterNSW has **developed its operating expenditure forecasts in a way that may potentially be too low**. There are specific examples that look to be overly ambitious - for example, in relation to flood operations, whilst WaterNSW states that “expenditure in this category is nil as WaterNSW is unable predict the occurrence of a future flood event”, in reality, the expected value (probability times consequence) of this expenditure item will almost certainly be non-zero (see section 5.4.1 of the 2017 report)*

*In real 2016-17 dollars, WaterNSW’s submission only seeks an increase in one cost activity between 2017 and 2021, namely Environmental Planning, the dollar value of which is reasonably minor in the context of WaterNSW’s overall operating expenditure forecast. All other activity areas are forecast to decline over the regulatory period in real terms. On face value, **this is likely to indicate that WaterNSW’s basis for adjusting its operating expenditure forecasts over the regulatory period, may potentially be too low.***

WaterNSW has also had to deal with assisting many of our customers through a significant drought, which has seen the business reprioritise many of its planned business initiatives to better support customers. WaterNSW has also had to safely deal with managing the implications of COVID-19 on its operation and business plans.

Based on the discussion below and the increased risk to WaterNSW operating environment, WaterNSW considers that its proposed operating expenditure should be reinstated in full and that the operating expenditure reductions of \$23.7 million over the 2021 Determination period from the Draft Determination as shown below are not applied.

Table 1 –Operating expenditure reductions applied by IPART (\$millions, \$2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
Labour Cost	-0.9	-1.3	-0.3	-1.4	-3.9
Land Tax	0.0	-0.6	-0.6	-0.6	-1.8
Transformational Strategy	0.0	-0.5	-0.5	-0.5	-1.5
Reallocation of Regulatory Resources	0.4	-0.4	-0.4	-0.4	-0.7
Environmental Opex	-0.5	-1.2	-1.7	-2.2	-5.5
Reallocation of Corporate Overhead to other determinations	-0.9	-0.7	-1.0	-1.3	-3.4
Catch up efficiency	-0.5	-1.2	-1.7	-2.2	-5.5
Continuing efficiency	-0.3	-0.7	-1.0	-1.3	-3.4
Total Reduction	-2.8	-5.0	-7.8	-8.1	-23.7

WaterNSW maintains that the operating expenditure program for the 2021 Determination period is prudent and efficient.

The consultant's total proposed reductions also include top-down catch-up and continuing efficiencies. These reductions are unsustainable and fail to recognise the increased demands on our organisation to increase (not decrease) our focus on maintaining or improving our performance to meet regulatory and customer service obligations.

The justification and transparency of the "efficiency" saving percentages is insufficient to enable Water NSW to critique Atkin's judgements.

Proposed reductions of this magnitude, while providing much needed adjustments to the 2017 Determination allowances, would impede our ability to meet our financial obligations and customer service standards over the next four years.

We ask that IPART consider setting a target operating expenditure allowance for the 2021 Determination period to provide WaterNSW an opportunity and achieve an efficient frontier over time.

The following sections address our concerns with the consultant's proposed operating expenditure reductions.

2.2.1 Summary of issues - direct operating expenditure reductions

The IPART draft decision proposes a **\$3.9 million** reduction in direct labour over the 2021 Determination period .

We do not support the proposed reductions on the following grounds:

1. IPART has not considered our proposed reductions in total expenditure. Our pricing proposal results in a 3% reduction in total expenditure over the 2021 Determination Period relative to 2019-20. WaterNSW submits that Atkins should assess our proposal holistically at the total expenditure level, including the combined impact of direct salaries, overhead and other direct costs.

2. IPART has not assessed the reasons for the increase in direct labour nor has IPART considered the offsetting reductions in overhead costs. Compared to the 2017 Determination period, WaterNSW has implemented significant improvements to our cost coding framework and timesheet reporting practices. Reductions in overhead costs have been offset by increases in direct costs due to improvements in direct cost coding and increases in staff utilisation.
3. Of particular concern, IPART has only allowed \$0.09 million in direct labour to fund the rural valley flood operations activity. The \$0.09 million was derived using the 2019-20 direct ledger as the base year. Not only is 2019-20 an inappropriate base year to set the 2021-2025 flood operations allowance due to drought conditions at the time, WaterNSW will be unable to discharge its obligations under section 7 of the *Water NSW Act (NSW) 2014* to undertake flood mitigation and management.
4. IPART has not considered the benefits of implementing a combined WaterNSW Enterprise Bargaining Agreement (EBA) as discussed in Section 2.2.6.

Furthermore, we do not believe it is inappropriate to introduce both a catch-up and continuing efficiency to direct labour costs, which have already been subject to the direct scope adjustments. We consider this to be a 'double-counting' of efficiencies.

In summary, the proposed increase in salaries is justified after taking into account the proposed reduction in total expenditure and the reasons for the increase in direct labour. We recommend that IPART reverse its recommendation to reduce our direct salaries expenditure by \$3.9 million over the 2021 Determination period.

These points are discussed in the sections below.

2.2.2 IPART should consider the proposed reductions in total expenditure

Atkins has not considered our proposed reduction in total expenditure. Our proposal results in a 3% reduction in total expenditure over the 2021 Determination Period relative to 2019-20. Our expenditure proposal should be assessed holistically at the total expenditure level, including the combined impact of direct salary, overhead and other direct costs.

The reduction in total expenditure is shown in the table below:

Table 2 – Total proposed operating expenditure (direct + overhead) over time

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Average FY22-25	Average less FY20 actuals (\$)	Average less FY20 actuals (%)
Actual/forecast*	56.3	53.4	51.1	56.1	56.6	54.6	54.6	-1.7	-3.1%

*Excludes costs associated with managing revenue volatility risk

As WaterNSW's proposed total operating expenditure is lower on average than 2019-20, we consider that the reasoning behind Atkins' recommendation is not applicable when costs are considered at a holistic level.

Furthermore, Atkins' recommendation considers expenditure prior to other scope reductions and efficiencies that have been applied to expenditures over the 2021 Determination period. IPART's draft operating expenditure allowance before the reduction in direct labour costs is significantly (12%) lower than our actual expenditure in 2019-20 which is unachievable when total costs are considered.

	2021-22	2022-23	2023-24	2024-25	Average FY22-25	Average less FY20 actuals (\$)	Average less FY20 actuals (%)
IPART draft determination*	48.3	51.0	48.8	46.5	48.7	-7.7	-13.6%
Draft determination before direct labour cuts*	49.2	52.3	49.1	47.9	49.6	-6.7	-11.9%

*Excludes costs associated with managing revenue volatility risk

2.2.3 Reasons for the increase in proposed expenditure and reductions in overhead costs

In the efficiency report, Atkins states that the increases in labour cost have not been justified and that above inflation increases should be offset by productivity gains. However, Atkins has allowed the step increases for the customer billing and customer support (Customer and Community) activities.

We consider that Atkins' high level analysis does not take into account the valid reasons for the step increase in direct salaries.

For example, the key contributors to the step change are shown below:

Table 3 – Key contributors to the step change in operating expenditure (\$000s., \$2020-21)

\$000s	2021-22	2022-23	2023-24	2024-25
Routine maintenance	678	744	804	1,709
Corrective maintenance	448	461	472	483
Dam safety compliance	307	438	461	444

- Maintenance:** The cost increase is due to improved cost coding. From 2020-21 we note that approximately \$650,000 p.a. in additional costs has been included in the forward period for the ICT water asset systems (SCADA support, maintenance and telemetry) supporting maintenance activities. In 2019-20, this expenditure would have been pooled into overhead, where approximately half of the cost was allocated to the Greater Sydney Determination using a cost allocation methodology. Furthermore, approximately \$120,000 p.a. has been reallocated to dam safety in 2020-21, compared to 2019-20. We consider the step increased in maintenance to be cost reflective, as expenditure on ICT water assets and systems supporting maintenance activities are now being allocated directly to the relevant determination instead of being smeared across each of the IPART determinations.
- Dam Safety:** This expenditure is allocated against many projects across the valleys. The perceived cost increase is due to increased utilisation, recruitment for two vacant positions and reduced overhead in dam surveillance, engineering teams and geospatial. As noted previously, total costs are forecast to decline. Furthermore, our expenditure on dam safety is necessary to sustain the dam safety program for the long term and to meet our regulatory requirements and customer and community expectations.

We consider the proposed reduction in dam safety expenditure fails to take into account recent changes to our operational landscape with the introduction of new dam safety legislation and the added focus on risk-based surveillance, implying higher direct operating

expenditure. We submit that IPART should consider our expenditure holistically, including the improvements made in terms of cost coding and utilisation. Our position is consistent with the Atkins recommendation that WaterNSW should focus on improvements in direct costs coding to the determinations.

We consider that WaterNSW should not be penalised for introducing recent improvements to its cost coding framework, and timesheet reporting practices, including recent improvements in staff utilisation at the determination level. These efforts have led to an increase in the level of direct costs recorded to projects while reducing the amount of overhead allocated across each of the IPART determinations.

The proposed increases are in line with Atkins recommendations at page 162 of the efficiency report:

There is a need for greater direct cost booking. For example, where services are provided to operational business units, then direct costs should be coded accordingly.⁹

The following sections discuss the proposed increase in flood operations expenditure over the 2021 Determination period.

2.2.4 Allocation Pool costs have been double counted in the analysis

As mentioned in our response to the draft efficiency report in November 2020, the allocation pool (AP) costs for flood operations appears to have been double counted in the analysis of direct cost increases. It appears Atkins has added expenditure for flood operations from two separate pivot tables, each for the pre-allocation and post-allocation view. It is likely that Atkins may not have included the AP credits in the analysis.

Because of this, there is a perception of a large step increase in flood operations expenditure in FY21. The perceived increase is shown below when we split out the step change for direct salaries by activity.

Table 4 – Step change from FY2019-20 for direct salaries by activity (\$000s)

\$000s	2021-22	2022-23	2023-24	2024-25
Flood operations (reflecting AP double count)	1,219	1,453	1,324	1,297

However, we have detected a further anomaly in the data set used by Atkins. We have inadvertently included Greater Sydney expenditure for flood operation activity at Warragamba Dam, which was provided as part of an RFI on 'all valley' costs. We confirm our Rural Valleys proposal does not include funding for flood operation activities at the Warragamba Dam; however, the expenditure was included in the data set provided to Atkins because of the make-up of the data for 'all valley' costs in TM1 (budgeting system).

We note that AP flood operations costs are allocated to the following valleys based on the following splits:

⁹ <https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-rural-water-waterrsw-rural-bulk-water-prices-from-1-july-2021/legislative-requirements-waterrsw-rural-bulk-water-prices-from-1-july-2021/consultant-report-by-atkins-expenditure-review-of-waterrsw-rural-bulk-water-services-and-corporate-cost-allocation-february-2021.pdf>

Table 5 –Flood operation costs by valley (%)

Dam	Split to Valley
Burrendong	15%
Wyangala	15%
Copeton	15%
Keepit	15%
Burrinjuck	20%
Warragamba (Greater Sydney) –inadvertently included in data set	20%

State-wide flood incident management work PPRR (Prevention, Planning (&Training), Response and Recovery) costs are allocated across the valleys which have gated spillways on the dams. An additional weighting is applied for the Murrumbidgee and Greater Sydney valley to recognise the extra focus on those systems.

After correcting for this error, the step change in direct salaries for the flood operations activity is \$2.2 million over the 2021 Determination period as follows:

Table 6 – Step change from FY2019-20 for direct salaries by activity (\$000s)

\$000s	2021-22	2022-23	2023-24	2024-25
Flood operations (corrected for double count and error in data set)	507.6	611.6	554.5	542.6

2.2.5 Flood operations expenditure

After correcting for the anomaly identified in section 2.2.4 above, there is a notable step increase in expenditure on flood operation activities of \$2.2 million over the 2021 Determination period or approximately \$0.5 million p.a..

Total actual expenditure for flood operations between 2017-18 to 2019-20 is approximately \$0.27 million on average. However, in the 2017 Determination, IPART provided no allowance to undertake flood operation activities in the current period, which suppressed spending for this crucial activity. This was confirmed in the Aither 2017 efficiency report:

*This information provides a high level indication that WaterNSW has **developed its operating expenditure forecasts in a way that may potentially be too low**. There are specific examples that look to be overly ambitious - for example, in relation to flood operations, whilst WaterNSW states that “expenditure in this category is nil as WaterNSW is unable predict the occurrence of a future flood event”, in reality, the expected value (probability times consequence) of this expenditure item will almost certainly be non-zero (see section 5.4.1 of the 2017 report)*

WaterNSW has anticipated flood operation work over the 2021 Determination period based upon the drought breaking & recent rains (e.g. increasing training in response to possible events).¹⁰ Flood operations are primarily related to the operation of dams, such as training for flood operations and the maintenance of assets and update of systems required for flood operations management and mitigation.

¹⁰ For example, we assess that there is an 80% chance that Burrinjuck Dam will spill through the Winter or Spring. Hence, we are actively assessing the airspace situation at present.

The increase in flood operations expenditure is partly offset by a reduction in water delivery operating expenditure (e.g. as staff are involved in both activities). WaterNSW submits that it is inappropriate for IPART to accept the reduction in water delivery expenditure of approximately \$0.285 million p.a. over the 2021 Determination period, while capping the projected increase in flood operations expenditure.

Compared to the 2019-20 actuals, there has also been an increase in budgeted salaries for this activity due to improvements in the budgeting process and finance business partnering. As noted previously, WaterNSW should not be penalised for introducing recent improvements to its cost coding framework, and timesheet reporting practices, including recent improvements in staff utilisation at the determination level.

WaterNSW needs to ensure that it is not careless or negligent in releasing water from its headworks. Section 7 of the *Water NSW Act (NSW) 2014* states that:

(1) *For the purposes of this Act, the listed functions of Water NSW are as follows:*

...

(i) *to undertake flood mitigation and management*

The risk of negligence by dam operators was highlighted in numerous reports following the 2011 Brisbane floods and the class action suite launched by affected residents against the operators of Wivenhoe Dam, Sunwater.

In late February 2021, it was reported that the Queensland government and state-owned dam operator Sunwater settled with 6,800 class action claimants for \$440 million, one of the first court cases/settlements of its kind in Australia.¹¹ As demonstrated, dam operators have been subject to increased scrutiny in responding to flood risks in recent years. There is an expectation on dam operators under law to proactively manage and minimise the risk of floods to both water users and the community.

We submit the level of operating expenditure proposed under the flood operations activity is insufficient to fund this crucial activity as mandated under the Water NSW Act. The funding is not proportionate to the expectations placed on dam operators who are required to proactively manage the risk of floods, including flood mitigation and management undertaken for the benefit of both water users and the community. We submit that the reduction in flood operations expenditure of \$2.2 million over the 2021 Determination period should be reversed in full.

2.2.6 Costs have been avoided under the combined WaterNSW EBA

[Redacted]

[Redacted]

[Redacted]

¹¹ <https://www.abc.net.au/news/2021-02-26/brisbane-floods-wivenhoe-dam-class-action-win-payout-queensland/13196490>

[Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]

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[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

To conclude, the proposed increase in salaries is justified after taking into account the proposed reduction in total expenditure, the reasons for the increase in direct labour and the intended productivity benefits under the combined WaterNSW EBA, such as achieving payroll efficiency through one combined payroll system. However, we do not consider the reduction applied by IPART to be justified. We recommend that IPART reverse its recommendation to reduce our direct salaries expenditure by \$3.9 million over the 2021 Determination period.

2.2.7 Transformation strategy development

The consultant’s \$1.5 million reduction for our development of a longer-term transformational strategy over four years should be reconsidered. The expenditure is required to develop business plans and transformation strategies aimed at improving organisational efficiency and lowering our operating expenditure over the 2022-25 determination period. The expenditure is a material requirement focused on delivering efficiencies for the benefit of customers and meet customer expectation targets which will only grow over time.

In order to drive improved business performance, it is not uncommon for organisations to specifically allocate funds to acquire dedicated experienced expertise to support business

transformation. Given IPART's proposed cost reductions and lower revenues arising from a lower WACC allowance, it is likely that WaterNSW will not have sufficient funding to invest in a dedicated cost transformation program.

2.2.8 Land tax liabilities

WaterNSW considers that the \$1.8 million reduction in proposed land tax liabilities over the 2021 Determination period should be reversed. Our position on this issue was stated during the efficiency review.

2.2.9 Regulatory Staff

WaterNSW acknowledges IPART's support for additional regulatory staff. Given the level of stakeholder engagement required to develop a sound and defensible regulatory proposals for Rural Valleys and WAMC, we submit that a greater share of the costs should be allocated directly to the Rural Valley and WAMC determinations over the next four years.

We request that IPART reconsider the proposed allocation between Rural Valleys, WAMC and Greater Sydney of 50:25:25 and instead allocate the additional resources in equal shares between the Rural Valley and WAMC determination.

Greater regulatory administration is required due to the information intensive 'valley-by-valley' approach to the regulation of Rural Valleys and WAMC relative to the one-valley approach for Greater Sydney.

On page 161 of the efficiency report, Atkins states that *the workload for WAMC is likely to be less than Rural Valleys*.¹²

The valley-by-valley approach for Rural Valleys and WAMC results in greater resource requirements for calculating individual RABs, revenue requirements and prices by valley. compared with the activities required for Greater Sydney, where there is one valley (albeit a large one) with one calculation of the revenue requirement and one set of prices.

In addition, the resources required to assist our customer-facing business units with customer engagement across multiple valleys are significant.

In particular, the WAMC determination contains 13 regulated valleys, 13 unregulated valleys and 3 groundwater pricing regions, each with a different set of costs and prices compared to 13 regulated valleys under the Rural Valley determination. There are 38,915 license holders covered by the WAMC determination in 2019-20 compared to 13,376 licence holders covered by the Rural Valley determination.¹³ There are 63 customers covered by the Greater Sydney Determination.

In the 2017 Rural Valley Price Review, IPART received approximately 30 submissions to both its issues paper and draft determination. This compares to ~1 submission to the draft 2016-2020 Greater Sydney determination.

There is an expectation from regulators and the community that utilities should develop a deeper understanding of their customers and what they want from their service provider.

¹² <https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-rural-water-waternsw-rural-bulk-water-prices-from-1-july-2021/legislative-requirements-waternsw-rural-bulk-water-prices-from-1-july-2021/consultant-report-by-atkins-expenditure-review-of-waternsw-rural-bulk-water-services-and-corporate-cost-allocation-february-2021.pdf>

¹³ 2018-19 figure.

While activities relating to Greater Sydney are important and are undoubtedly resource-intensive in the lead-up to each determination, plus having sufficient resources to meaningfully contribute to any IPART framework / WACC reviews is essential for a regulated utility, the regulatory costs relating to Rural Valleys (and WAMC) are relatively higher than Greater Sydney due to the valley-by-valley construct of the determinations.

On this basis, as well as recognising that there is no opportunity for the proposed allocation of costs to Greater Sydney to be recovered until the subsequent determination, we propose that the costs should be allocated between the determinations for Rural Valleys (2/3) and WAMC (1/3) to reflect the relative complexity compared to the Greater Sydney determination.

2.2.10 Environmental Planning and Protection

IPART has applied a **\$1.9 million reduction** to our proposed Environmental Planning and Protection expenditure over four years.

WaterNSW had previously advised that the perceived increase in Environmental Planning and Protection expenditure is due to the misclassification of procurement costs in the forward budget. The procurement management and purchasing budget should have been allocated across the IPART activities.

As noted in our response to the Atkins draft efficiency report, we would like to reiterate that the procurement management and purchasing function is one of the most important business support functions leading the efficient purchasing of goods, services and works from external parties and sources. It is a vital part of ensuring WaterNSW receives value for money for services procured from the market. There has been no “increase” in procurement spend¹⁴ – in fact, WaterNSW’s procurement function has been through a transformation program and operating model review over the recent determination period.

In absence of an appropriately resourced procurement function, individual business units and projects will be forced to conduct their own procurement and these resources are not specialised in procurement of larger complex strategic goods and services leading to increased overhead costs, higher delivery risks, significant compliance and probity challenges and not delivering value for money blowing out the target spending.

WaterNSW has invested significant effort in lifting the maturity and performance of its procurement function over the last 4 years from being a very transactional ‘tendering’ function to a centre-led category management strategic procurement function, in line with best practice. Progress on this procurement transformation journey that WaterNSW is on includes:

- Establishment of an effective category management function comprising 3 category managers who partner with business units and prepare category strategies, proactively driving best value for money commercial delivery strategies often partnering with NSW Govt. procurement and other peers;
- Establishment of an efficient procurement operations team who execute on the category strategy developing sourcing action plan for all high value and/or high-risk procurement across the enterprise ensuring probity is maintained while best value for money suppliers are contracted utilising the best-in-class nimble tools and systems; and
- Establishment of a procurement governance and excellence role maintaining procurement framework, procedures and process compliance, delivering internal and external reporting,

¹⁴ The 2020-21 forecast for the procurement function at the corporate level is \$1.65 million in expenditure. This equals approximately \$495,000 per annum for the rural valleys assuming 30% is allocated to the rural valleys.

training procurement team and stakeholders, addressing audit actions and improvement opportunities and also leading continuous improvement initiatives for WaterNSW procurement to continue operate at market standard level navigating through challenges.

To eliminate our entire procurement management and purchasing budget for supporting Rural Valleys would be inconsistent with the objectives of ensuring value for money delivery through effective category management, including efficient outcomes, efficient use of resources, better understanding of the market, increased focus on collaboration and innovation and improved quality of services.

Considering the dedicated Procurement function is a critical success factor for delivering business outcomes and target efficiency gains, without the necessary funding being reinstated, WaterNSW risks failing on its delivery targets for Rural Valleys and will be forced to involuntarily accept a higher level of cost risk - both in the form of additional business overheads to undertake procurement on their own and exceed overall project spending with inefficient procurement attempts leading to best value for money not being delivered. WaterNSW's risk position in relation to ensuring probity may also worsen in decentralised procurement engagements, in effect increasing potential fraud and corruption compliance monitoring, reporting and audit costs.

2.2.11 Cold Water Pollution

In our response to the Atkins draft efficiency report, WaterNSW's proposed additional costs of **\$3.75 million** to address cold water pollution ("CWP") requirements in our Works Approval. The initial submission is found in Attachment 1.

However, the matter was not specifically addressed in the Draft Determination. For IPART's consideration and as requested by Atkins during the efficiency review, WaterNSW has attached to this submission a detailed business case on the need for investment in cold water pollution-mitigating measures. This additional information is provided in Attachment 2.

WaterNSW is subject to regulatory requirements to tackle water pollution challenges in the Gwydir, Murrumbidgee, Lachlan, North Coast and Hunter valleys. The regulatory requirements are set out in WaterNSW works approvals. These are also set out in the Attachment 2 for information.

Cold water pollution or thermal pollution occurs downstream of many large dams in NSW due to the release of "cold water" derived from deep within the reservoir to the downstream river channel. A range of studies and investigations have indicated that cold water pollution has significant adverse impacts on aquatic organisms and aquatic ecological processes and is a key determinant of river health. WaterNSW recognises the complexities and importance of the CWP issue. This has led to the proposed program to investigate options to reduce the impacts of cold water downstream of our large dams and fill-in the temperature data gaps.

The CWP mitigation options for six WaterNSW dams will be developed and the best option for each dam will be recommended for implementation. In addition, the gaps in the temperature data will be filled-in as reflected in Table below.

Table 7 – Temperature monitoring future state

Temperature monitoring future state	
Dam	Temperature monitoring future state
Copeton	<ul style="list-style-type: none"> Establish upstream temperature monitoring site on the Gwydir River close to the reservoir
Blowering	<ul style="list-style-type: none"> Establish temperature monitoring site upstream of the dam
Keepit	<ul style="list-style-type: none"> Move the upstream temperature data collection site closer to the reservoir
Carcoar	<ul style="list-style-type: none"> Establish temperature monitoring site upstream of the dam Move the downstream temperature data collection and algae monitoring site closer to the dam
Toonumbar	<ul style="list-style-type: none"> Establish temperature monitoring site upstream of the dam
Lostock	<ul style="list-style-type: none"> Establish temperature monitoring site upstream of the dam Move the downstream temperature data collection and algae monitoring site closer to the reservoir

This is a regulatory requirement that addresses water pollution (CWP) challenges in the respective valley, specifically the improvement for fish habitats to provide long term environmental benefits due to the increased water quality. The study will develop a report for the relevant dam identifying asset solutions to address cold water pollution.

The options addressing CWP will be identified by specifying the features of the options such as type, sizing and cost. This will also include developing an options assessment framework enabling a sound and evidence-based decision-making process to introduce the preferred CWP mitigation option or combination of options.

We note that Atkins has provided preliminary views on our CWP proposal. These views do not appear to have been included in the IPART Draft Decision.

We wish to make the following comments in relation to Atkins preliminary views.

In the efficiency report, Atkins states that WaterNSW had *not demonstrated that this should be considered as additional opex, rather than simply a rolling program of CWP work which is already incorporated in base year opex. It is also not clear to us that this should be treated as opex, given the focus on identifying asset solutions:*

In relation to Atkins' comment that *a rolling program of CWP work is already incorporated in base year opex*, WaterNSW confirms that there is no rolling program of CWP work in base year operating expenditure.

Atkins stated that WaterNSW has not provided a strategy document to justify the proposed expenditure on CWP however we believe this comment is premature. The proposed expenditure on CWP is intended to fund options development and assessment as required under the Works Approvals (e.g. options development and Introducing the preferred option for each dam and to 'fill in the data gaps' e.g. monitoring sites).

In relation to Atkins query on whether the expenditure is considered operating or capital expenditure, the strategy documents and feasibility studies are considered operating expenditure under Australian accounting standards; however, on review we have reallocated \$1.0 million of expenditure (from the \$3.75 million proposal) into the capital account in relation water monitoring sites and assets.

In response to the Atkins comment on how these dams have been selected: the dams have been selected based on the works approval CWP requirements as outlined in Attachment 2. With respect

to monitoring expenditure: they have been selected based on dams without the monitoring sites or unsuitable existing monitoring sites (e.g. Copeton upstream monitoring site is not on the main river and is far from reservoir).

We requested that IPART consider these additional costs when finalising its Final Decision.

2.2.12 Continuing efficiencies

The ‘frontier company’ approach that IPART’s consultant, Atkins, has applied to its catch-up efficiencies assumes ongoing productivity improvements in the operation of the business over time. The productivity improvements are predicated on underlying growth and improvements in the economy that should flow through to the sector.

WaterNSW considers that targeting efficiency is an important element of the regulatory framework in order to deliver long term benefits to customers. With respect to the continuing efficiency, we do not consider it unreasonable to introduce some productivity ‘offset’ that reflects the expected productivity improvement of the economy as a whole (or alternatively the water sector). This is consistent with the fundamental structure of “CPI-X” regulation. However, we question both the potential double counting of efficiencies when other efficiency adjustments are introduced (e.g. \$14.7 million of scope adjustments, WaterNSW’s self-imposed efficiencies and \$5.5 million of catch-up efficiencies). These concerns also apply to the continuing efficiencies applied to capital expenditure.

We have concerns about the use of continuing efficiencies of 0.7% per annum.

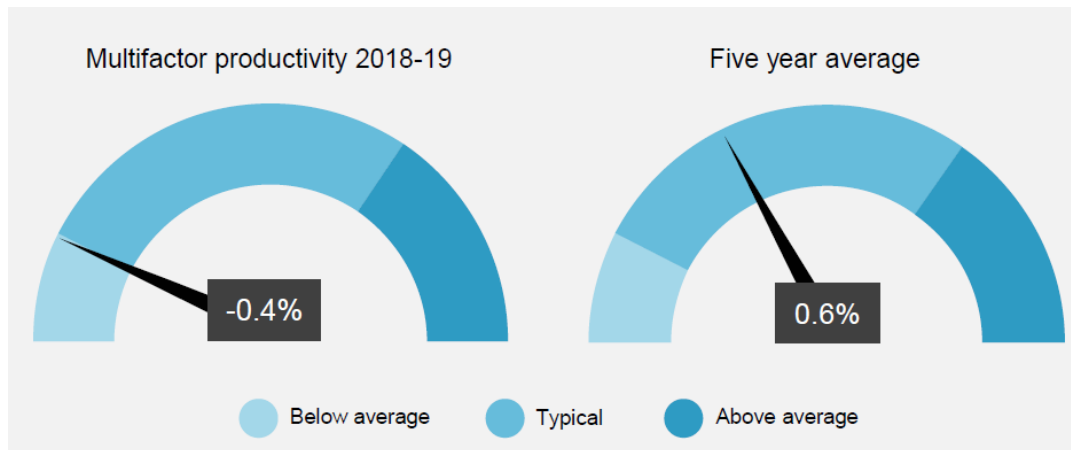
The cumulative effect of IPART’s continuing efficiencies is to reduce our operating expenditure (after the removal of any expenditures deemed inefficient by Atkins) by 2.77% in 2024-25 and \$3.5 million over the four-year period.

WaterNSW submits that for the purposes of setting expenditure allowances over the *forthcoming* regulatory period, what is required is the best estimate of expected productivity over the *forthcoming* regulatory period - not an estimate of long-term productivity. Long-term productivity reflects the emergence and adoption of new technologies, substitution between inputs (e.g., between labour and capital) and long-term changes in outputs over a period of decades.

Hence, when setting continuing efficiency targets, IPART should consider what is feasible for the water industry over the forthcoming regulatory period, rather than over the long-run.

WaterNSW also notes that even at the market-sector level, estimates of productivity can be sensitive to the measurement period. This can be seen in Figure 1 below, which indicates that productivity in 2018-19 was below average, and considerably lower than productivity measured over a five-year horizon.

Figure 1 – Multifactor productivity over different periods



Source: Productivity Commission, *Productivity Insights*, February 2020. Page 2.

The latest analysis by the ABS indicates that, in 2019-20, due largely to the COVID 19 pandemic:¹⁵

- MFP fell by 0.7% across the market sector; and
- MFP fell by 3.5% in the utility industry.

Given that the economic effects of the pandemic have not been reversed, it seems highly unrealistic that WaterNSW should be expected to achieve a 0.7% per annum increase in productivity over the next regulatory period.

However, that is what would be expected of WaterNSW if IPART were to apply its existing approach of setting a continuing efficiency target by reference to average MFP over the past 40 years.

WaterNSW's proposal

WaterNSW proposes that when determining a continuing efficiency target, IPART should:

- Give most weight to the measured productivity of the utility industry (rather than the market sector) since the utility industry most closely reflects the input and output characteristics of water businesses; and
- Give most weight to MFP estimates over the most recent historical years (rather than 40 years) in order to produce more realistic estimates of the scope for productivity gains over the forthcoming regulatory period.

Based on the evidence provided above, WaterNSW proposes that a continuing efficiency target of **0-0.35% per annum**, rather than the 0.7% per annum should be adopted in the Draft Determination.

The lower bound is set based on evidence from the utilities sector that suggests a productivity factor no higher than zero. Our proposed upper bound is 0.35%, which is the midpoint between the utility sector productivity measure (0%) and the long-term productivity measure applied by IPART (0.7%). We consider this to be a conservative range and that the appropriate factor for a water utility over the next four years lies closer to the utility sector productivity factor (i.e. the lower bound).

Our detailed assessment of the economic considerations when setting a continuing efficiency target is provided in Appendix 4.

¹⁵ See: <https://www.abs.gov.au/statistics/industry/industry-overview/estimates-industry-multifactor-productivity/2019-20>.

2.2.13 Catch-up efficiencies

In addition to making program-specific adjustments and continuing efficiencies as discussed above (as well as WaterNSW's self-imposed efficiencies), IPART has adopted the recommendation of Atkins, and proposed a cumulative catch-up efficiency adjustment of 1.1% per year to move WaterNSW towards an 'efficiency frontier' over the 2021 Determination period. This is based on:

- Findings that WaterNSW has not driven efficiencies in either the 2017 Determination period or the 2021 Determination period and that there is scope still for improvements to WaterNSW's business structure to deliver efficiencies; and
- A benchmarking analysis, indicating that WaterNSW's corporate and support expenditure and ICT expenditure is higher relative to other 'comparable' water utilities.

We have serious concerns with both IPART's findings and the methodology by which it has determined the catch-up efficiency adjustment.

In light of these significant reductions, and the lack of theoretical basis for the catch-up efficiencies, we believe there is no justification to implement a catch-up efficiency, particularly given the absence of an 'efficiency frontier' on which to base these further reductions. We request IPART to revisit and reverse its approach to catch-up efficiencies as discussed in the following section.

In particular, we believe the findings to be misplaced and the benchmarking analysis to be flawed and applied inconsistently when looking to other IPART decisions. Even accepting IPART's findings and the results of the benchmarking analysis, there are still issues concerning the potential for double-counting when applying IPART's catch-up efficiencies.

This approach also fails to consider and adjust for the operating and regulatory environments an entity has been operating in and, in WaterNSW's case, the impacts of drought and more recently floods, material regulatory change, operating model changes, currency of supporting assets (e.g. end of life unintegrated IT systems) and COVID-19.

We therefore challenge the proposed catch-up efficiency adjustment. Our concerns are described in more detail below.

2.2.13.1 Benchmarking analysis

The benchmarking analysis comparing our corporate and support expenditure and ICT expenditure to that for other water utilities further suffers from a number of flaws:

1. **WaterNSW operates a fundamentally different business to the 'comparator' water utilities used in the analysis**

As a large-scale bulk water supply business, WaterNSW operates in a market for which there are very few direct comparators in Australia and internationally. It would appear inappropriate to benchmark WaterNSW with comparators like Sydney Water, a large-scale retail water utility, and Central Coast Council, a vertically-integrated medium-sized water utility, each with significant wastewater operations. Comparing WaterNSW with international companies is challenging due to differing operating, economic and regulatory environments that need to be specifically adjusted to provide a meaningful comparison.

The nature of our business, our capital asset base and operating expenditure programs fundamentally differ from that of both Sydney Water and Central Coast Council (and Hunter Water).

Atkins notes that it has "*sought to benchmark WaterNSW's performance against bulk water supply comparators **with limited success** as the nature and operating environment of managed*

catchments is non-homogeneous" (emphasis added). Despite this, the benchmarking analysis is critically used to inform a notional 'frontier' to which WaterNSW must reach and that forms the basis for the catch-up efficiency adjustments.

2. The benchmarking analysis is conducted and used in a manner inconsistent with other IPART decisions

Even if it is accepted that WaterNSW may be compared with Sydney Water and Central Coast Council, the way in which the benchmarking analysis has been conducted and used appears to be inconsistent across IPART decisions.

For WaterNSW, the benchmarking analysis is conducted on the proportion of corporate and support expenditure and IT expenditure to total operating expenditure. This differs to other recent IPART decisions, where the benchmarking analysis is conducted on a *total operating expenditure* per property/customer basis, with similar water utilities. In particular, we note in Table 8 the following recent IPART decisions:

Table 8 – Benchmarking analysis in recent IPART Decisions

	Methodology	Proposed operating expenditure adjustments
Central Coast Council (2019 Price Review – Final Report)	<ul style="list-style-type: none"> Benchmarking analysis compared Central Coast Council's operating expenditure per property to other major water utilities in Australia (i.e. Gosford and Wyong Councils) using NPR data. IPART rejected efficiency reviewer's conclusion that Central Coast is below the 75% percentile of water utilities and its recommendation of up to 2% in catch-up efficiencies, on the basis of insufficient capacity and being a newly merged entity. 	No catch-up efficiencies, but note program-specific adjustments were made to labour costs.
Hunter Water (2020 Price Review – Draft Report)	<ul style="list-style-type: none"> High-level benchmarking analysis conducted to compare Hunter Water's operating expenditure per customer to other Victorian water utilities using NPR data. IPART accepted efficiency reviewer's recommendation of no catch-up efficiencies, on the basis of insufficient cost data to determine if Hunter Water is a 'frontier' utility and the limited number of suitable comparators to make "efficiency" judgments of Hunter Water through benchmarking analysis. 	No catch-up efficiencies, but note program-specific adjustments are made proposed to heads of expenditure, such as corporate labour expenditure.

	Methodology	Proposed operating expenditure adjustments
Sydney Water (2020 Price Review – Draft Report)	<ul style="list-style-type: none"> Benchmarking analysis compared Sydney Water's operating expenditure per property to other large similar-sized water utilities in Australia (using NPR data) and in England and Wales. IPART accepted efficiency reviewer's recommendation of no catch-up efficiencies, as Sydney Water's operating expenditure performance is above average for the sector. 	No catch-up efficiencies.

While WaterNSW acknowledges that these differences in IPART's decisions may reflect differences between its consultant efficiency reviewers, consistency and uniformity must be maintained across IPART decisions to ensure regulatory stability and avoid the risk of arbitrary expenditure cuts.

We note that, when considering corporate support costs, one needs to consider they are generally fixed i.e. you will always need certain functions such as a CEO, and Executive Team, a human resources function, a finance unit, a regulatory team, financial accountants, etc. If IPART wants to rely on benchmarking results to drive expenditure reductions, we urge IPART to consider what is the minimum level of fixed support costs required by a business of our scale and scope. This also needs to consider the legislative complexity and regulations of the environment the entity operates in. We do not consider that the Atkins report has adequately considered these matters in arriving at its conclusions.

2.2.14 Top down efficiencies should not apply to water monitoring activities

The consultant's top down efficiencies have been applied to the Rural Valleys hydrometric monitoring activity. We consider that these reductions should be reconsidered by IPART.

There has been a significant change in industry structure and service delivery models for water monitoring activities since the 2017 Rural Valley Determination.

WaterNSW now undertakes functions on behalf of the Water Administration Ministerial Corporation that were previously provided by the Department. This includes water monitoring services that were provided to WaterNSW for the provision of bulk water supply in addition to the monitoring provided directly to DPIE-W to support the Department in the discharge of its WAMC functions.

Water Monitoring previously carried out by the Department are now delivered under a revised operating model and team structure, including water monitoring functions being carried out by one team at WaterNSW since 2017. Together with the water monitoring services provided under the Greater Sydney determination, this has enabled WaterNSW to achieve significant efficiencies in water monitoring operating expenditure.

These significant efficiencies have been recognised by the IPART WAMC consultants, Cardno. For instance, in page 78 of the Cardno report, Cardno states that

WaterNSW comparative analysis of market costs and its derivation of efficiency targets for its monitoring activities have been set out in its Water Monitoring Review Project - Derivation of Efficiency Targets paper, which had an objective 'to demonstrate that our operating model is comparable in cost and service level to alternative operating models,

such as outsourcing. If we can show this then we are efficient and effective.' As part of the project, WaterNSW approached a range of comparable organisations with the objective of gathering data to facilitate direct external benchmarking. In order to complete the assessment, WaterNSW:

- > Confirmed the ability to model the costs of undertaking monitoring in-house
- > Applied the model to the Greater Sydney Monitoring Network (outsourced at that time)
- > Compared the modelled Greater Sydney Monitoring cost with the established outsourced contract.

Based on the analysis completed, WaterNSW determined that the costs of undertaking Water Monitoring inhouse using the resourcing levels, structure and work practices in place in 2018 was 12% above the market rate. Therefore, an efficiency target of 12% was agreed with staff, with a range of opportunities identified to bridge the gap. This outcome was used as the basis for the business case, and the Board Paper, which supports the water monitoring expenditure included in WaterNSW's Pricing Submission for the 2021 determination period.

...

Duplication of monitoring around the Greater Sydney borders, due to the monitoring functions in Greater Sydney being carried out by a different organisation prior to the transfer of functions to WaterNSW, meant that in some locations there were two lots of monitoring being carried out. This has led to rationalisation of the work to remove this duplication, with improved efficiency allowing the previously required work effort to be spread out to other activities and locations.

Furthermore, in page 79 to 80 of the Cardno Report:

Key efficiencies that were identified and developed by WaterNSW for its water monitoring include the following:

- > Some efficiencies have been realised by removing duplication of monitoring work at some sites around the Greater Sydney borders
- > The location of staff was reviewed and optimised for efficiency, including increasing staff levels at the Orange office. The heat mapping analysis to assess where water monitoring staff were located and locating them to where they were needed has also resulted in a new office being located in Coffs Harbour. A 3% efficiency gain was estimated for these changes.
- > The transfer of water monitoring assets to WaterNSW included some State Water sites. This has allowed WaterNSW to bring in the same data management systems and also gain efficiencies from rationalising co-located and adjacent sites. Additionally, due to a lack of confidence in its data at some of its older sites, State Water were getting WaterNSW staff to monitor these stations. The data improvements, site rationalisation, and the removal of the additional work that was being carried out on State Water's behalf has resulted in efficiencies of 2-3% being estimated.
- > Trialling new technology logging devices and working with staff as to possible time-savings from improved data management has been estimated to achieve an efficiency of around 1.5%

> Remote controlled devices for gauging have been introduced to replace more time-intensive manual gauging activities (e.g. having to wade through rivers to reach the gauging boards). Although these improvements do not apply at every location, WaterNSW's analysis has showed that a 2% efficiency can be achieved if the technological improvement is implemented at all sites where it is an option.

> Back office improvements to streamline processes and avoid re-work have been estimated to achieve efficiencies of 2%

Collectively through implementing these improvements, WaterNSW identified that efficiencies in the region of 11-12% could be achieved and could be measured and modelled to assess the level of success.

In addition, efficiencies have been achieved during the 2016 determination and will be able to be carried across into the 2021 determination period through the reduction of laboratory contracts.

As part of its optimisation work across the 2016 determination period, WaterNSW has also added three full time planner positions into the organisation structure to forecast the workload that needs to be delivered. This workload has been mapped into the future and also programmed to be as efficient as can be delivered based on the optimisation and rationalisation work that has been completed during the current period. The three planners have replaced six previous positions.

Whereas DPIE had separate teams for different tasks, WaterNSW has looked to multi-skill its monitoring staff so that one person can do the surface, groundwater and take monitoring rather than having to send out a different person to complete each type of monitoring activities. Additional team efficiencies have been realised through the introduction of Team Leader positions to improve staff resource management.

These efficiencies have been incorporated into WaterNSW's forecasts for its water monitoring activities in the 2021 determination period.

The Cardno report concludes at page 80 that:

The efficiencies have been realised through the optimisation and rationalisation of staffing resources and locations, re-scoping of roles within teams, multi-skilling, improved technology and data management, and a proactive assessment of the workload to actively seek where the monitoring functions could be delivered better. Duplication of monitoring work has also been removed where this had been identified as an issue.

Although there are overall reductions in operating expenditure for the WAMC water monitoring services, as WaterNSW has aligned its costs to DPIE's W-code activities using best endeavours, its activities may not directly align with DPIE's activity structure. As a result, there may be some apparent movement between the 2016 and 2021 expenditure for individual activity codes that may not be fully comparable, for example the large decrease in expenditure for groundwater quantity monitoring between the two periods.

As the scope of work across the current and future periods is generally the same, the expenditure savings that have been identified to be carried across into the 2021 determination period may also suggest that the operating expenditure in the past was not efficient.

Further operating cost efficiencies are also expected to be realised across the 2021 period and into the following determination period as a result of the implementation of

WaterNSW's capital expenditure WAVE program. This is expected to result in savings through improved data management and reporting. The WAVE program is intended to include a self-help portal which will allow data users to access their own data rather than making requests to the specific WaterNSW data team to provide the data.

Most importantly, we observe that Cardno has decided not to apply any catch-up efficiency to future water monitoring operating expenditure on the basis that the business processes used to develop the WAMC monitoring budget are in line with good industry practice:

Catch-up efficiency has been applied where we consider that the business processes used to justify and develop expenditure forecasts fall behind good industry practice.

...

We have not applied a catch-up efficiency to the activities where DPIE has applied its own internal efficiency challenge to avoid double counting. We have also not applied a catch-up efficiency to water monitoring expenditure in recognition of the efficiency gains made by WaterNSW in recent years.

We submit that the business process used to develop the WAMC hydrometric budget were also used to develop the rural valley hydrometric monitoring budget. The consolidation of the State's water monitoring fleet into WaterNSW has helped transform the efficiency of water monitoring across the State. As highlight by both WaterNSW and Cardno, these efficiencies have been achieved through the integration of business processes and team structures across each of the three IPART determinations.

Based on the reasoning provided in the Cardno report, the consultant's reductions to the rural valley hydrometric monitoring budget should be reconsidered by IPART.

2.2.15 Other issues; double counting

Even if we were to accept IPART's findings and the results of the benchmarking analysis, there are still issues of double-counting raised when applying the 1.1% p.a. (cumulative) catch-up efficiency adjustment to our operating expenditure over the 2021 Determination period. This arises in two respects:

1. Our uncontrollable costs do not appear to have been excluded from the base operating expenditure to which catch-up efficiencies are applied

We incur a number of uncontrollable operating costs, including, compulsory Treasury Managed Fund insurance contributions for our infrastructure assets, land tax payments payable to the NSW Revenue Office

To the extent that these costs are outside of our control and/or are required by law, they should be excluded from the base operating expenditure to which IPART applies its catch-up efficiency adjustments.

Table 9 – Our Uncontrollable operating costs (\$ millions, \$2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
Dam Safety Levy	-	226,099	226,099	226,099	678,296
Insurances - Public Liability	306,369	306,369	306,369	306,369	1,225,478
Insurances – Property	876,125	876,125	876,125	876,125	3,504,499

	2020-21	2021-22	2022-23	2023-24	Total
Property - land tax expense	1,334,810	1,946,172*	1,946,172*	1,946,172*	7,173,325
Annual Operating Licence Audit	77,923	76,966	106,111	89,523	350,523
Management System Audit	5,911	5,839	8,050	6,791	26,591
Financial audits	85,984	84,928	117,088	98,784	386,784
Property Council Rates	71,185	68,068	96,972	87,091	323,317
Property Rent Expense	686,189	723,135	961,288	913,322	3,283,934
Property Lease outgoings	128,083	123,115	154,370	147,879	553,446
Property Security Expenses	36,916	34,500	48,626	41,809	161,851
Total	5,924,496	6,786,315	7,162,270	7,054,963	26,928,044

*includes the 0.6m per annum which was cut by IPART as per table 3.2 of the IPART Draft Decision. Should IPART decide to retain the recommendation to the reduce land tax provision by 0.6m p.a. please deduct 0.6m from the row on land tax.

2. Programs subject to specific adjustments on the basis of efficiency appear to have been subject to a 'second round' of catch-up efficiency adjustments

As noted earlier, IPART has made bottom-up specific adjustments to the following programs on the basis of efficiency:

Table 10 – Direct operating expenditure reductions applied by IPART (\$millions, \$2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
Labour Cost	-0.9	-1.3	-0.3	-1.4	-3.9
Land Tax	0.0	-0.6	-0.6	-0.6	-1.8
Transformational Strategy	0.0	-0.5	-0.5	-0.5	-1.5
Reallocation of Regulatory Resources	0.4	-0.4	-0.4	-0.4	-0.7
Environmental Opex	-0.5	-1.2	-1.7	-2.2	-5.5

As these programs have already been specifically 'adjusted' once to ensure efficiency, it is both unreasonable and unnecessary to have them adjusted again efficiency, using top-down catch-up efficiency adjustments. To do so, raises a high risk of double-counting efficiency adjustments.

To avoid any potential for double-counting, we suggest that IPART remove both the \$26.9 million of uncontrollable costs when making any top-down catch-up efficiency adjustments.

In addition, Cardno (which is reviewing WaterNSW's costs as part of the WAMC determination, noting that water monitoring services apply across our Rural Valleys and WAMC operations) has considered our water monitoring costs to be efficient, as stated below:

An exception to this observation [re ongoing improvement] is for the water monitoring services provided by WaterNSW where a relatively stable level of service has been

provided for a decreasing level of expenditure in recent years **demonstrating efficiency gains** (emphasis added).

and

*There is evidence of efficiency being achieved in some areas resulting from this functional separation. For example, WaterNSW has demonstrated material savings in the delivery of water monitoring services through economies of scale and integration of the WAMC water monitoring services with the activities it was already undertaking in this area.*¹⁶

Currently, the \$11.9 million p.a. of water monitoring operating expenditure is deemed to be efficient under the WAMC determination and excluded from the application of the catch-up efficiency, yet the application of the catch-up efficiency is also applied to Rural Valleys water monitoring expenditure. The business process used to develop the WAMC hydrometric budget (which is considered efficient by Cardno) was also used to develop the Rural Valleys hydrometric monitoring budget. The consolidation of the State's water monitoring fleet into WaterNSW has helped transform the efficiency of water monitoring across the State. As highlight by both WaterNSW and Cardno, these efficiencies have been achieved through the integration of business processes and team structures across each of the three IPART determinations. Based on the reasoning provided in the Cardno report, the consultant's reductions to the Rural Valleys hydrometric monitoring budget should be reconsidered by IPART.

WaterNSW requests that water monitoring costs are excluded from the application of Atkins' top-down efficiency adjustments.

WaterNSW has serious concerns that IPART's catch-up efficiencies are retrospective, thereby 'changing the rules of the game' at each determination through double counting efficiencies. We urge IPART to allow WaterNSW time to achieve greater efficiencies during the regulatory period, rather than reducing our forward expenditures at the start of the regulatory period (with little or no ability to achieve the efficiency in the early years) based an arbitrary and unsubstantiated efficiency frontier.

If IPART is to apply catch-up efficiencies, WaterNSW proposes that this should only occur once IPART has considered the issue of efficiency as part of its wider review of how it regulates water businesses, rather than adopting the approach of Atkins which we consider to be lacking in the theoretical basis (in particular due to the absence of an efficiency frontier).

2.3 Capital expenditure

Atkins has proposed capital expenditure **reductions of \$72.1 million, or 19%** relative to our proposed capital expenditure program. Table 11 below outlines IPART's proposed capital expenditure reductions (noting that we have not recalculated Atkins' top-down efficiency adjustments for this change).

Table 11 – Total capital expenditure adjustments (\$000s \$2020-21)

¹⁶ See Cardno *Expenditure review of Water Administration Ministerial Corporation Final Report, 11 March 2021* pages vi and 5. <https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-rural-water-review-of-water-management-prices-from-2021/legislative-requirements-review-of-water-management-prices-from-2021/consultant-report-by-cardno-expenditure-review-of-water-administration-ministerial-corporation-march-2021.pdf>

	2021-22	2022-23	2023-24	2024-25	Total
WaterNSW Proposed	142.7	67.1	82.9	70.4	363.0
Draft Decision	141.0	64.1	47.9	38.0	290.9
Difference	-1.7	-3.0	-35.0	-32.4	-72.1
Difference (%)	-1.2%	-4.5%	-42.2%	-46.0%	-19.9%

Our concerns with the consultant's proposed capital expenditure reductions are outlined below, and are based on the direct and top-down adjustments applied by Atkins.

2.3.1 Direct Capital Expenditure Reductions

IPART has recommended direct capital cost **reductions of \$56.4 million** on Fish Passage offsets and **\$1.28 million** on the Lake Cargelligo embankment upgrade. The reductions are offset by a \$2.4 million reallocation of corporate capital costs from the WAMC determination into the Rural Valley Determination.

The following points address the consultant's proposed reductions to specific capital expenditure programs.

2.3.2 Fishway passages

In the Draft Determination, IPART indicated the following with respect to WaterNSW's proposed fish passageway offsets:

We have reduced proposed expenditure on fish passageway construction by \$56.4 million, which is almost 80% of the proposed program over the 2021 period. On balance, we do not consider the scope, scale and timing of the 11 projects proposed by Water NSW is realistic.

The fishway program is a regulatory requirement, and Water NSW is required to complete the program to meet its environmental obligations. We have not adjusted the allowance for fishways because we consider they should not be built, but because Water

NSW could not justify the scale, timing and deliverability of the program. The fishways should be built, and as soon as they responsibly can be.¹⁷

Atkins' proposed **reduction is \$56.4 million** compared with WaterNSW's proposed fish passageways program and comprises a significant proportion of the total proposed reductions to the capital program.

In justifying its proposed reductions, Atkins states that:

WaterNSW has proposed constructing eleven schemes, of which two are pilots. We consider piloting to be sensible. Given the lack of business cases and scheme development we have recommended an expenditure allowance for implementing the two pilot schemes and for developing the business cases and detailed design for the remaining nine schemes. This will allow time for learning lessons from the pilots, for

¹⁷ See IPART Draft Rural Valleys Determination 2021, page 38.

*planning and design for the remaining schemes. This should yield more efficient outcomes for customers in the long term.*¹⁸

WaterNSW is concerned that the approach proposed by Atkins has gone too far in reducing our allowed expenditure for fish passages and is not consistent with our legislative obligations. We therefore we request that this matter is revised by Atkins and IPART. We note that feedback from the 30 March 2021 public forum indicated that customers feel strongly about investment in fish passages.

WaterNSW acknowledges the beneficial outcomes of these projects and very much understands the considerable financial cost for customers of these investments, but notes that these are regulatory obligations that must be met. WaterNSW considers to date there has been an interagency focus on cost efficiency, rather than a focus on ensuring the fish passage offsets are efficiently delivered in the long-term interests of customers.

WaterNSW has undertaken a review of the schedule for the fishway program. This has identified that in order to ensure learnings from pilot sites are effectively incorporated into the remaining fishways, detailed design for remaining fishways should commence only after the pilot sites have been effectively commissioned.

We have reviewed our forward program with respect to fish passages and have identified that some downward revision to our original proposal is required in order to meet our regulatory obligations while ensuring that we are able to undertake pilot studies and incorporate the findings in our future expenditures over the upcoming determination period.

WaterNSW proposes a revised estimate of **\$43.1 million** as the prudent and efficient expenditure for fish passageways for the 2021 Determination period, reflecting a realistic delivery timeline.

Additional details on fish passage offsets is provided in Appendix 2.

2.3.3 Lake Cargelligo adjustment

Atkins recommends a **1.28 million reduction** in 2022-23 for a dam safety upgrade to the off-river storage system in the Lachlan Valley as:

“The expenditure allowance should agree with the current estimate in the PBC [Preliminary Business Case] of \$13.7M, which appears to have been reduced from the SIR CapEx figures total of \$15.0M” (Page 123).

WaterNSW considers that the initial cost estimate to undertake the dam safety upgrade works at Lake Cargelligo was approximately \$15 million. However, we have recently undertaken the dam safety risk assessment as well as operational risk assessment for the Lake Cargelligo Dams. This resulted in a refinement of our options for the best solution to deliver the stated objectives, which is prudent and provides an efficient solution to our Lachlan customers at a lower cost. The refined solution is now estimated to cost \$13.7 million (as per the preliminary business case) and we will proceed with this refined and cost-efficient solution.

2.3.4 Additional capital expenditure for Chaffey Dam environmental offset

WaterNSW is proposing to spend **\$1.5 million** in capital expenditure over the 2021 Determination period to meet the environmental approvals related to the Chaffey Dam Upgrade and Augmentation project, which was completed in 2016.

¹⁸ See Atkins Final Report for Rural Valleys 2021, page 14.

We request that the additional capital be included in the 2021-25 IPART allowances.

The Chaffey Dam Upgrade and Augmentation (Stage 2) project involved raising the dam wall to enable it to store more water (62,000ML to 100,000ML) and to secure permanent water supplies for Tamworth and Peel Valley water users. The dam was also upgraded to meet NSW Dams Safety Committee standards for extreme floods.

The project represented a significant investment of \$50 million in critical water infrastructure assets in the Tamworth region. \$18 million of the dam safety upgrade component of the works was funded by the NSW Government.

The \$31.8 million augmentation component of the works was funded by the Australian Government's National Water Security Plan for cities and Towns (\$18.1 million), the NSW Government (\$9.7 million) and Tamworth Regional Council (\$4 million). Part of the expenditure on Chaffey Dam augmentation (net of the grants) entered the Government RAB under the dam safety pre 1997 category (100 Government Share).¹⁹

An Infrastructure Approval was issued in relation to the Chaffey Dam Project for WaterNSW to prepare a Booroolong Frog Offset Plan and a Vegetation Offset Plan to mitigate the environmental impacts of the project.

In order to meet the requirements of the Infrastructure Approval, and in lieu of a land based offset, WaterNSW proposes to acquit the offset requirements by providing funding to third-party programs and initiatives that seek to mitigate the environmental impacts of the project. The proposal has broad support from the NSW Department of Industry.

The cost of biodiversity offsets is considered to be a capital item. The expenditure is incremental and directly attributable to the construction of an infrastructure asset (Chaffey Dam) forming part of the Infrastructure Approval for the project and hence would not have been incurred if the Chaffey Dam augmentation project did not proceed. Consistent with precedent, it is proposed that the additional expenditure enter the Government RAB under the dam safety pre 1997 category by 2021-22.

For IPART's consideration, WaterNSW has attached supporting documentation in relation to the funding proposal at Attachment 3 of this submission. The file package contains:

- Original business case and Board approvals (Chaffey papers);
- Booroolong frog offset plan;
- Conditions of approval;
- Letter from Biodiversity, Conservation and Science Directorate on monetary equivalent of species credits we were obligated to achieve under the conditions of approval; and
- Board Paper 24 February 2021 - Chaffey Dam Augmentation - Biodiversity Offset Approval

2.3.5 WAVE – capital expenditure

In our Rural Valleys and WAMC pricing proposals, the WAVE program capital expenditure of \$39.9 million was understated by approximately \$3 million due to the exclusion of capitalised overheads in the program estimate.

¹⁹ For instance, in the IPART 2017 Model \$11.9m in FY2016 Peel Valley Dam Safety (net of grants)

WaterNSW is seeking the inclusion of the capitalised overheads in the two final determinations using the split recommended by Atkins per the Efficiency Report and pro-rated between 2020-21 to 2022-23. The inclusion of the full costs of the program are integral to ensuring that the benefits included in the pricing proposals can be delivered.

2.3.6 “Top-down” efficiency reductions – capital expenditure

Atkins has applied top-down efficiency **reductions of \$16.6 million, or 4.6%** of the total proposed capital program due to ‘catch-up’ efficiencies (\$12.4 million, or 3.4%) and ‘continuing’ efficiencies (\$4.2 million, or 1.2%) as illustrated below:

Table 12 – Capital expenditure top-down efficiency adjustments

	2021-22	2022-23	2023-24	2024-25	Total
Atkins Reductions					
Catch-up efficiency (%)	2.11%	4.22%	6.83%	7.44%	
Catch-up efficiency (\$)	-3.04	-2.82	-3.51	-3.05	-12.4
Continuing efficiency (%)	0.80%	1.59%	2.38%	3.16%	
Continuing efficiency (\$)	-1.02	-0.95	-1.09	-1.17	-4.2

WaterNSW suggests that the total efficiency reductions of approximately \$16.6 million over four years are unachievable without compromising our financial and service standard outcomes. The consultant has provided less than four pages in the Draft Report to justify \$16.6 million of ‘top-down efficiencies’ for capital expenditures, with the analysis largely drawing on outdated international studies that do not readily reflect WaterNSW’s circumstances.

The following sections address the recommended continuing and catch-up efficiency reductions.

2.3.7 Continuing efficiencies (capital)

The following paragraphs summarise the justification for the ‘continuing efficiency’ reductions for capital expenditure as provided by Atkins in its Final Report:

The continuing improvement element of efficiency, termed ‘Frontier Shift’, relates to the increased productivity derived from process innovation and new systems and technology that all well-performing businesses should achieve. We have applied the results from the Australian Productivity Commission Multi-Factor Productivity (MFP) analysis, proposed efficiencies from other water utilities in New South Wales and recent analysis for Ofwat, the water regulator in England and Wales, which has been applied to frontier water companies. We have applied a Frontier Shift of 0.7% per annum cumulating over the Determination period.

In line with the recommendations of the WaterNSW GS and Sydney Water 2020 Determinations, we have not assumed continuing efficiency will reduce expenditure in FY21 because of the COVID-19 response.²⁰

²⁰ See Atkins Final Report for Rural Valleys 2021, page 137.

<https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-rural-water-watnsw-rural-bulk-water-prices-from-1-july-2021/legislative-requirements-watnsw-rural-bulk-water-prices-from-1-july-2021/consultant-report-by-atkins-expenditure-review-of-watnsw-rural-bulk-water-services-and-corporate-cost-allocation-february-2021.pdf>

Our response to the IPART's (and its consultant's) approach to 'continuing efficiencies' for capital expenditure is the same as our response to continuing efficiencies for operating expenditure as discussed in Section 2.2.12 (and discussed in detail in Appendix 4).

WaterNSW proposes continuing efficiencies of 0% - 0.35% p.a.

2.3.8 Catch-up efficiencies (capital)

The consultant takes a different approach to assessing its 'catch-up' efficiency for capital expenditure compared to catch-up efficiencies for operating expenditures. Whereas Atkins bases catch-up efficiencies (at least in theory) on an efficient frontier, for capital expenditure Atkins applies its judgement across four areas as illustrated below.

Table 13 – Catch-up efficiency adjustments for capital expenditures

Cumulative efficiency challenge (%)				
	2021-22	2022-23	2023-24	2024-25
Catch-up efficiencies				
<i>Catch-up: Capital program dev</i>	0.11%	0.22%	0.33%	0.44%
<i>Catch-up: Value engineering</i>	0.50%	1.00%	1.50%	2.00%
<i>Catch-up: Cost estimating</i>	0.50%	1.00%	1.50%	2.00%
<i>Catch-up: Procurement</i>	1.00%	2.00%	3.00%	3.00%
Catch-up efficiency	2.11%	4.22%	6.33%	7.44%

We consider that cumulative reductions for catch-up efficiencies rising to over 7% in 2024-25 are unachievable and potentially double-count "continuing efficiency" reductions and other direct reductions, as further detailed below.

We also provide further comment on the application of top down efficiencies to our renewals and replacement expenditure at Appendix 4 of this submission.

In addition to making program-specific adjustments, IPART's proposed catch-up efficiencies are based on findings that:

- WaterNSW has not applied internal top-down efficiency challenges to capital programs;
- WaterNSW's capital processes are at an early stage of maturity (in particular, program development and prioritisation, value engineering, cost estimating and procurement); and
- WaterNSW's asset management processes continue to contain gaps.

We have concerns that IPART's decision to accept Atkins' recommendation has not taken into account progress on the development of a number of our capital processes and the oversight our Board has of the capital program. WaterNSW considers that IPART should give further consideration to our position as a relatively young organisation, and questions whether the significant catch-up efficiencies that have been proposed are achievable. Our concerns are described in more detail below.

2.3.9 “Capital Program Development

The analysis of the requirement for additional efficiencies for Capital Program Development does not appear to consider that there is a substantial overlap between the concept as described in the draft report and WaterNSW’s own efficiency target categories of ‘Engineering’ and ‘Mobilisation and Packaging’. WaterNSW considers that the targets it has already set in these areas are achievable.

2.3.10 Value Engineering

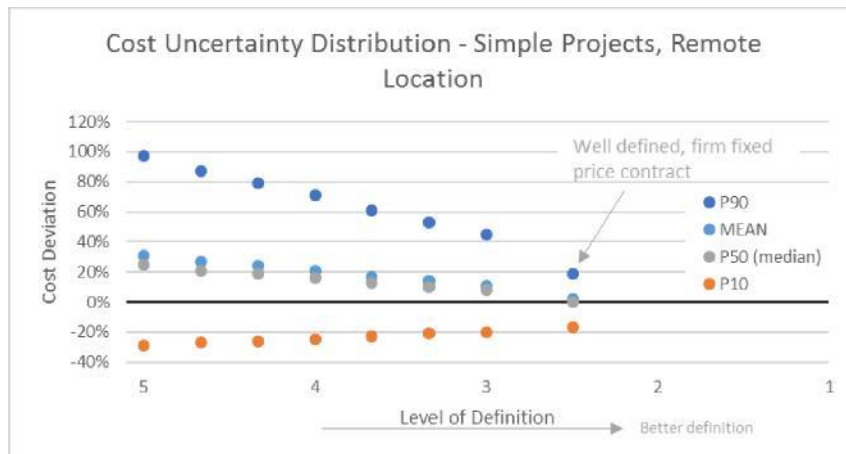
WaterNSW notes that the draft report appears not to provide any evidence that this efficiency target is warranted, apart from noting WaterNSW’s history of challenging engineering consultant’s estimates. Assuming that the draft report is referring to the example of the Avon Deep Water Access provided during the Greater Sydney Review, we note that this involved ensuring alignment with WaterNSW’s (lower) costing methodology. Given that WaterNSW’s forecasts are based upon the same methodology, WaterNSW would question the applicability of this efficiency target.

2.3.11 Cost estimating

WaterNSW recognises the need for mature processes to efficiently manage our asset portfolio. We believe we have demonstrated our commitment through the considerable improvement and maturity of the estimating methodology since the previous review. WaterNSW has an asset base dominated by bespoke on-river structures, where project risks are significant.

As such, WaterNSW considers any risk being borne through the current maturity of bottom-up estimates to be almost entirely toward under-estimating of site-specific conditions and risks. This observation is consistent with almost all industry commentary that consistently shows estimates typically increase throughout the project lifecycle. Please note the graph below from an Advisian study we commissioned in 2017, which analysed industry data on project costs for projects similar to those in the rural portfolio.

Figure 2 - Cost variance with estimate maturity



We suggest that unless Atkins can provide any evidence in industry data to support the findings, that this efficiency adjustment be removed in its entirety.

2.3.12 Procurement

The procurement efficiency as described in the draft report appears to overlap with all efficiency target categories set by WaterNSW (Engineering, Mobilisation and Packaging, Bulk Purchasing and Local Content).

As discussed during the review process, these efficiencies were set based upon each project type and applied against the relevant level of the work breakdown structure for each project. The consultant does not appear to recognise this or provide any analysis detailing why the tailored efficiencies set at the project level are inadequate.

Our business and capital and asset management processes

WaterNSW is a relatively young organisation, having only been established in 2015 as a result of the merger of State Water Corporation and Sydney Catchment Authority. It is not unreasonable to expect that our capital and asset management processes may be at an early stage of maturity and particularly so, when compared to processes at more well-established water utilities. *A priori*, this should not provide justification for catch-up efficiency reductions to be applied to our programs.

During the review process with Atkins, WaterNSW provided substantial evidence of our cost estimating processes as applied during the current regulatory period, and examples of how we identify and rectify over-estimation issues.

Despite this evidence, Atkins final report has presented only a small selection of data points on projects where we have underspent on budget, each of which involved legitimate changes in estimation and scope early in the project. We provided evidence of several other major projects for which our initial estimates were at or above the original budget in the current regulatory period, again reflecting legitimate changes, such that it cannot reasonably be established that there is evidence of an upwards bias in our cost estimation.

Our ability to meet the catch-up efficiencies

As a relatively newly established business, we have significant concerns with our ability to meet IPART's proposed catch-up efficiencies of between 2.1% to 7.4% a year, on top of a further cumulative continuing efficiency adjustment of 0.8% per year cumulative over the 2021 Determination period. This effectively means that we face **total capital efficiency reductions that rise to 10.6%** in 2024-25. This is a significant burden and attempting to meet those targets poses risks to both our financial and service standard outcomes.

We further question whether it is realistic to expect our business, having only being established in 2015, to achieve these largely arbitrary reductions within 4 years' time.

We note in IPART's 2019 Central Coast Council Decision that IPART did not accept Atkins' recommended catch-up efficiency targets on the Central Coast Council's operating expenditure. In doing so, IPART attached significant weight to the fact that that over a 3-year determination period the Central Coast Council would not have "sufficient capacity to identify and implement these efficiencies" and gave consideration to its status as a "newly merged entity".

We request that IPART give similar consideration to our circumstances and remove the catch-up efficiencies proposed in its Draft Determination accordingly.

2.4 Reprofiting of WAMC corporate capital expenditure to other determinations

In the WAMC efficiency Report, the IPART consultant (Cardno) recommended an adjustment to the value of corporate capital projects allocated to the WAMC determination so that only 25% of the allocated amount enters the WAMC RAB in 2016-17, gradually increasing to 50% of the allocated amount in 2017-18 and 75% of the allocated amount in 2018-19. The recommendation was made by Atkins who reviewed the rural valley pricing proposal.

It is not clear whether the balance of corporate capital expenditure has been reallocated to the Rural Valley determination. Our views on this issue are contained within our separate response to the WAMC Draft Determination which forms part of this response.

In addition to those concerns, we have identified a material error of omission per the Atkins recommendation to reallocate 2016-20 corporate capital expenditure to the other WaterNSW determinations in future price reviews.

The recommendation is not possible to be implemented at a future Rural Valleys determination. We note that it is an error of omission to make recommendations which are not possible to implement. The error of omission has been identified in both the Atkins Rural Valleys and Cardno WAMC efficiency reports.

To summarise, at page vii of the WAMC efficiency report, Cardno advises that it has reduced the amount of corporate capital expenditure which has been allocated to the WAMC determination using a moderated profile of 25% of the allocated amount in 2016-17 which gradually increases to 100% of the allocated amount in 2019-20.

WaterNSW sets out, and we accept, that the 2016 Determination did not allow for sufficient corporate capital expenditure for the WAMC business. However, the level of expenditure is also the result of cost allocation– the WAMC businesses did not suddenly required a step change in corporate capital expenditure, WaterNSW will have taken time to build its understanding of the business and its expenditure requirements. We therefore recommended that the level of corporate capital expenditure allocated to the WAMC business and considered efficient be in line with a moderated profile of expenditure rising from 25% of that submitted by WaterNSW in 2016/17 to 100% in 2019/20.

This has the result of reducing efficient expenditure by \$7.4 million. As this expenditure has been subject to efficiency assessment through previous expenditure reviews and found to be efficient, we recommend that this amount should in future be allocated to the regulatory asset base(s) of the other businesses that benefited from the expenditure

Cardo notes that WaterNSW's total corporate capital expenditure was considered efficient in prior reviews. We assume Cardno is also referring to this 2021 Rural Valley Determination and we ask that Cardno clarify this in their report. The Atkins Efficiency Report (p 176) concludes that corporate capital expenditure was considered prudent and efficient, as shown below.

We have taken into account the challenges posed by the merger and how effectively the new strategy has been implemented and we concluded in the round that there were no grounds to challenge the prudence and efficiency of the expenditure. Overall, we believe that the consolidation of the various offices and move to Parramatta appears to have been managed in line with good practice and has been undertaken in a prudent and efficient way. We find the fleet expenditure to be both prudent and efficient; however, it does suggest that in the past that there was some inefficiency with a reluctance to sweat the assets.²¹

The conclusion that WaterNSW's corporate capital expenditure is considered efficient is mirrored in page 54 and page 69 of the Cardno report:

Overall, the office accommodation consolidation strategy in the current period was managed in line with good practice and was prudent and efficient

...

Corporate capital expenditure has been subject to a separate review, as set out in Section 5.7. This review concluded that there was no grounds to challenge the prudence and efficiency of corporate capital expenditure in the current period.

²¹ <https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-rural-water-waternsw-rural-bulk-water-prices-from-1-july-2021/legislative-requirements-waternsw-rural-bulk-water-prices-from-1-july-2021/consultant-report-by-atkins-expenditure-review-of-waternsw-rural-bulk-water-services-and-corporate-cost-allocation-february-2021.pdf>

If the Cardno recommendation is implemented, we submit that the balance of corporate capital expenditure must be assigned to the 2021 Rural Valleys Determination by default, as total corporate capital expenditure was also considered efficient in both the 2020 Rural Valleys and 2019 Greater Sydney reviews.

We note that the Atkins Rural Valleys report failed to recommend a reallocation of efficient corporate capital expenditure to the rural valleys. This is an error of omission contained within the Atkins report. Cardno state that the 2016-2020 corporate capital should be allocated to the other determinations *at a future review*. It is unclear why the reallocation cannot occur in the current 2020 Rural Valleys Price Review.

At a subsequent 2025 Rural Valleys Price Review, it would be impossible for IPART to allocate any 2016-2020 corporate capital expenditure to the Rural Valleys RAB.

The RAB roll forward methodology used to set the Rural Valleys RAB is prescribed under the 2010 Water Charge Rules ("WCR" or the "Rules"). It offers IPART limited discretion in setting the starting RAB at each price review.

As the current review is being conducted within the transitional period specified in the Rules, the old Water Charge (Infrastructure) Rules (2010) ("WCIR") will apply with respect to the RAB roll forward methodology. The relevant provisions are set out in Schedule 2 below.

The regulatory asset base of a Part 6 operator, for the purposes of the second or a subsequent regulatory period in relation to the operator as a Part 6 operator, is to be determined in accordance with the formula:

$$(A + B) - (C + D)$$

where:

***A** is the regulatory asset base of the operator determined under this Schedule or the applied provisions in respect of the preceding regulatory period.*

***B** is the total of the actual (or, in the case of the last year of the preceding regulatory period, forecast) capital expenditure on assets used by the operator to provide infrastructure services (net of actual customer and government capital expenditure contributions) in respect of each year of the preceding regulatory period.*

***C** is the regulatory depreciation in respect of assets used to provide infrastructure services in respect of each year of the preceding regulatory period.*

***D** is the actual (or, in the case of the last year of the preceding regulatory period, forecast) revenue received by the operator from disposal of assets used to provide infrastructure services in respect of each year of the preceding regulatory period.*

Source: <https://www.legislation.gov.au/Details/F2017C00488>

Note that the starting point for the RAB roll forward methodology begins with variable A, the RAB determined under this Schedule or the applied provisions in respect of **the preceding regulatory period**. Variable B prescribes that only actual capital in the **preceding regulator period** can enter the RAB. Therefore, IPART cannot amend the Rural Valleys RAB to account for expenditure that was

incurred in the regulatory period prior to the preceding regulatory period (i.e. two regulatory periods ago).

In effect, it would be inconsistent with the WCR for IPART to amend the Rural Valleys RAB at the subsequent 2025 Rural Valleys Price review in order to implement the consultant's findings to reallocate 2016-2020 corporate capital expenditure to the Rural Valleys determination. We note that it is an error of omission to make a recommendation which is not possible to implement.

We ask that IPART consider the requirements of the WCR and reallocate efficient Rural Valleys capex to the Rural Valleys 2021 Final Determination. If it was the view of Cardno / Atkins that efficient corporate capital expenditure was incurred in the other determinations such as the Rural Valleys Determination, as is implied in the report, then the RAB roll forward methodology dictates that any actual capital expenditure rightfully incurred in the rural valleys shall enter the Rural Valleys RAB during the current price review.

We also note the Atkins / Cardno recommendations may require costs to be reallocated to the Greater Sydney Determination that was settled in June 2020. WaterNSW is concerned that it may be asked to bear the financial implications of the consultants' recommended changes to allocations, and therefore IPART is requested to consider how it would adjust costs for the Greater Sydney determination (e.g. through a reopening or early determination) rather than waiting for three years to make WaterNSW "whole".

We would not expect to be financially disadvantaged until the next Greater Sydney determination in three years in order to implement the consultants' findings on this matter and request that IPART do not accept these proposals on the basis that our current approach to cost allocation meets all relevant accounting and regulatory requirements.

Should the Cardno recommendation stand, we request that both IPART and Atkins-Cardno ensure that WaterNSW recovers its efficient corporate capital expenditure across each of its determinations, in line with the findings contained within the three efficiency reviews conducted by Atkins-Cardo (Greater Sydney/Rural Valleys/WAMC).

WaterNSW asks IPART to consider the timing of any change to corporate capital allocations, and that corporate capital allocations be specifically considered in the next Greater Sydney determination.

2.4.1 Proposed reallocation of corporate capital to the other determinations

In the event that IPART decides to reallocate the WAMC corporate capital to the other determinations, we submit that it is not appropriate to allocate corporate capital to the Broken Hill Pipeline Determination.

The Broken Hill Pipeline was commissioned in April 2019, and the inaugural determination for the pipeline commenced in 2019-20. We note that the operation of the pipeline has been wholly outsourced to the market, with approximately one direct internal FTE responsible for the contract management of the pipeline with the operator. We also note that the 2020-21 corporate capex has not been affected by the recommendation to reprofile the WAMC corporate capex.

Due to the limitations in Schedule 2 of the WCR, which provides limited discretion to IPART, IPART is required to reallocate a share of the corporate capex to the Rural Valley determination in this price review.

We recommend that the balance of the WAMC corporate capex should be allocated to the Greater Sydney and Rural Valley determination on the proportion of the value of the RAB. That is, the balance should be allocated 33% to the Rural Valley RAB and 67% to the Greater Sydney RAB.

The proposal to allocate the balance of the corporate capex by proportion of RAB is supported by the rules of the existing determinations e.g. IPART Rural Valley 2017-21 determination as well as the Greater Sydney 2016-2020 determination. For example, at section 4.13 of the 2016 Atkins efficiency report, Atkins stated that

In its regulatory submission, WaterNSW stated that:

costs associated with corporate wide capital projects (such as corporate information technology projects) are isolated and then allocated to each region based on the proportional value of the Regulatory Asset Base (RAB). On the basis of RAB proportion, 67% of the cost associated with corporate wide capital projects are allocated to the Greater Sydney customer base.

...

Therefore, whilst WaterNSW's use of RAB as the basis for allocating corporate costs is unlikely to be perfectly reflective of the underlying cost driver, it has the benefit of:

- *being readily available, and therefore easy to calculate, and*
- *a reasonable proxy for the physical asset base, which will be a driver of some corporate capex costs.*

Overall, these features, and the fact that the costs being allocated are relatively immaterial, leads us to recommend that no change be made to WaterNSW's proposed approach to allocating WaterNSW's corporate capital expenditure costs²²

In 2016-17, corporate capital expenditure was allocated based on a percentage of the RAB to meet the rules of the existing determinations. However, as WAMC historically has a very low RAB, but a large headcount (FTEs) relative to Greater Sydney and Rural Valleys, the RAB was not considered an appropriate basis for the allocation of capital costs to the WAMC determination.

In 2017-18 and 2018-19, WaterNSW allocated 27% of the total cost of 'staff based' corporate capital projects to WAMC based on the proportion of headcount (FTEs). This method was applied to overcome the issue of WAMC having a low RAB compared to a disproportionately high head count.

If IPART disagrees with our proposal to allocate a share of corporate capex to the WAMC determination by FTE as described above, then the balance should be allocated by proportion of RAB to the Greater Sydney and Rural Valleys determinations as per the rules of the existing determination and in accordance with precedent.

The reallocation is shown below:

Table 14 – Impact of reallocating of corporate capital expenditure (\$2020-21)

	2016-17	2017-18	2018-19
Balance of WAMC corporate capex to be reallocated to determinations	4,326,726	4,232,411	6,177,190
IPART proposed reduction to WAMC	75%	50%	25%
Amount to redistribute	3,245,045	2,116,206	1,544,298
Reallocation to Greater Sydney (66.7%)	2,164,445	1,411,509	1,030,046

²² https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-metro-water-legislative-requirements-sydney-catchment-authority-pricing-investigation-commencing-from-1-july-2016/consultants_report_-_aither_-_watnsw_greater_sydney_expenditure_review_-_february_2016.pdf

	2016-17	2017-18	2018-19
Reallocation to Rural Valleys (33.3%)	1,080,600	704,696	514,251
Total	3,245,045	2,116,206	1,544,298

2.5 Overhead Allocation

This section outlines our concerns regarding Atkins findings on our cost allocation methodology. We maintain the view that our approach to allocating overhead by “totex”:

- Meets accounting standards;
- Is consistent with IPART’s Cost Allocation Guidelines
- Forms the basis of our financial accounts that have been approved by the Audit Office;
- Is used by other utilities in other jurisdictions. For example, Energex - the largest electricity Network Provider in Queensland that provides energy to 3.4 million residents - uses the totex approach to allocate overhead to its regulated business which was approved by the AER;²³
- Allocates costs based on underlying business activity, in particular growth capex; and
- Was accepted as a basis to set the Greater Sydney Determination allowances.

We also consider that it is not appropriate for the regulator to mandate that a business applies an alternative accounting policy, particularly when we have adopted cost allocation principles and guidelines that are adopted by almost all regulated utilities, and auditors (i.e. the Audit Office of NSW) have accepted the policy as being appropriate.

WaterNSW points out several errors contained within Chapter 8 in the efficiency report including inaccurate assumptions that non-core activities drive significant corporate activity and erroneous conclusion on the WaterNSW CAM.

If IPART accepts Atkins’ findings, WaterNSW is concerned that it would introduce a significant financial risk as we would not readily be able to recover any reallocations that would require other determinations (including the Greater Sydney determination which was finalised in 2020) to be amended. We consider that our current approach to cost allocation is robust, is consistent with the IPART cost allocation guidelines and Accounting Standards and therefore should not be changed based solely on the advice of IPART’s technical consultants for this review.

We consider that our current approach is fit-for-purpose and that the case has not been made for change. Changing our cost allocation approach across a complex business based on the advice of one technical consultant would set a concerning precedent that WaterNSW could potentially be forced to change its approach to cost allocation at each review. This would clearly not be appropriate.

We therefore do not support the ‘log book’ approach to tracking any revenue shortfalls as recommended by Atkins arising from overhead reallocations as this introduces a significant regulatory risk for WaterNSW. If a reallocation was to occur, it would necessarily require an amendment or reopening of the Greater Sydney determination (or perhaps an early determination) to accommodate the reallocation of overhead from Rural Valley and WAMC to the Greater Sydney

²³ Please see page 22; <https://www.aer.gov.au/system/files/Energex%20-%2033.%202015-20%20Cost%20Allocation%20Method%20-%20October%202014.pdf> as updated in <https://www.aer.gov.au/system/files/Energex%20-%20Cost%20allocation%20method%20-%202018%20October%202018.pdf> as approved by the AER.

determination from 2023-24 in order to ensure WaterNSW is not financially disadvantaged by the reallocation over the next four years.

By ignoring our advice, particularly the knowledge of our business and costs, Atkins have made several recommendations that are erroneous and not support by the evidence. We recommend that IPART not adopt Atkins recommendations to change WaterNSW's approach to allocating overhead from totex to direct salaries.

2.5.1 The 10% overhead to non-special projects

Atkins concludes that there has been no justification provided for the 10% overhead rated applied to certain non-core projects.

Non-core projects receive a 10 % overhead rate however these projects represent a subset of non-core expenditure. As highlighted in the CAM, we apply a 10% fixed overhead rate on special non-core project because they are incremental to current capacity. We then apply the standard overhead rate to steady state non-core activities for services provided to the MDBA as a state constructing authority and other commercial services, including services provided to non-water users.

As previously flagged in our response to the efficiency report, WaterNSW considers that non-core special projects are generally delivered via external infrastructure delivery companies. Because of the delivery model, and the one-off nature of the project, we consider these projects to be incremental to current capacity (one-off).²⁴ We submit that it is not defensible to increase the rate of overhead above the current 10% rate for special projects.

Outside of MDBA works, the remaining non-core project are primarily undertaken on behalf of DPIE which heavily scrutinises any invoices issued in relation to special projects, as they are (to reiterate) incremental to current capacity and are generally delivered via external infrastructure delivery companies (with their own corporate costs/overhead) acting on behalf of WaterNSW.

Furthermore, we observed that the 10% fixed rate applied to non-core special projects is comparable to the 10% totex rate applied to 'steady state' non-core activities.

We submit that the 10% overhead rate has been appropriately applied to non-core Government funded special projects that are generally delivered through external infrastructure delivery companies. Atkins conclusion that non-core activities are assumed to drive *a significantly level of corporate activity*, is not supported by any evidence.

In addition, the forecast for non-core projects is difficult to predict i.e. there is not a steady state forecast for these works and they are not a key part of Water NSW's operations. These are works undertaken on an ad-hoc basis to assist NSW Government agencies.

2.5.2 Ability to increase overhead to non-core projects and consistency with WCR

We question whether allocation of additional overhead to non-core activities (including grant funded Government projects on rural valley infrastructure assets) would be consistent with the requirements of the WCIR.

²⁴ Relevant examples were provided by WaterNSW to Atkins in the email of 15 December 2020 which also forms part of this submission. For example, Separable Portion 2 pipeline infrastructure project.

Importantly, under Rule 29 (2) (b) of the WCR, IPART must be satisfied that the forecast revenue from regulated charges is reasonable likely to meet that part of the prudent and efficient cost of providing infrastructure services that is not met from other revenue.²⁵

As mentioned above, non-core expenditure includes special projects i.e. certain grant funded capital items which are treated as operating expenditure as these items do not enter the RAB. These projects receive a fixed overhead rate of 10%.

WaterNSW cannot allocate additional overhead in an arbitrary manner to the special projects without the express agreement of the NSW Government. The NSW Treasury heavily scrutinises the invoices issued in relation to special projects, as they are (to reiterate) incremental to current capacity and are generally delivered via external infrastructure delivery companies (with their own corporate costs/overhead) acting on behalf of WaterNSW.

We consider the reallocation of overhead from core to non-core activities cannot be implemented under the WCR, as IPART cannot be satisfied the additional non-core overhead (including to grant funded projects on regulated assets) will be met by other revenue source. For clarity, non-core revenue is difficult to forecast and we would also seek to ensure that WaterNSW is not made worse off financially by the reallocation over the next four years (i.e. the implication of any change needs to be revenue neutral across all determinations including Greater Sydney, WAMC and the Broken Hill Pipeline)

In addition, WaterNSW cannot allocate additional overhead costs in an arbitrary manner to the MDBA without the agreement of the MDBA and endorsement of the Ministerial Council. These costs, as well as other costs related to commercial services, are not subject to IPART economic regulation. Under the proposal, we consider that Atkins nor IPART cannot reach the conclusion that the additional overhead to non-core will be met by other revenue sources. Therefore, we submit that the proposed option cannot be implemented as it is inconsistent with the requirements of the WCIR.

In summary, we consider that IPART cannot be satisfied the additional non-core overhead charged to Government funded activities can be met from other external revenue. We submit that the proposal to allocate additional overhead from the rural valley to non-core activities and grant funded rural valley projects is inconsistent with the requirements of the WCIR.

We ask that IPART consider the requirements of the WCIR and the revenue risk to WaterNSW given the ad hoc nature of non-core works and the unwillingness of NSW Government agencies to pay for allocated overheads.

2.5.3 Atkins recommendation leads to unintended consequences

Atkins has commented on the need to ensure overhead costs are allocated to determinations based on the causal link between the overhead cost and the expenditure. However, the Atkins recommendation results in approximately \$2.0 million of additional overhead allocated to the Broken Hill Pipeline.

The operation of the Broken Hill Pipeline has been outsourced entirely to market (Trility). WaterNSW has approximately one internal contract manager involved in the administration of the pipeline. We consider that it would be erroneous to conclude that \$2.0 million in overhead operating expenditure should be allocated to the Broken Hill Pipeline over four years, representing a 18% increase in pipeline operating expenditure, mostly consisting of energy costs.

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<https://www.legislation.gov.au/Details/F2017C00488#:~:text=Water%20Charge%20%28Infrastructure%29%20Rules%202010%201%20%281%29%20The,applicant%20is%20established%20or%20appointed.%20More%20items...%20>

Of particular note, IPART had only approved \$0.15 million p.a. in overhead on average for the Broken Hill Pipeline in its 2019 determination, \$0.2 million in contract management costs and \$0.1 million on financial audit costs.

Since the commissioning of the pipeline, WaterNSW has been allocating appropriately \$0.5 million per annum in overhead costs to the Broken Hill pipeline using totex as an allocator in line with the current IPART allowances for the pipeline. WaterNSW wanted to maintain a consistent approach to allocating corporate overhead across all of our determinations. We consider this to be a pragmatic and appropriate approach.

However, the consequence of the Atkins recommendation is an additional increase in pipeline overhead by \$0.5 million per annum.

We are concerned as to whether the cost implications of the Atkins' recommendation will be accepted by the Tribunal in the Broken Hill Determination. There is considerable regulatory risk associated with changing the approach to overhead allowances at each regulatory review based on the technical consultant's finding when it is not practical / possible to adjust the other determinations for the corresponding impacts.

By ignoring WaterNSW's advice, particularly the knowledge of our business and costs, Atkins have made several recommendations that are erroneous and not support by the evidence.

2.5.4 Erroneous conclusions regarding the WaterNSW CAM

We submit that the conclusions drawn by Atkins are based on incorrect statements and conclusions that do not give proper weight to the evidence presented by WaterNSW.

In the provision of bulk water services, WaterNSW constructs, maintains and enhances a significant number of infrastructure assets. WaterNSW incurs corporate costs which are triggered by both capital and operating projects. Corporate costs have been allocated to projects and determinations as specified in our Cost Allocation Manual (CAM) by totex. Our CAM provide a practical approach to identify and allocate a supportable proportion of corporate costs to determinations.

The totex allocation results in an allocation that is better aligned with the allocations from the 2020 Greater Sydney Determination.

Our proposal to allocate overhead by totex is in line with the IPART cost allocation guidelines.²⁶

The IPART cost allocation guidelines provide guidance on the form of the CAM, as per below. It does not prescribe any particular cost driver for allocation, as shown below:

Section 42 of the WIC Act requires that, within three months after an infrastructure service becomes the subject of a coverage declaration, the service provider:

- *must keep separate accounts for its infrastructure services that are the subject of the declaration, and*
- *must submit a cost allocation manual to IPART in relation to that infrastructure.*

The primary driver of our cost allocation methodology is to comply with the relevant accounting standards. An unintended consequence of the IPART recommendations is the need for WaterNSW to prepare a separate set of regulatory accounts given we are unable to change the accounting policy unless it complies with requirements of the NSW Audit Office, and as noted below, Atkins has

²⁶ <https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/investigation-administrative-water-iparts-cost-allocation-guide/legislative-requirements-iparts-cost-allocation-guide/cost-allocation-guide-march-2018.pdf>

not conducted a comprehensive audit of our policy against the requirements of the Australian Accounting Standards or the NSW Audit Office.

The added complexity would necessitate additional funding of \$0.4 million per annum in operating expenditure to appoint two additional accountants to prepare a separate set of regulatory accounts.

The Atkins recommendation places additional regulatory complexity on our reporting requirements in attempting to reconcile our audited financial statements against the requirement of the IPART Annual Information Return.

Whilst we are grateful for the advice from Atkins, we note that it is unusual for regulators and efficiency consultants to recommend prescriptive wholesale changes to an entities' cost allocation framework based on a cursory review of expenditure over a 2-3 month period.

The business is best placed to determine the most appropriate cost allocation methodology for its business and customers based on its knowledge of its operations and the industry. WaterNSW is also subject to a comprehensive audit program implemented by the NSW Audit Office. In addition, WaterNSW procured specialist accounting advice to develop the CAM. The WaterNSW CAM is consistent with Australian Accounting Standards.

We note that Atkins has not conducted a comprehensive audit of the CAM against the requirements of the IPART guidelines or the Australian Accounting Standards. WaterNSW believes this should be disclosed in the Final report for transparency. The limitations of the Atkins analysis and conclusions should be highlighted in the Final Report for transparency.

The findings in chapter 8 of the report imply that WaterNSW did not consider other allocation methods. The report implies that WaterNSW did not implement a process of assessing WaterNSW's cost and cost drivers in developing the CAM. This is not correct.

WaterNSW analysed the drivers of corporate costs in developing the CAM that was used as the basis to set the 2020 Greater Sydney expenditure allowances. WaterNSW had considered other approaches to allocating corporate overhead across each of the determinations, such as the direct salaries driver, which was based on our understanding of the drivers of our costs. This was noted in our response to RFI 90, we noted that:

If the direct salaries approach to cost allocation had remained in place over FY18-20, this would have resulted in an actual overhead allocation to Rural Valleys of \$58.4 million. This would have resulted in a further \$6 million increase in opex overheads for Rural Valleys over FY18-20, above the current opex overspend of \$49.1 million for the current period.

IPART did not request additional information on FTEs values by determination for the purposes of assessing our overhead methodology. We are surprised by IPART's comments in the Draft Decision which imply that it was forced to consider an inferior operating expenditure allocator in the absence of FTE data. IPART did not request additional information on FTE values or direct salary costs, nor was it flagged as an option to WaterNSW.

We present analysis on the impact of the change of approach to allocation from totex to direct salaries (as a proxy for FTEs) to highlight the impact to the determinations. This information would have been provided to IPART had it been requested:

Table 15 -Impact of changing allocator from totex to direct salaries (\$m, \$2020-21)

Determination	FY21	FY22	FY23	FY24	FY25	FY22-25	% allocation
Rural Valley	0.3	1.9	2.7	-0.6	1.4	5.4	35.67%
WAMC	3.7	4.2	4.2	4.1	4.8	17.2	26.62%
Greater Sydney	-3.7	-5.7	-6.4	-3	-5.7	-20.8	37.57%
Broken Hill	-0.3	-0.4	-0.5	-0.5	-0.5	-1.9	0.14%
Non core*	0	0	0	0	0	0	0.00%
Total	0	0	0	0	0	0	100%

*leaving non-core static, as per WaterNSW's position on the treatment of non-core overhead.

In summary, WaterNSW's approach to allocating overhead by totex meets accounting standards; is used by other utilities; best reflects the underlying business activity for which overheads are being incurred to support regulated business; and was accepted as a basis to set the Greater Sydney Determination allowances. We do not consider it reasonable for the regulator to mandate a business to apply an alternative accounting policy, particularly when we have adopted cost allocation principles and guidelines that are adopted by almost all regulated utilities.

If IPART accepts Atkin's findings, WaterNSW will seek to ensure that we are made "whole" financially over the next four years, which may include revisiting the Greater Sydney determination.

This is a significant change and should IPART consider it warrants consideration, we ask that it instead be considered as part of the next Greater Sydney determination so that appropriate analysis and justification can be undertaken.

2.6 Volatility Allowance

2.6.1 Introduction

WaterNSW welcomes IPART's recognition that we should receive our revenue in relative alignment to our largely fixed cost base and its support of an 80:20 price structure.

However, WaterNSW does not accept that the approximate \$0.5 million per annum allowance for volatility self-insurance, to replicate an 80:20 from the current price structures, reflects the efficient cost of providing customer choice on tariff structure.

2.6.2 The prudent and efficient costs of volatility insurance is \$2.3 million per annum

The cost of \$2.3 million to purchase revenue volatility insurance per our pricing proposal is the result of a competitive market procurement process undertaken with the insurance industry, supported by independent actuarial and reinsurance advice. WaterNSW considers that IPART should accept this as the prudent and efficient cost of providing customers with their preferred price structures, in place of the volatility allowance included in the Draft Determination.

WaterNSW considers the procurement of this volatility insurance as being an efficient and innovative solution to providing customer choice of tariff structure while at the same time as providing WaterNSW with the revenue structure more appropriate for its cost structure. The insurance product was a relatively new development for the Australian water industry.

2.6.3 WaterNSW will still face higher volatility risk than other bulk water utilities

WaterNSW notes that even at an 80:20 fixed to variable pricing structure, WaterNSW is exposed to more volatility than other Part 6 operators under the Water Charge Infrastructure Rules (WCIR). For example, the Victorian utility, Goulburn Murray Water, has a pricing structure of 90:10 fixed to variable for irrigation services and 100:0 fixed to variable for bulk water services. Further, for SunWater Systems, the ACCC reported in its 2013-14 ACCC Monitoring Report that customer bills comprise 85 and 99 per cent fixed charges (with some exceptions).

WaterNSW is not being compensated for the increased exposure to volatility risk in the rural valleys. That is, it receives the same equity compensation (equity beta and market risk premium) as businesses with much lower revenue risk (such as the Victorian utilities cited above, and WaterNSW's Greater Sydney valley).

2.6.4 WaterNSW supports customer tariff choice

WaterNSW supports customer choice on tariff structure. The tariff structures proposed in our Pricing Proposal were those endorsed by customer representatives at Customer Service Committees.

The volatility insurance costs are for the total revenue covering the Hunter Valley and the 8 Murray Darling Basin valleys excluding the Lowbidgee (100% fixed charge) and Fish River (which we proposed would move to an 80:20 revenue structure). We proposed to exclude the North and South Coast valleys on the basis they are not yet at full cost recovery.

If a valley elects to move to a higher fixed charge pricing structure than the current 40:60 or 60:40 structures, WaterNSW will support this and would seek to remove that particular valley from the volatility insurance cover. We would seek a re-quote of the product accordingly (noting that the premium reduction may not be perfectly linear). For instance, Peel Valley moved from 40:60 fixed to variable pricing structure during the 2017 Determination, which resulted in RTP costs not being applied to the valley.

Furthermore, the volatility insurance product provides a possible foundation in the future for more flexible arrangements with customers. For example, it may enable future facilitation of individual customers being able to choose their tariff structure.

2.6.5 It is not prudent or efficient for WaterNSW to 'self-insure against revenue volatility

WaterNSW does not believe it would be innovative or efficient for WaterNSW to self-insure.

Self-insurance is not a new, nor an efficient strategy, for WaterNSW. In effect WaterNSW has, in the past, been "self-insuring" – that is, fully bearing revenue risk arising from the 40:60 pricing structure and not managing the risk. As a result, WaterNSW has borne significant losses (under-recovery) during both the 2006-2010 and 2010-2014 pricing periods.²⁷

Over the period 2006 to 2016, the WaterNSW cumulative under-recovery amounted to \$101.5 million²⁸ as shown below.

²⁷ Excluding the 2014-17 period where the UOM was established by the ACCC, which resulted in a significant loss of \$20 million which has not been recovered to date.

²⁸ Assuming no payback of the UOM balance accrued in the 2014-17 determination period

Table 16 - Allowed revenue requirement vs. actual revenue recovered (\$millions, \$2020-21)

	2006-2016
Total allowed revenue requirement	1,000.8
Total actual revenue	899.3
Under-recovery	-101.5

Self-insurance can be an efficient strategy for firms where risks are naturally internally diversified by the firm. For example, many firms self-insure risks for individual business lines (e.g. associated with exchange rates, fire, road-accidents etc.) when the risk is sufficiently diversified across the aggregated business and/or over time.

However, self-insurance is not practical nor achievable for WaterNSW with regards to water usage revenue. Revenue from water usage is too significant relative to total revenue, and there is high correlation of water usage revenue between valleys. The diversification benefits over time are also small. Water usage in any given year is highly correlated with previous years, droughts can persist for many years (spanning regulatory periods) and there is a risk of long term trends. The 20-year rolling average for the calculation of expected water sales for pricing purposes means that volatility is only gradually reflected in prices over time.

There is substantial evidence that revenue and cashflow volatility is value-destructive²⁹, and that managing risk through insurance or hedging is a prudent activity for business managers and adds to firm value^{30,31}.

Continuing to bear volatility as suggested by IPART in its Draft Report is basically choosing to continue to bear the associated revenue risk and costs. This is inconsistent with IPART's stated agreement that we should have an 80:20 pricing structure in recognition of our highly fixed cost-base³² and low risk compensation (i.e. Equity Beta of 0.7). **It is inconsistent with providing WaterNSW with a reasonable opportunity to recover our efficient costs.** We also note that the former State Water Corporation received a lower credit rating (Baa3/BBB-) despite:

- Having a capital structure less than half the notional efficient benchmark of 60% Net debt to RAB due to the revenue risk arising from the 40:60 high variable pricing structure;
- Earning a higher WACC at the time; and
- IPART providing a volatility allowance of \$2 million per annum for the 2010 price period.

As a bulk water supplier, WaterNSW does not consider insurance to be our core business – we are concerned that there would be significantly more cost in us trying to replicate a self-insurance scheme ourselves than outsourcing it to dedicated professional risk managers. Running a self-insurance scheme ourselves is tantamount to setting up a new “non-regulated” risk management service offering.

The cost of a self-insurance scheme would need to include:

²⁹ Rountree, B., J. Weston, and G. Allayannis. 2008. Do Investors Value Smooth Performance? *Journal of Financial Economics*. 90: 237-251. who (p. 1) find “that a 1% increase in cash-flow volatility is associated with approximately a 0.15% reduction in firm value.”

³⁰ Aretz, K., Bartram, S. M., & Dufey, G. (2007). Why hedge? Rationales for corporate hedging and value implications. *The Journal of Risk Finance*, 8(5), 434-449.

³¹ MacKay, P., & Moeller, S. B. (2007). The value of corporate risk management. *The Journal of Finance*, 62(3), 1379-1419. In an examination of oil-refiners they found that hedging revenues increased firm value by 2 to 3 per cent.

³² See page 85 of the Draft Report

- a **Capital Reserve** to shield WaterNSW from the volatility (i.e. akin to financial institution minimum capital reserves). Interest costs of holding 1 year's "value at risk" as a capital buffer would be \$0.8 million (3.8% nominal cost of debt x \$20.3 million variable revenue at risk)³³;
- A **Risk Premium** (this is the IPART volatility allowance - \$2.315 million as proposed); and
- **Management time and resources** – conservatively estimated at 1 FTE to administer the scheme and ongoing actuarial advisory costs (\$0.25 million per annum),

2.6.6 A market tested price is the best evidence of the efficient costs

WaterNSW submits that its market-testing / procurement approach represents the best method of determining the prudent and efficient costs of volatility. Indeed, the insurance market has advised WaterNSW that the method used by IPART to determine its volatility allowance is not reflective of how they have assessed the volatility risk in pricing the volatility product for WaterNSW.

This is evidenced by regulatory practice in other jurisdictions. For example, in determining the efficient costs of self-insurance for National Grid, the UK regulator Ofgem relied on a market testing process.

Market testing determines who is best able to diversify risk. The external market is often lower than self-insurance when, as is the case for WaterNSW, the source of volatility is external to the organisation (i.e. outside of WaterNSW's influence) and well understood.

2.6.7 Concerns in relation to the IPART calculation approach

WaterNSW appreciates that estimating the cost of revenue volatility is not straight forward. The true costs should incorporate a range of costs including financing, financial distress, taxation and management/administration.

One possible approach is to estimate the cost of financing to negate any risk of volatility. However there are challenges to this approach:

- There is no certainty as to how long the financing will be required. Consequently any additional financing would need to be in the form of equity and debt;
- It is uncertain as to when the additional financing will be required. The cost of equity (and financing more generally) can escalate significantly and at times (e.g. during the period of the global financial crisis) effectively unobtainable; and
- The accumulated shortfall in revenue can continually increase indefinitely and it is difficult to put a limit on the amount of equity that would be required.

Consequently adopting this approach would lead to very high costs and we expect multiples higher than the quoted cost for the volatility insurance product.

2.6.8 Concerns in relation to the IPART calculation approach

The method proposed by IPART to provide a volatility allowance of \$0.5 million per annum differs substantially to that previously applied by IPART in the 2010 determination. The formula applied by IPART in the 2010 determination involved the cost of financing of four continuous years of low

³³ The variable revenue at risk of \$20.3 million assumes replication of the 80:20 pricing structure. The variable revenue was taken from the IPART draft determination model at row 420 to 430 at the prices & revenue tab. For those valleys under the 40:60 fixed to variable pricing ratio, the variable revenue in the model is 60% of the total revenue requirement and was therefore multiplied by 2/3 to calculate the revenue at risk. For Hunter Valley (under a 60:40 fixed to variable pricing ratio), the variable revenue in the model is 40% of the total revenue requirement and was multiplied by 1/2. North Coast, South Coast, Peel Valley and Fish River were excluded from the analysis as they are not covered by the risk transfer product.

extractions.³⁴ Similarly, the formula initially proposed by IPART in the 2017 Determination assumed the cost of financing based on the probability of low extractions over a 4 year determination.

The IPART Draft Report does not provide an explanation as to what has changed to WaterNSW's operating environment since the 2010 determination period or the 2017 Determination period to warrant a change in the methodology of the volatility allowance. WaterNSW is exposed to the same revenue risk faced by the (then) State Water Corporation during the 2010-2014 determination period and WaterNSW during the 2017-21 determination period.

Using this previous IPART 2010-2014 method, the volatility allowance was approximately \$2 million per annum (**\$2.5 million in \$2020-21**); which is over 4 times the value IPART has calculated using the new method. Using the method proposed by IPART (but not adopted)³⁵ in the 2017 Determination, the volatility allowance was approximately \$1.0 million per annum, about 2 times the value IPART has calculated using the new method.

The new method proposed by IPART and as calculated by Frontier Economics is a theoretical assessment of the costs of volatility, using a Monte Carlo simulation on a sparse data set to predict future usage. However, the Frontier report does not provide an opinion on whether the approach is robust, or likely to predict future expected demand. The Frontier Economics approach does not address, consider or provide compensation for, the likelihood of low extractions events during the 2021 Determination period.

The approach assumes that WaterNSW would not contribute to the principle payments on the loan that is owed under the self-insurance model. That is, on average, WaterNSW would only contribute to the payment of interest charged on the loan. This assumes WaterNSW would not accumulate significant under-recovery of revenue under the self-insurance model. This is confirmed in page 20 of the Frontier Economics report:

However, we perform a final step to calibrate the consumption so that it is equal to IPART's forecast on average. This is based on the assumption that IPART's forecast of consumption (derived using the average of the past 20 years at the start of the regulatory period) is unbiased).

The consumption in each iteration is proportionately scaled up or down such that the mean across the 1,000 simulations is equal to the IPART forecast. This maintains the shape of the distribution and maintains the likelihood of material under- or over-recoveries. The scaling factor used to determine the calibration may be different between years and between valleys.

However, the application of the calibration factor is not supported by the evidence. The application of the calibration factor implies that Frontier's initial analysis found that the 20-year rolling average was in fact biased (suggesting a downward trend in usage). This is consistent with actual events, including the cumulative under-recovery accrued prior to 2017 and the UOM balance accrued during the 2014-17 determination period, both of which has not been recovered to date.

It is unrealistic to assume that WaterNSW would recover its efficient costs under the existing 20-year rolling average used to set the variable charges. The 20-year rolling average includes extractions that were recorded in the years 2000-01 to 2001-02. However, actual usage sustained in the 1990s and early 2000s could not be said to be representative of expected demand. We argue that there is a significant structural change usage as a result of changes in the water management and planning

³⁴ Where 'low extractions' were calculated as historic mean extractions less the historic mean absolute deviation.

³⁵ See footnote 199 page 94 of the 2017 IPART Final Decision;

<https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/investigation-legislative-requirements-water-bulk-water-review-of-prices-for-waternsws-rural-bulk-water-services-from-1-july-2017-formerly-state-water-corporation/final-report-waternsw-review-of-prices-for-rural-bulk-water-services-from-1-july-2017-june-2017.pdf>

laws, leading to a permanent downward trend in usage which is not reflected (fully) in the 20-year rolling average

We refer to actual events, such as the cumulative revenue shortfall accrued by WaterNSW to date, as evidence that the 20-year rolling average is unable to guarantee the recovery of WaterNSW's efficient costs over the 2021 Determination period or the long term. The empirical evidence implies that it is optimistic to suggest WaterNSW will only require compensation for the interest charged on a loan under the self-insurance model.

2.6.9 The approach is inconsistent with the Water Charge Rules

WaterNSW submits that the proposed approach is inconsistent with the requirements of the WCR and the mandatory conditions imposed upon IPART under the ACCC terms of accreditation that requires IPART be satisfied that WaterNSW can recover its prudent and efficient costs **within the regulatory period**. IPART is also required to set prices that contribute to the Basin Water charging principle and objectives, including the need to ensure sufficient revenue streams to the operator.

The IPART Draft Decision proposes to retain the existing tariff structure so that a high proportion (60%) of user revenue is recovered through the usage charges which are set using the 20-year rolling average.

WaterNSW considers the approach of setting high variable tariffs, to be inconsistent with the requirements of the WCR and the ACCC Pricing principles.

Under the ACCC accreditation of IPART, IPART is required to observe the following:

- (a) [...]that the applied provisions apply as a law of the State and are in force;
- (b) [...]that the approval or determination of regulated charges of all Part 6 operators and Part 7 operators relating to State water resources of that State must be carried out by the accredited agency in accordance with the accredited arrangements and the applied provisions.

Note: the applied provisions refer to the WCIR.

According to the ACCC, the first mandatory condition ensures that multiple regulators across the MDB will apply one set of pricing principles to all determinations under the WCIR, helping to achieve consistency where decisions are being made by different regulators in different Basin states.

The ACCC imposed two additional conditions under the terms of accreditation. The first additional condition requires that **IPART must apply the ACCC pricing principles** in making determinations or approvals under the WCIR (p 9).³⁶

In its draft decision, the ACCC proposed two additional conditions to the mandatory conditions imposed by the WCIR. The first condition required IPART to apply the ACCC pricing principles in making determinations or approvals under the WCIR. The second condition required IPART to provide information obtained or produced in carrying out its functions under the accredited arrangements to the ACCC upon request.

Under section 3.11 of the ACCC Pricing Principles, charges *must* promote the economically-efficient use of water infrastructure assets. In practice, this can be best achieved where the fixed and variable components of a charge recover the fixed and variable cost of providing the service. Charges *must* also be set to ensure sufficient revenue stream:

³⁶ <https://www.accc.gov.au/regulated-infrastructure/water/water-projects/ipart-application-for-accreditation-under-the-water-charge-infrastructure-rules/final-decision>

For example, charges must promote the economically efficient use of water infrastructure assets. In practice, this can be best achieved where the fixed and variable components of a charge recover the fixed and variable costs of providing services.

Charges must also be sufficient to ensure that the required infrastructure services continue to be efficiently delivered. That is, charges must be designed so that businesses earn a sufficient revenue stream in order to meet their regulatory, legal and other obligations.

...

Tariff structures should:

- *promote the economically efficient use of water infrastructure assets*
- *ensure sufficient revenue streams to allow efficient delivery of the required services*
- *give effect to the principles of user pays in respect of water storage and delivery in irrigation systems*
- *achieve pricing transparency*
- *facilitate efficient water use and efficient functioning of water markets.*

As per Rule 29 of the WCR, the Regulator must not approve charges unless it is satisfied that the total forecast revenue is reasonably likely to meet the prudent and efficient cost within that regulatory period.

The Regulator must not approve the regulated charges set out in an application under this Division unless the Regulator is satisfied:

...

(ii) the forecast revenue from regulated charges is reasonably likely to meet that part of the prudent and efficient costs of providing infrastructure services that is not met from other revenue.

Old WCIR cited as the 2021-2025 prices are to be determined under the transitional arrangements;
<https://www.legislation.gov.au/Details/F2017C00488>

The estimated cost of volatility of \$0.5 million per annum is not sufficient to compensate WaterNSW for the revenue volatility risks it faces nor would it allow WaterNSW to secure the Revenue Insurance Product. The revenue streams under the Draft Decision would be subject to a high variable component coupled with the 20-year rolling average used to set the variable charge which assigns a high degree of forecasting risk to WaterNSW and provides no certainty in the recovery of WaterNSW's efficient costs within the regulatory period,

In addition, the approach is inconsistent with the National Water Initiative principles which state that users should bear the risks of any reduction in, or less reliable, water allocations arising as a result of seasonal or long-term changes in climate and drought

Water access entitlement holders are to bear the risks of any reduction or less reliable water allocation...arising from reductions to the consumptive pool as a result of seasonal or long-term changes in climate; and... drought.³⁷

As highlight previously, the new method is a theoretical assessment of the costs of volatility. The approach assumes that WaterNSW would only contribute to the payment of interest charged on the loan. This assumes WaterNSW would not accumulate significant under recovery of revenue. It does not consider the likelihood of low extractions events during the 2021 Determination period or the forecasting risks associated with the 20-year rolling average which is assigned to WaterNSW. It

³⁷ COAG, Intergovernmental Agreement on a National Water Initiative, June 2004, p 8

follows that that IPART cannot be satisfied that WaterNSW can recover its prudent and efficient costs **within the regulatory period per the requirements of the WCR** nor can it be satisfied that the proposed volatility allowance contributes to the Basin Water charging principles and objectives.

2.6.10 The approach is inconsistent with actual events

WaterNSW submits that the 20-year rolling average will likely decline as the calculation is updated with demand figures at the end of the 2021 Determination period reflecting the current regulatory environment. Should IPART decide to set the volatility allowance by reference to the cost of self-insurance, WaterNSW submits that IPART should consider the significant forecasting risk assigned to WaterNSW under the 20-year rolling average and revert to the previous calculations for the volatility allowance, having regard to either the cost of financing four continuous years of low extractions or the probability of low extractions over the 2021 Determination period.

WaterNSW disagrees with Frontier’s assumption that the 20-year rolling average is a perfect estimate of future demand. Frontier have assumed no significant accumulation of debt over the 2021 Determination period. However, it is unrealistic to assume that WaterNSW would recover its efficient costs under the 20-year rolling average used to set the variable charges. We note there is significant forecasting risk in using the 20-year rolling average.

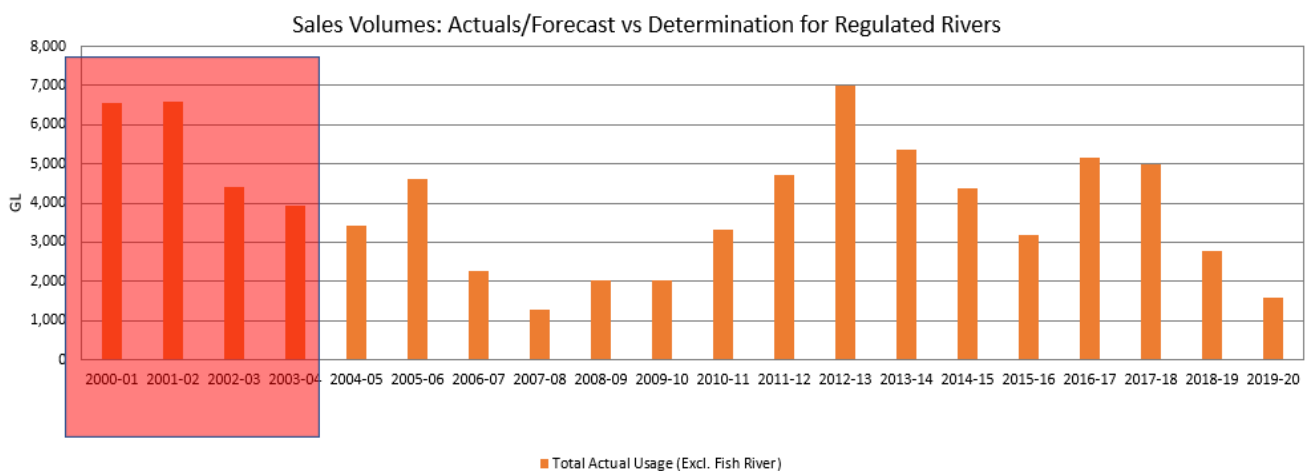
As discussed previously, based on actual events, over the period 2006 to 2016, the WaterNSW cumulative under-recovery amounts to \$101.5 million:

In addition, WaterNSW accrued a UOM balance of \$20 million during the 2014-17 determination period. To date, WaterNSW has yet to recover the UOM balance accrued during the 2014-17 determination period.

The 20-year rolling average has been in place for 10 years since 2010. Theoretically, any cumulative shortfall is supposed to be recovered over the next 10 year period. This is highly unlikely to occur given the clear downward trend in demand experienced in recent years and a significant structural change in usage which is not reflected (fully) in the 20-year rolling average.

The chart below shows the year which would be ‘rolled off’ the 20-year rolling average at the end of the upcoming 2021 Determination period.

Table 17 – 20-year rolling average



We consider that IPART should assess whether the data points highlighted above are likely to be replaced with an equivalent level of demand over the 2021 Determination period e.g. the level of demand experienced in the 1990s and early 2000s.

Frontier assume that the existing 20-year rolling average is *not biased* (via the application of the calibration factor) however WaterNSW's challenges this assumption. As previously mentioned, the application of the calibration factor implies that Frontier's initial analysis found that the 20-year rolling average was in fact biased (suggesting a downward trend in usage).

The 20-year rolling average includes usage from the early 2000s. However, actual usage sustained in the early 2000s could not be said to be more representative of future expected demand. We argue that there is a significant structural change in usage as a result of changes in the water management and planning laws, leading to a downward trend in usage, which is not fully reflected in the 20-year rolling average

We refer to actual events, such as the cumulative revenue shortfall accrued by WaterNSW to date, as evidence the 20-year rolling average cannot guarantee the recovery of WaterNSW's efficient costs over a 20-year period or the 2021 Determination period. The empirical evidence confirms that it is highly optimistic to suggest that WaterNSW will only require compensation for the interest charged on a loan under the self-insurance model.

Prior to the commencement of the Water Sharing Plans (WSPs), water extractions in most regulated valleys was considered excessive (i.e. overused or over-allocated). As a result, the MDB Governments decided to strengthen the rules around diversion limits to restore the health of the river system. The MDB cap was agreed by the MDB Governments, and subsequently, the Water Management Act NSW 2000 (NSW) (WM Act) was enacted to provide for the protection, conservation and ecologically sustainable development of the water sources of NSW. The WM Act enabled the Minister to create WSPs consistent with the objects of the WM Act.

The WSPs were introduced for most regulated river systems in the 2000s with a reduction in long term diversions in mind. It is understood the Government set a range of up to 10% reduction in diversions through the changes introduced via the new regulatory regime.

Furthermore, under the Water Act and the *Basin Plan 2012 (Cth)*, NSW water resources plans must be accredited by the Murray Darling Basin Authority, and must (amongst other things) demonstrate compliance with the sustainable diversion limits in the plan. Once the resources plans are accredited and in force, there is expected to be even further downward pressure on water usage to meet the requirements of the plan. Since the early 2000s Water Sharing Plans have been enacted in all regulated valleys, with strengthened rules around diversion limits, compared to the 1990s to early 2000s.

The reduction in the reliability of water entitlements was recognised by the Commonwealth. For example, in Schedule 3 A of the Commonwealth Water Act 2007:

Water access entitlement holders are to bear the risks of any reduction or less reliable water allocation, under their water access entitlements, arising from reductions to the consumptive pool as a result of:

- (i) seasonal or long-term changes in climate; and*
- (ii) periodic natural events such as bushfires and drought.*³⁸

³⁸ http://classic.austlii.edu.au/au/legis/cth/consol_act/wa200783/sch3a.html

The sentiment is mirrored in the National Water Initiative principles which state that users should bear the risks of any reduction in, or less reliable, water allocations arising as a result of seasonal or long-term changes in climate and drought

*Water access entitlement holders are to bear the risks of any reduction or less reliable water allocation...arising from reductions to the consumptive pool as a result of seasonal or long-term changes in climate; and... drought.*³⁹

Given that Water Sharing Plans have been enacted in all regulated valleys, with strengthened rules around diversion limits, we submit that recent usage would represent a more accurately reflection of expected demand compared to usage observed in the early 2000s.

As per the previous figure, extraction levels of 6,500 GLs p.a. were recorded in 2000-01 to 2001-02, which was repeated only once in 2012-13 during the post WSP environment. We consider it is highly unlikely for actual demand to reach the extractions levels experienced in the 1990s and early 2000s over the 2021 Determination period (that is, approximately 6,500 GLs p.a. in two of the four years of the 2021 Determination period).

As the 2001-01 and 2001-02 data points are included in the 20-year rolling average which are not representative of future demand over the 2021 Determination period, we argue that the 20-year rolling average is overstated from the first year of the 2021 Determination period. Because of the forecasting risk, WaterNSW submits that it will accumulate debt under the self-insurance model over the 2021 Determination period.

In addition, the following factors are likely to lead to a permanent downward trend in usage:

- In 2018, NRAR was established with responsibility for monitoring compliance with NSW water management and planning laws, leading to the implementation of an effective compliance regime and increased detection of water theft.
- Climate change: WaterNSW is in the process of improving our understanding of climate change and the impacts this may have on our operations, water resource models and our customers. The risk of climate change has not been factored into the 20-year rolling average. However, the scientific consensus is that it is reasonable to expect longer periods of drought due to global warming, particularly in dry regions like in land/regional Australia (ref. State of the Climate Report 2020, CSIRO).⁴⁰
- Commonwealth water buy-backs from irrigators for environmental demand. The buy-backs have resulted in a permanent shift in agricultural usage among licensed users.

WaterNSW submits the 20-year rolling average will decline as the calculation is updated with actual demand during the 2021 Determination period reflecting the current regulatory environment. WaterNSW will require compensation for the cost of financing in years of low water extractions (below the 20-year rolling average) in light of the forecasting risk assigned to WaterNSW.

Should IPART decide to set the volatility allowance by reference to the cost of self-insurance, WaterNSW submits that IPART should revert to the previous calculations for the volatility allowance, having regard to either the cost of financing four continuous years of low extractions or the probability of low extractions over the 2021 Determination period, taking into account the permanent downward trend in usage.

³⁹ COAG, Intergovernmental Agreement on a National Water Initiative, June 2004, p 8

⁴⁰ <http://www.csiro.au/en/Showcase/state-of-the-climate>

2.6.11 Ex Ante Under and Overs mechanism is not appropriate

The calculation proposed by IPART acts as an *ex ante* Unders and Overs (UOM) mechanism that does not consider the cost of financing four continuous years of low extractions, the principle payments on the loan, or the probability of low extractions rates over the 2021 Determination period.

The UOM balance under the IPART calculation is based on a forward-looking theoretical assessment of the expected performance of the 20-year rolling average using Frontier Economics unrealistic calibration factor. Hence the approach is subject to a high degree of forecasting error,

IPART's proposed approach exposes WaterNSW to the financial risk of having to leverage our balance sheet to fund the under recovery of revenue for an undefined period of time. It would require the Tribunal to commit to an approach that spans five regulatory periods (assuming four-years per regulatory period) in order to cover the volumes of the 20-year rolling average. IPART has recognised on many occasions that it is not possible bind a future Tribunal under existing legislation.

In any case, the approach would not ensure WaterNSW would recover its prudent and efficient costs due to error given the UOM balance is based on a forward looking theoretical assessment of the expected performance of the 20-year rolling average and subject to a high degree of forecasting risk. It is not based on the performance of the 20-year rolling average to date in recovering our prudent and efficient costs. It does not consider the permanent downward trend in usage observed in recent years.

In comparison, the ACCC UOM mechanism which was implemented over the 2014-17 determination period under the WCR was an *ex post* UOM mechanism with the added benefit of tracking any accumulated shortfalls in revenue which are then incorporated into the tariff calculations at a future determination period and or in the next year. **WaterNSW proposes the ACCC UOM is re-introduced in the absence of an allowance for the risk transfer product as we have proposed.**

The calculation proposed by IPART is not as transparent as the ACCC mechanism introduced in the 2014-17 Determination period under the WCR and is clearly not appropriate when considering the requirements of the WCR, such as ensuring WaterNSW can recover its prudent and efficient costs within the regulatory period and contributing to the Basin Water charging principles and objectives.

Self-insurance in no way would provide WaterNSW with a reasonable opportunity to recover its efficient costs over the upcoming regulatory period. There are significant qualifications in using the IPART approach as any downward trend in usage will never be recovered.

2.6.12 Payment of the principle

Payment on the principle of the loan is a general requirement under almost all commercial loans.

As established, the 20-year rolling average is not indicative of expected demand over the 2021 Determination period. The calibration factor applied by Frontier Economics is unrealistic and fails to take into account the permanent downward trend in usage or the actual performance of the 20-year rolling average to date.

Assuming that:

- 1) Water sales over the 2021 Determination period reflect the most recent trend in usage (e.g. 2017-2020 average); and
- 2) WaterNSW is required to contribute to the principle payments of the loan under the self-insurance model (that is, the debt will be paid off over the next determination period as per the requirements of the WCR),

the costs of self-insurance increases to \$1.7 million per annum, which is over 3 times higher than IPART's estimate of the volatility allowance of \$0.5 million per annum and \$0.6 million per annum lower than WaterNSW's costs of procuring the revenue product of \$2.315 per annum.

The costs of the volatility allowance approaches \$2.5 million as per the 2010 IPART Final Determination (inflated to 2020-21 real dollars) assuming that WaterNSW is entitled to recover 100% of its revenue requirement, and not 80% as is currently assumed in the IPART calculation.

This analysis is indicative of a likely scenario; however the calculation still underestimates the true costs of self-insuring as it does not take into account:

- Periods of accumulated under-recovery (or actual under recovery);
- The cost of financing should be adjusted upwards for the risk of needing to raise finance during a credit squeeze;
- The management costs associated with self-insuring; and
- The impact on the cost of debt that would arise with a credit downgrade based on a self-insurance model.

2.6.13 Conclusions

There is a high probability that actual water sales volumes over the 2021 Determination period will fall far below the 20-year rolling average based on the performance of the 20-year rolling average to date and the fact that rural NSW is still in drought.

Should IPART decide to set the volatility allowance by reference to the cost of self-insurance (which we oppose). WaterNSW submits that IPART should revert to the previous calculations for the volatility allowance, having regard to either the cost of financing four continuous years of low extractions or the probability of low extractions over the 2021 Determination period, taking into account the permanent downward trend in usage.

In addition, by reversing the calibration factor on the 20-year rolling average and assuming WaterNSW is required to contribute to the principle payments of the loan under the self-insurance model which is a general requirement under almost all commercial loans and implied under the requirements of the WCR, the costs of self-insurance increases to \$1.7 million, which is 3 times higher than that assumed by IPART.

This calculation would still underestimate the true costs of self-insuring as it does not take into account:

- Periods of accumulated under-recovery;
- The cost of financing should be adjusted upwards for the risk of needing to raise finance during a credit squeeze, and
- The management costs associated with self-insuring.

On this basis WaterNSW submits that IPART should allow \$2.3 million per annum to allow the insurance product to be purchased, achieving replication of 80:20 price structures in the rural valleys in an efficient market-tested; and new and innovative way for the Australian water market.

If IPART does not provide a VA of \$2.3 million per annum as proposed, WaterNSW will not be able to purchase the insurance product to replicate the 80:20 pricing structure and therefore IPART will not be able to demonstrate compliance against the WCR; that is, that WaterNSW is reasonably likely to recover its prudent and efficient costs within the next regulatory period.

WaterNSW proposes an UOM is re-introduced in the absence of an allowance for the risk transfer product as we have proposed.

A discussion of the impacts on WaterNSW's financeability of the self-insurance decision is provided in Section 2.8.3.2.

2.6.14 Correction to Frontier report

At page 16 of the Frontier report, Frontier states that:

However, WaterNSW advised us that it could provide us with long times series (e.g., up to 100 years) of simulated water volumes for at least the major valleys. These data would be simulated using the Integrated Quantity and Quality Model (IQQM) that is used within the industry for water resource planning purposes

WaterNSW wishes to correct this statement. WaterNSW advised Frontier that it was unable to provide IQQM modelling on 100 years of simulated water volumes as per Frontier's request for information. The IQQM model is owned and operated by DPIE.

Instead of the IQQM results, WaterNSW explored the option of providing longer term modelling from our internal models which have not previously been published or subject to external scrutiny. However, the analysis was not available in the immediate term. If the modelling was required, the 100-year simulation would have to be created and be subject to peer review and quality assurance. We had attempted to develop longer term modelling for the purposes of the Frontier Report; however, we were unable to verify the results of the analysis in the timeframe provided.

The Frontier report should be amended based on the comments above.

2.7 Return of assets (depreciation)

2.7.1 Asset lives

WaterNSW recognises the importance of balancing the need to ensure the timely recovery of capital costs while managing customer bill impacts, through making asset life assumptions.

WaterNSW considers the adjustment to the useful life of IT assets from 6 to 7 years to be appropriate. We accepted IPART's recommendations to retain the existing assets lives for the remaining categories.

2.7.2 Disaggregating the RAB

IPART notes in section 7.5.4 of its Draft Report that the methodology applied to calculate the current draft depreciation allowance may lead to an under-recovery of depreciation in the short term by aggregating short-lived and long-lived assets into a single RAB. IPART suggests that WaterNSW review its depreciation method in the future.

WaterNSW agrees with IPART and considers that disaggregating the RAB into a short-lived and a long-lived RAB would provide a more accurate alignment of costs and revenues. On this basis, we propose that capital expenditure in the upcoming determination period be separated into a short-lived and a long-lived RAB for each valley.

Similar to our Greater Sydney determination, we intend for the subsequent (i.e. 2025) determination to undertake a detailed review into disaggregating the existing RAB to assess if a greater degree of

precision can be achieved with greater disaggregation that better reflects the remaining lives of our existing assets. For the upcoming period we suggest retaining the existing RAB and separating new assets into short-lived and long-lived RABs.

Consistent with IPART's view, we propose that capital expenditure related to Water Delivery & Other operations and Corporate assets be included in the short-lived RAB and all other expenditure be included in the long-lived RAB.

We note that this is consistent with the treatment in the 2006 determination where IPART set a RAB for short-lived and long-lived assets.⁴¹

The difference in total revenue requirement outcomes, excluding MDBA and BRC, between the two approaches is presented below. The disaggregation leads to a \$10.9 million increase in revenue requirement over the period. A modified draft report model with separated RABs is provided to IPART as an attachment for their consideration.

Table 18 - Notional Revenue Requirement (NRR) with a disaggregated RAB (\$millions, \$2020-21)

	2021-22	2022-23	2023-24	2024-25	Total
NRR - Draft Report	95.0	100.6	99.6	98.2	393.4
NRR - Disaggregated RABs	95.7	102.6	103.0	102.9	404.2
Variance (\$)	0.7	2.0	3.4	4.7	10.9

2.8 WACC, inflation and financeability

This submission addresses the following issues relating to WACC, inflation and financeability and the resulting implications, as well as how IPART can take these into account in its final determination for WaterNSW:

- The exceptional impact of the COVID 19 pandemic on the economy as a whole and financial markets more specifically;
- The associated heightened level of uncertainty that exists around all WACC parameters but, in particular, the uncertainty associated with the forecast of inflation used by IPART to derive a real WACC;
- How the uncertainty around the inflation forecast can best be mitigated, and in so doing, minimise the prospect of windfall gains/losses accruing to stakeholders as a result of regulatory forecast error; and
- The implications for the financeability of WaterNSW's business were IPART to not adapt its regulatory framework and methodology to the new economic circumstances.

WaterNSW accepts the use of IPART's standard WACC framework for the Rural Valleys (Coastal valleys) and WAMC reviews and IPART's application of the ACCC's 'on the day' WACC methodology for the MDB valleys for calculating a post-tax nominal WACC. However, we propose an alternative approach to forecasting inflation to convert IPART's 'nominal' WACC to a 'real' WACC.

IPART indicated in the Draft Report that it will adopt an inflation estimate of 2.1% per annum for deflating the post-tax nominal WACC to a post-tax real WACC.

⁴¹

See 2006 determination model and section 4.1.3 of https://www.ipart.nsw.gov.au/files/sharedassets/website/trimholdingbay/review_of_bulk_water_prices_from_2005_to_2006_-_issues_paper_-_september_2004.pdf

WaterNSW notes that there is inflation risk associated with IPART's approach to forecasting inflation when calculating the post-tax real WACC. If outturn inflation varies from IPART's forecast. WaterNSW notes that IPART's inflation forecasts (and other regulators' forecasts generally) have been systemically higher than outturn inflation, which results in insufficient cash flows in the determination to achieve IPART's 'notional' real post-tax WACC. This has significant implications for the financeability of WaterNSW's investment program.

2.8.1 Forecasting inflation

IPART's existing method for forecasting inflation in calculating the real WACC involves two steps:

- IPART adopts the one-year ahead RBA forecast of inflation, and then assumes that inflation will be 2.5% (the midpoint of the RBA's inflation target range) in every remaining year of the regulatory period; and
- IPART then calculates a geometric average of the expected rates of inflation over the regulatory period.

In the case of a business with a four-year regulatory period, three out of the four numbers over which IPART computes a geometric average will be 2.5%. This guarantees that IPART's forecast of inflation will always be close to 2.5%, irrespective of whether that is a realistic forecast or not. IPART's approach assumes that inflation will always be 2.5% in the second year of every regulatory period, and remain at that level, regardless of:

- Prevailing economic conditions or the economic outlook over the regulatory period;
- Whether actual inflation is close to 2.5%;
- Whether the RBA's 1-year ahead forecast rate of inflation is close to 2.5%;
- Whether the RBA's 2-year ahead forecast is close to 2.5%; and
- Whether investors' prevailing expectations of inflation over the next five years is close to 2.5%.

In WaterNSW's view, the main shortcoming of IPART's existing approach to forecasting inflation is an assumption that inflation will return to 2.5% in year 2 of the regulatory period, under any circumstances. Such an assumption is unrealistic in the present low-inflation environment.

For instance, the Reserve Bank of Australia ("**RBA**"), which IPART has recognised is "objective, and best-placed, to analyse what the available information suggests for expected inflation" has said consistently that the outlook for inflation remains low as the Australian economy recovers from the COVID 19 pandemic. The RBA's latest (February 2021) Statement of Monetary Policy reaffirmed that view, noting that:

*Spare capacity will remain for some years, dampening inflationary pressures.*⁴²

The RBA went on to note that recent increases in inflation were due to the reversal of temporary government policies, such as free childcare, which have now run their course:

Headline inflation has been volatile since the pandemic started. The introduction and subsequent reversal of various temporary policy support measures, such as free childcare, have resulted in large price movements. Working in the opposite direction, prices of some retail items, especially household goods, were initially boosted in response to strong demand

⁴² See RBA, *Statement on Monetary Policy, February 2021*. Page 1.

*and supply disruptions. Most of these effects have now run their course.*⁴³

Hence, there is no reason to suppose that any recent, short-lived increase in the rate of inflation would continue over the forthcoming regulatory period. To the contrary, the RBA emphasised that inflation is likely to remain “subdued” and “muted” for a number of years due to spare capacity in the economy:

Underlying inflation pressures remain subdued and are expected to be fairly muted in the period ahead. Spare capacity in the labour market remains elevated, and wages growth has eased further from already low rates. Many employers have responded to the economic challenges of the pandemic by delaying wage increases, imposing wage freezes and, in some cases, applying temporary wage cuts. Forward indicators suggest wages growth will remain soft this year.

*Both underlying price inflation and wages growth are expected to remain below 2 per cent over the forecast period, out to mid 2023. Trimmed mean inflation is expected to be 1¼ per cent over 2021 and 1½ per cent over 2022. For inflation to be sustainably within the Bank’s target range of 2–3 per cent, a period of labour market tightness that leads to faster wages growth is needed. However, even the latest, upgraded, forecasts for economic activity and employment still imply a degree of spare capacity and slow wages growth over coming years.*⁴⁴

WaterNSW notes that until recently, most regulators in Australia employed approaches to forecast inflation that were very similar to IPART’s existing ‘RBA geometric average’ approach - namely, adopting RBA forecasts for the first year or two of the regulatory period, assuming an immediate return to 2.5% thereafter and then averaging forecast/assumed rates over some future horizon.⁴⁵

However, in recognition that such an approach has produced unreasonable and unrealistic inflation forecasts for many years, including in the current low-inflation environment, nearly all Australian regulators have now made fundamental changes to their inflation forecasting approaches:

- In its June 2020 determination for SA Water, the Essential Services Commission of South Australia (ESCOSA) adopted a glidepath approach whereby it adopted the RBA’s 1-year ahead and 2-year ahead forecasts of inflation for years 1 and 2 of the regulatory period, assumed that the rate of inflation would transition gradually to 2.5% thereafter by year 7 (i.e., a 5-year glidepath) and remain at that level until year 10;⁴⁶
- In every determination since June 2020, the Essential Services Commission in Victoria (ESC) has forecast inflation by applying 50% weight to RBA-based forecasts (similar to IPART’s) and breakeven inflation;⁴⁷
- In December 2020, the Australian Energy Regulator (AER) decided that it would adopt a glidepath approach to forecast inflation. Under that approach, the AER would adopt the RBA’s 1-year ahead and 2-year ahead forecasts of inflation for years 1 and 2 of the regulatory period, and then assume that inflation would transition gradually via a linear glidepath to 2.5% by year 5. The overall inflation forecast would then be calculated as the geometric average over the rates for years 1 to 5; and⁴⁸

⁴³ Ibid, page 2.

⁴⁴ Ibid, page 2.

⁴⁵ The notable exception was the Economic Regulation Authority in Western Australia, who has consistently used breakeven inflation to forecast inflation.

⁴⁶ See ESCOSA, *SA Water Regulatory Determination 2020, Final Determination: Statement of Reasons, June 2020*. Page 5.

⁴⁷ See, for example: ESC, *Melbourne Water Draft Decision, 17 March 2021*. Page 53.

⁴⁸ See AER, *Regulatory treatment of inflation, December 2020*. Page 6.

- In February 2021, the Independent Competition and Regulatory Commission (ICRC) published a draft WACC methodology decision in which it proposed to adopt the AER's glidepath approach to forecasting inflation.⁴⁹

Furthermore, in March 2021 the Queensland Competition Authority (QCA) launched a standalone review of its inflation forecasting methodology. The Issues Paper used by the QCA to initiate that review noted that a number of regulators had recently made significant changes to their inflation forecasting methodologies. The QCA has sought views from stakeholders particularly on whether it should adopt either the AER's glidepath method or market-based measures (such as breakeven inflation) to derive its inflation forecasts.

In summary, due to concerns about the reliability of the 'RBA geometric average' approach—a version of which is employed by IPART - nearly all regulators in Australia have either made fundamental changes to their inflation forecasting inflation recently, or are currently consulting on whether and how they should improve their method for forecasting inflation.

The following table summarises recent changes to the inflation forecasting methodologies by Australian utility regulators.

Table 19 – Summary of recent Australian regulatory' decisions on forecasting inflation

Regulator	Previous approach	New approach
AER ⁵⁰	10-year average based on: a trimmed mean inflation RBA forecast for the first two years of the regulatory period, and the mid-point of the RBA's target inflation band (2.5%) for the remaining eight years.	The AER's December 2020 decision is to shorten the averaging period to a term that matches the length of a regulatory period (typically 5 years) and apply a <u>linear 'glide-path'</u> from the RBA's forecasts of inflation for Years 1 and 2 to the mid-point of the RBA inflation target in Year 5 (e.g. 2.5%).
ESCOSA ⁵¹	Geometric mean over 10 years of the RBA inflation forecast for the first year and the midpoint of the RBA's target band for the following 9 years	10-year average inflation expectation, calculated using the RBA trimmed mean CPI inflation forecasts for two years and a <u>linear 'glide path'</u> to the mid-point of the RBA's inflation targeting band over five years, then remaining at 2.5 percent thereafter.
ESC ⁵²	Forecast inflation for the purpose of determining the real WACC was based on nominal bond rates using the "paired bond approach" which considers current market evidence	Based on the midpoint of the RBA geometric and bond breakeven inflation rates. The RBA geometric inflation rate is the RBA forecast consumer price index inflation rate one and two years ahead and the midpoint of the RBA target inflation band (2.5%) to 10 years ahead. The bond breakeven inflation rate is implied by the difference between the yields on 10-year nominal and indexed (inflation-linked) Commonwealth Government Securities.
ERAWA ⁵³	Treasury bond implied inflation approach. The (2013) approach used the Fisher equation and the observed yields of 5-year CGS of the nominal risk-free rate and 5-year indexed Treasury bonds (which incorporate a market based estimate of a real risk-free rate).	The ERA supports the use of a nominal WACC to address concerns that current negative real risk free rates and low real WACCs do not reflect Australian market conditions.. Where the ERA is required to forecast inflation for the purposes of the WACC, it will use the

⁴⁹ See ICRC, *Review of methodologies for the Weighted Average Cost of Capital, February 2021*. Page 2.

⁵⁰ See <https://www.aer.gov.au/system/files/AER%20-%20Final%20position%20paper%20-%20Regulatory%20treatment%20of%20inflation%20-%20December%202020.pdf> page 52.

⁵¹ See ESCOSA 2019, p 8.

⁵² See ESC 2020, page 9.

⁵³ ERAWA, page .

Regulator	Previous approach	New approach
		'Treasury bond implied inflation approach' whereby the yield on 10 Year Commonwealth Government Securities and the yield on Indexed Treasury bonds differ by an inflation calculated using the Fisher equation.
ICRC ⁵⁴	The forecast used the mid-point of the RBA's target inflation band over the regulatory period.	Adopted the AER's revised approach of using the RBA's short-term inflation forecasts for the first two years of the regulatory period, then applying a linear 'glide path' to the RBA's 2.5% mid-point for the remaining years of a regulatory period.
QCA ⁵⁵	Geometric 5 year average of RBA short-term forecasts for years 1 to 3 and the midpoint of the RBA target range for years 4 and 5	In March 2021, QCA announced it will review its approach to forecasting inflation.

Source: WaterNSW analysis

This leaves IPART as one of the only regulators in Australia to retain its inflation forecasting approach.⁵⁶

WaterNSW submits that there is overwhelming evidence - including from the RBA - that current inflation expectations over the forthcoming regulatory period are significantly lower than the forecasts produced by IPART's inflation forecasting approach. There has also been broad acceptance that the RBA geometric average approach is producing unreasonable and unrealistic inflation forecasts in the current low-inflation environment.

Given these considerations, WaterNSW proposes that IPART should make some minor modifications to its existing inflation forecasting approach that would significantly improve the reliability of its inflation forecasts. WaterNSW submits that adoption of the AER's glidepath approach would represent the smallest possible departure from IPART's existing approach that would achieve the greatest improvement in the reliability of forecasts.

In arriving at the proposed approach of applying the AER's inflation forecasting methodology, WaterNSW assessed the materials and submissions made during the 2020 review. As an example, we note the view from Deloitte Access Economics (engaged by the AER) on the appropriateness of the glidepath approach as reproduced below.

The glide path approach is found to be highly congruent and simple, as well as relatively robust, transparent and replicable. The use of a glide path would provide a provision for potential deanchoring of inflation expectations in coming years. There are issues around how to define the length of the glide path and how to interpolate between the end of the RBA forecast series and the end of the glide path (whether to adopt a linear or exponential path back to 2.5%). That said, if inflation remains below the RBA's target range for an extended period the glide path is likely to produce a 10-year inflation expectation that better reflects expectations.

...

⁵⁴ See ICRC *Review of methodologies for the Weighted Average Cost of Capital, Report 1 of 2021, February 2021 - Draft Report*, page 44.

⁵⁵ QCA 2020c, page 11.

⁵⁶ WaterNSW acknowledges that IPART shortened the geometric averaging period from 10 years to the length of the regulatory period, in its 2018 WACC Methodology decision. However, that change alone has made little difference to its inflation forecasts. IPART's forecasts remain consistently very close to 2.5% — well above any reasonable estimate of inflation expectations over the forthcoming regulatory period.

If this de-anchoring [of inflation expectations from the RBA target range] were to occur, a glide-path approach would produce inflation estimates that most closely align with 10-year market expectations.⁵⁷

In order to implement such an approach, IPART would:

- Retain its approach of computing a geometric average of forecast / assumed inflation rates over the regulatory period. In the case of the five-year regulatory period proposed by WaterNSW, IPART would continue to compute a five-year geometric average. That is, no change to IPART's existing approach would be required in relation to the averaging period;
- Continue to adopt the RBA's 1-year ahead inflation forecast as the relevant forecast for year 1 of the regulatory period. Once again, no change to IPART's existing approach would be required in that regard;
- Alternatively, IPART could consider adopting the RBA's 2-year ahead inflation forecast as the relevant forecast for year 2 of the regulatory period, rather than assuming that inflation would revert to 2.5% in year 2 in all circumstances. This would be a reasonable change to make given that (a) the RBA routinely publishes 2-year ahead forecasts in its quarterly Statement on Monetary Policy, and (b) IPART has stated that the RBA is "best-placed, to analyse what the available information suggests for expected inflation"; and
- Assume that inflation would transition gradually, via a linear glidepath, from the RBA's 1-year (or 2-year) ahead forecast to 2.5% by the end of the regulatory period. This would be more reasonable than assuming inflation would return to the midpoint of the RBA's inflation target range by year 2 (or 3 in the case of using the RBA's 2-year ahead inflation forecast) and remain at that level thereafter. None of the RBA's commentary on the outlook for general inflation suggests that inflation would return to 2.5% by year 2 or 3 and remain at that level thereafter. To the contrary, the RBA has indicated that due to spare capacity in the economy, inflation is likely to remain below the midpoint of its inflation target range "for some years."

WaterNSW submits that adoption of the AER glidepath approach would have two key advantages:

- The approach would be simple and transparent; and
- It would make use of RBA information only, so would require minimal change to IPART's existing approach.

WaterNSW considers that modification of IPART's existing approach in line with the AER's glidepath approach would be a reasonable interim measure until such time as IPART is able to undertake a comprehensive assessment of its inflation methodology as part of its next WACC Methodology Review in 2022.

Adopting our proposed approach to forecasting inflation leads to an **inflation forecast of 1.7%** using the same underlying assumptions as in the Draft Determination (adjusted for the glidepath).

While other market-based approaches to forecasting inflation have merit and may be considered by WaterNSW in the upcoming IPART WACC Review, such as the bond breakeven inflation rate, swaps and surveys, for the purposes of the Rural Valley and WAMC determinations we consider that the AER's 'glide path' approach substantially addresses inflation forecasting risk, while being the closest in nature to IPART's current methodology.

⁵⁷ See Deloitte Access Economics *Review of the regulatory treatment of inflation – Prepared for the Australian Energy Regulator 30 June 2020*, page 38.

WaterNSW proposes that IPART finalise its inflation forecasting methodology for the Rural Valleys (and WAMC) Final Determination using the AER glidepath approach.

The AER glidepath approach is the most 'implementable' solution for the 2021 Rural Valleys and WAMC determinations. It is a 'one-off' solution to provide an unbiased inflation forecast for the 2021 determinations to address our unique circumstances and financeability concerns that cannot wait until the 2022 WACC Review is completed.

2.8.2 Annual updates to the costs of debt

In its Draft Determination, IPART stated that:

Our decision is to use an end of period true-up approach. This is consistent with our decision for the 2020 review of prices for Sydney Water and helps provide price certainty to customers.⁵⁸

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.⁵⁹

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 pipeline determination, on the following basis:

- **Cash flow timing impacts:** Without annual updates, the cashflow impact of differences between the cost-of-debt allowance and actual interest costs are borne by the business. This may impact the financeability of the firm, particularly if the firm needs to raise additional debt to fund capital or operating expenditure not factored into the determination allowances and caused by unforeseen circumstances, an outcome which is not in the best interest of customers. A trailing average with annual price adjustments allows the firm to properly align its actual costs with the cost-of-debt allowance to mitigate the cash flow risks described above.
- **Incentive to incur efficient debt raising costs:** Under annual updates, the aim is to determine an annual cost-of-debt allowance which reflects, as much as possible, the actual interest costs expected to be incurred by a prudent and efficient firm, in each year of the regulatory period.

Annual updates would provide greater ability for a business to adjust its debt raising practices on an annual basis to matching the benchmark allowances.

- **The realisation of immediate price reductions by consumers:** Under the annual price adjustments approach proposed by WaterNSW, if the cost of debt allowance declines during the regulatory period, the resulting price reductions would be passed through to consumers immediately rather than at the end of the regulatory period. WaterNSW expects that the cost of debt allowance to fall over the forthcoming regulatory period, since estimates of the prevailing cost of debt have fallen materially over the past 10 years.

As the trailing average cost of debt allowance is rolled forward over the next regulatory period, the overall cost of debt allowance is likely to decline as relatively expensive tranches of debt early in the last decade are replaced by relatively cheap tranches of new debt. Under the true-up approach, consumers would only benefit from any such decline in the cost of debt allowance through lower prices at the end of the next regulatory period.

⁵⁸ See IPART 2021 Draft Report - *Review of Water NSW's rural bulk water prices*, page 77.

⁵⁹ IPART *Review of our WACC method – Final Report, February 2018*. Page 38.

To date, IPART has applied a true-up in every regulatory decision since it finalised its 2018 WACC methodology. IPART's main reason for preferring an end-of-period true-up rather than annual price adjustments is to avoid imposing intra-period price volatility on consumers. However, as IPART itself has explained, the annual changes to the cost of debt allowance (and, therefore, to prices) is "likely to be small" under the trailing average method because only a fraction of the benchmark business's debt portfolio is assumed to be refinanced each year.⁶⁰

WaterNSW agrees with IPART in this regard, and therefore considers that applying annual price adjustments to reflect year-on-year updates to the cost of debt allowance is very unlikely to impose significant intra-period price volatility on consumers.

In our view, annual adjustments are more likely to mitigate the risk of large price movements between regulatory periods than a true-up. The ability under annual adjustment to align the regulatory cost of debt allowance with efficient debt management practices and avoid delays for customers receiving the benefits of a lower cost of debt, suggests that IPART should reassess their stance on annual adjustments for the upcoming WAMC (and Rural Valleys) determinations.

2.8.3 Financeability

WaterNSW has conducted analysis on the financeability credit metrics under three scenarios:

- Base Case – Using the Rural Valleys draft determination assumptions; and
- Scenario 1: 50% volume scenario – this scenario assumes the sales volumes drop 50% which is considered to be a likely scenario over the 2021 Determination period and there is no revenue volatility coverage. All other assumptions are as per the Base Case.
- Scenario 2: Inflation using a glidepath – this scenario assumes that forecast inflation is based on a geometric average of the RBA one-year forecast and a linear glidepath from the Year 1 forecast to the mid-point of the RBA target inflation band (2.5%) in Year 4. All other assumptions are as per the Base Case.

The analysis has been conducted under the Fitch credit metric, as WaterNSW's credit rating provider.

The results of the analysis are as follows:

- The Rural Valleys business is forecasting to make significant losses under all scenarios. Under the base case, WaterNSW is forecasting a net loss before tax in every year of the 2021 Determination period, totaling -\$38 million over the four years, averaging -\$9.5m per year;
- The FFO Interest coverage is above the minimum threshold under all scenarios; and
- The FFO net leverage is a "monitor" only metric, but we note the higher it is the worse it is and therefore would result in WaterNSW losing its BBB credit rating. The loss of our BBB credit rating would result in a 20 to 47 basis point increase in our cost of debt that would further impact our financeability.⁶¹

2.8.3.1 Base Case

In its Draft Report, IPART provided an assessment of WaterNSW's financeability using IPART's own analysis. IPART indicates that it "*did not identify a financeability concern for Water NSW - Water*

⁶⁰ IPART *Review of our WACC method – Final Report, February 2018*. Page 27.

⁶¹ The margin between BBB (our current rating) and BBB- (one notch down) has varied between 20 and 47 bp over the last 11 months for 10 year debt.

NSW is expected to meet two of the three ratios for the benchmark test in all years of the determination period”.

The results of IPART’s financeability test are reproduced below.

Table 12.4 Financeability test results based on our draft pricing decisions

	Target ratios	2021-22	2022-23	2023-24	2024-25
Real interest cover					
Benchmark test	>2.2x	21.6x	19.8x	20.3x	20.9x
Does it meet the target?		✓	✓	✓	✓
Real FFO over debt ^a					
Benchmark test	>7.0%	5.1%	4.7%	4.9%	5.1%
Does it meet the target?		✗	✗	✗	✗
Real gearing					
Benchmark test	<70%	60%	60%	60%	60%
Does it meet the target?		✓	✓	✓	✓

^a Funds from operations

Note: We have calculated the indicators based on our draft NRR and pricing decisions, using a WACC of 1.3%.

Source: IPART analysis.

In conducting the financeability test, we note that IPART multiplies the debt balance by the real risk free rate of 0.25%. We do not believe this is realistic. As interest is calculated on nominal rates, we believe the financeability test should be undertaken using nominal rates. Furthermore, the GGF component should also be added onto the interest calculations which is assumed to be equal to the nominal debt margin.

In assessing financeability, IPART states that:

*Overall, we did not identify a financeability concern for Water NSW. Under our draft prices, **Water NSW will meet two of the three ratios for the benchmark test** (interest cover and gearing) in all years of the determination period. It is our view that Water NSW can remain financially sustainable and continue to provide sustainable services over the 2021 determination period (emphasis added).⁶²*

WaterNSW wishes to highlight that IPART’s assessment does not fully capture our financeability concerns. For instance, gearing in IPART’s assessment will, by construction, always remain at 60% under the benchmark test. Therefore including gearing remaining at 60% as a ‘pass’ using IPART’s approach to assessing financeability overstates the financial sustainability of the decision.

As illustrated in IPART’s Table 12.4 as shown above, the business failed in each year of the regulatory period on the FFO/debt ratio, but passed in each year on the Interest Coverage Ratio (ICR). What this indicates is that **the business has sufficient cash flow to make interest payments, but insufficient cash flow to service its full debt obligation**. WaterNSW considers that this outcome is a ‘fail’ not a pass of the financeability test.

IPART’s interpretation of ‘2 out of 3’ constitutes a ‘pass’ of the financeability test is inconsistent with the view IPART expressed in the 2018 financeability review, whereby IPART applied a number of

⁶² See IPART 2021 Draft Determination, page 151.

ratios since each ratio contributes some different information about financeability. The ICR tells us about one aspect of financeability, while the FFO/debt ratio tells us about a different dimension.

If the business fails on one metric but passes on another, IPART should use this result to diagnose the source of the problem. A failure on the FFO/debt could only be because the business:

- Has an insufficient depreciation allowance, and/or
- Receives too low a real return on equity. The real return on equity might be too low because:
 - The nominal return on equity is too low; and/or
 - The inflation forecast is too high.

These results occur even without the significant impact on credit metrics associated with potentially large sales volumes variances as has occurred during the 2017 Determination period.

The following figures provide our credit metrics assumptions under the Fitch credit metric, as WaterNSW's credit rating provider.

2.8.3.2 *Financeability concerns with self-insurance*

Our concerns regarding financeability of the self-insurance approach are discussed below.

Section 15 of the IPART Act requires IPART to consider *the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets.*⁶³

If IPART does not provide a volatility allowance of \$2.3 million per annum as proposed, WaterNSW will not be able to purchase the insurance product to replicate the 80:20 pricing structure, which would have significant implications for the financeability of our business and which would without doubt leave WaterNSW unable to meet its financeability criteria and a standalone investment grade credit rating.

WaterNSW has conducted analysis on the financeability credit metrics under three scenarios:

- Base Case – Using the Rural Valleys draft determination assumptions; and
- Scenario 1: 50% volume scenario – this scenario assumes the sales volumes drop 50% which is considered to be a likely scenario over the 2021 Determination period and there is no revenue volatility coverage. All other assumptions are as per the Base Case.
- Scenario 2: Inflation using a glidepath – this scenario assumes that forecast inflation is based on a geometric average of the RBA one-year forecast and a linear glidepath from the Year 1 forecast to the mid-point of the RBA target inflation band (2.5%) in Year 4. All other assumptions are as per the Base Case.

The analysis has been conducted under the Fitch credit metric, as WaterNSW's credit rating provider.

⁶³ <https://www.legislation.nsw.gov.au/view/whole/html/inforce/current/act-1992-039>

Base Case

Figure 3 – Rural Valleys FFO adjusted interest coverage - Base Case

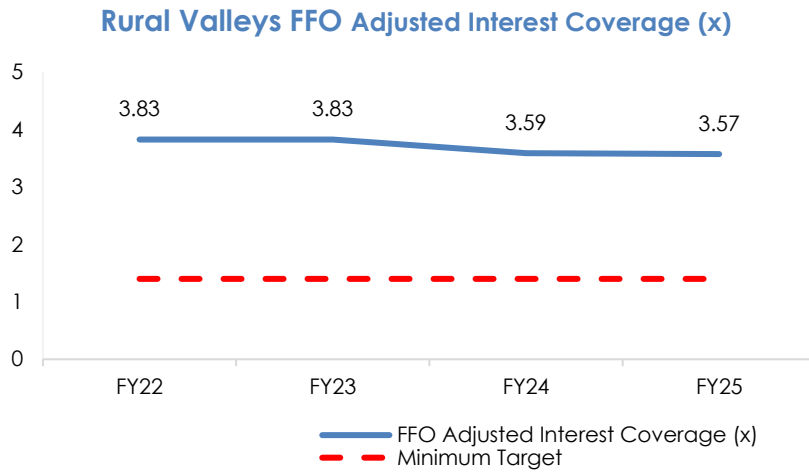


Figure 4 – Rural Valleys FFO net leverage – Base Case

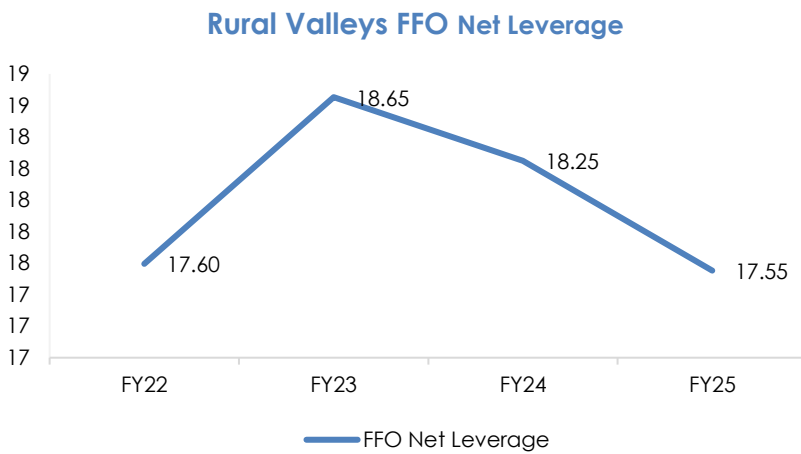
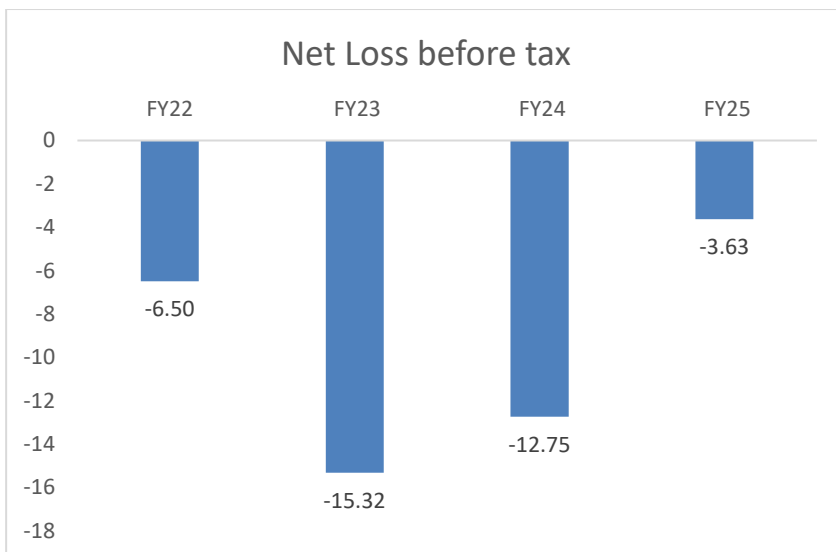


Figure 5 – Rural Valleys net loss before tax – Base Case



50% volume scenario

Figure 6 – Rural Valleys FFO adjusted interest coverage – 50% volume

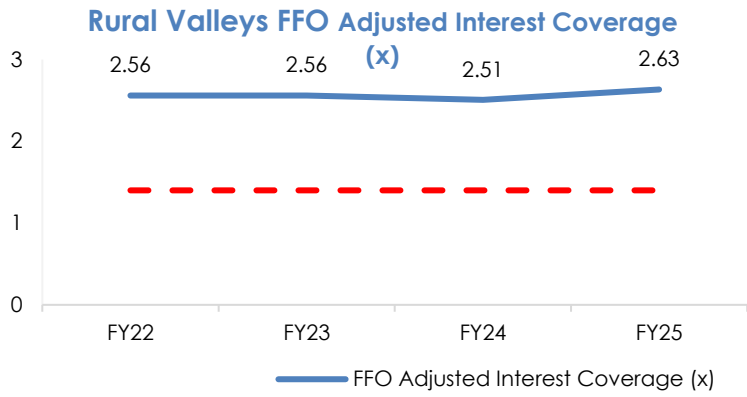


Figure 7 – Rural Valleys FFO net leverage – 50% volume

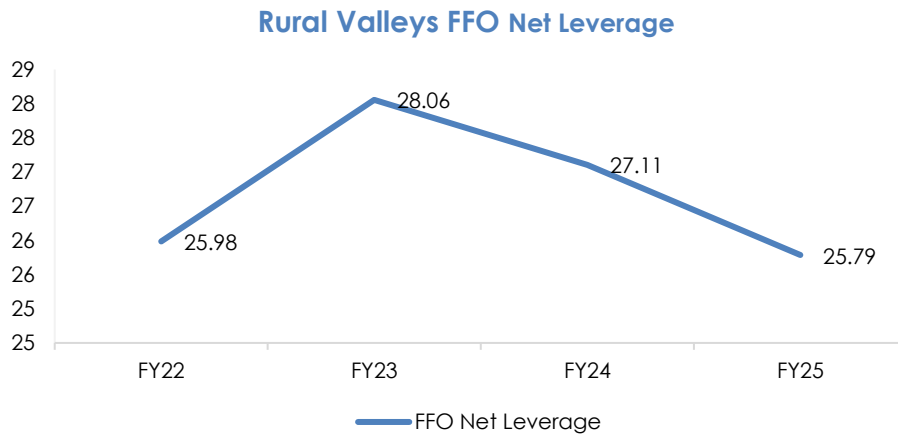


Figure 8 – Rural Valleys net loss before tax – Base Case

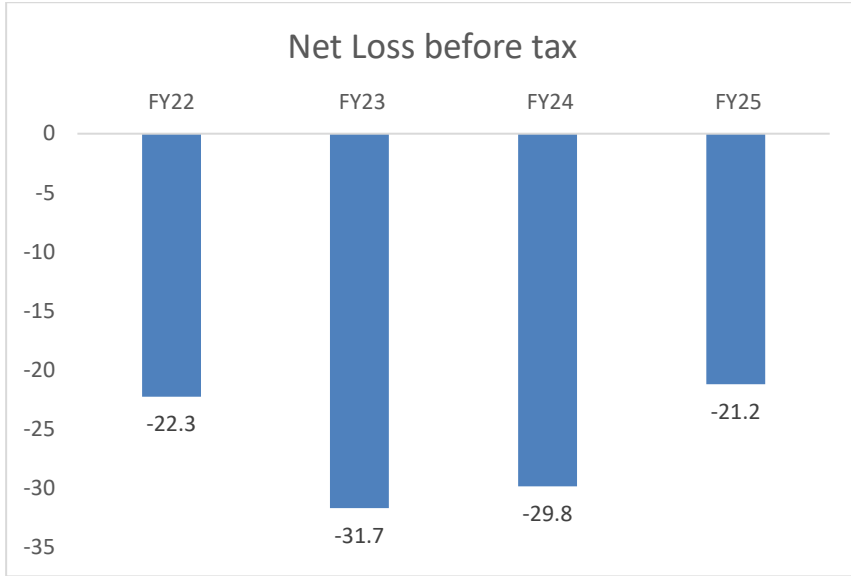


Figure 9 – Rural Valleys FFO adjusted interest coverage – 50% volume

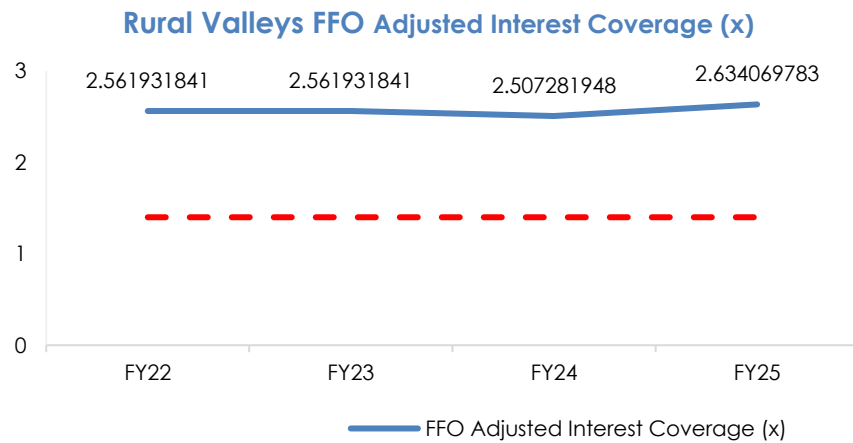


Figure 10 – Rural Valleys FFO net leverage – 50% volume

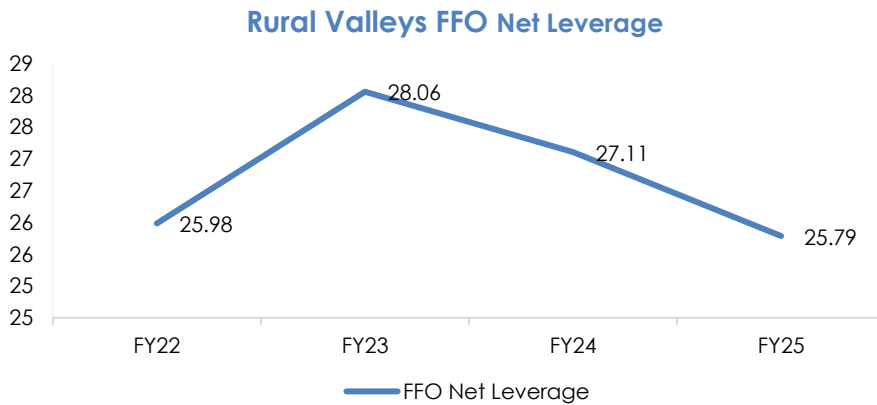
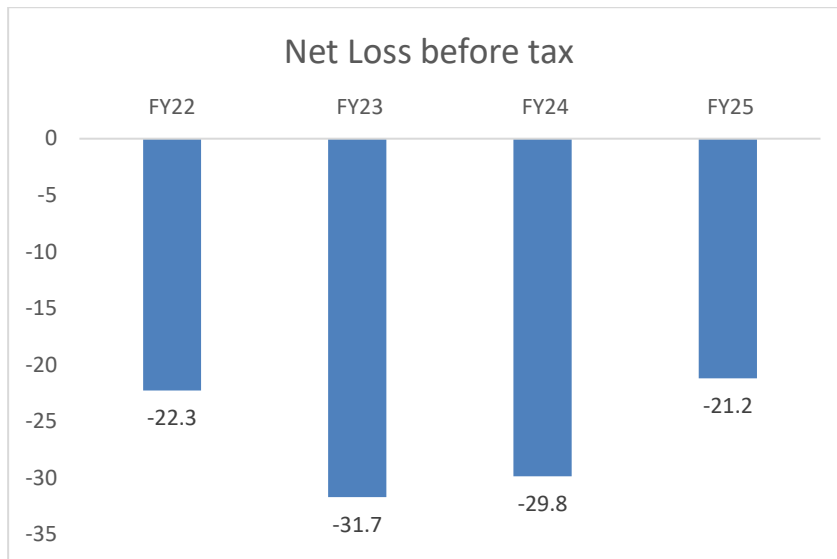


Figure 11 – Rural Valleys net loss before tax – 50% volume

In summary, the results of scenario 1 relative to the base case are as follows:

- The Rural Valleys business is forecasting to make significant losses under both scenarios;
- The FFO Interest coverage is above the minimum threshold under both scenarios; and
- The FFO net leverage is a “monitor” only metric, but we note the higher it is the worse it is and therefore a negative outcome will result in WaterNSW losing its BBB credit rating. The loss of our BBB credit rating will result in a 20 to 47 basis point increase in our cost of debt.⁶⁴ WaterNSW would need to be compensated for this risk under the WACC, through an adjustment to the WACC parameters using a BBB -rated corporate debt.
- In the absence of a risk transfer product, WaterNSW could not maintain an efficient capital structure while complying with the dividend targets set by the NSW Treasury. Under the Draft Decision, \$30 million of expected revenue is forecast to be recovered under variable charges which are set using a 20 year rolling average. We note that periods of drought generally persist over multiple years for example, over a 3-4 year period as per the chart on the 20 year rolling average in section 2.6.10 of this submission. Periods of high water available are rare and generally do not persist over multiple years (e.g. 2012-13 water sales in the post WSP environment).
- A debt drawdown of \$30 million in one year, let alone multiple years is problematic in ensuring the financial health of WaterNSW. Without the provision of appropriate risk compensation through the form of an adjustment to the equity beta or debt margin, the draft decision will impede on our ability to maintain an efficient capital structure and the dividend target set by the NSW Treasury.

⁶⁴ the margin between BBB (our current rating) and BBB- (one notch down) has varied between 20 and 47 bp over the last 11 months for 10 year debt.

Scenario 2 – Inflation glidepath

Figure 12 – Rural Valleys FFO adjusted interest coverage – Inflation glidepath

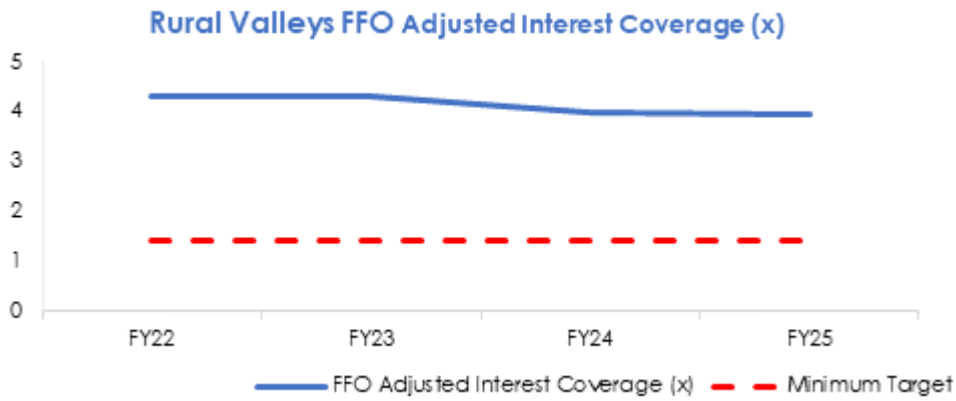


Figure 13 – Rural Valleys FFO net leverage – Inflation glidepath

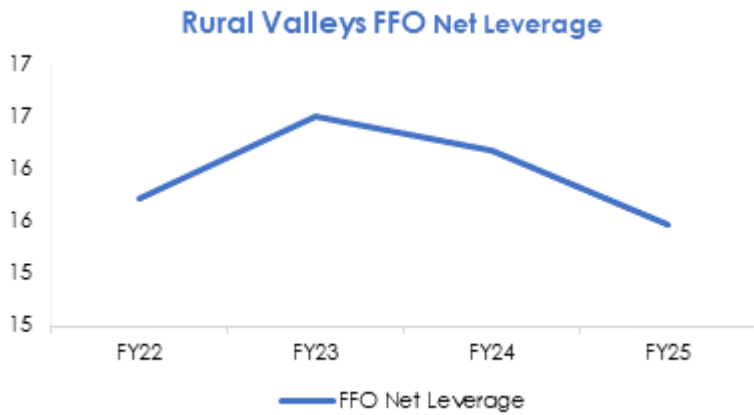
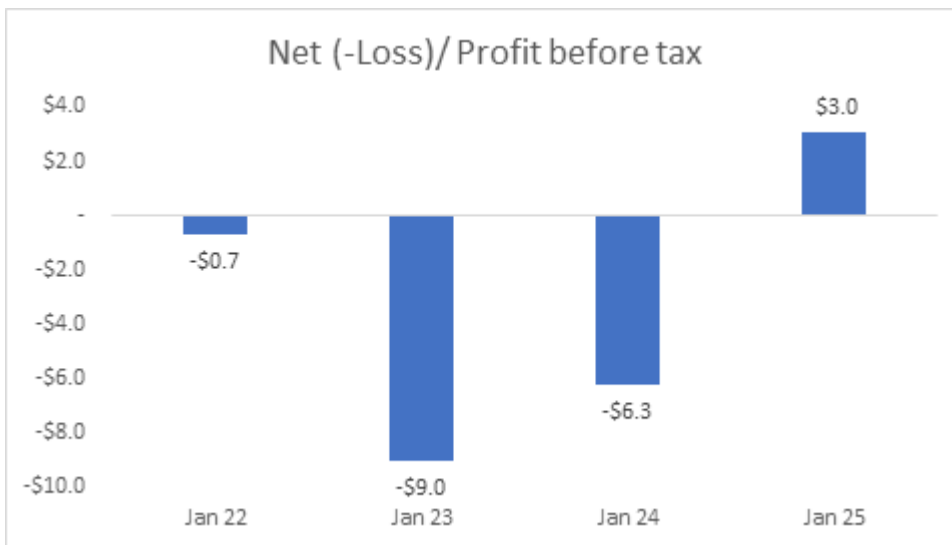


Figure 14 – Rural Valleys net loss before tax – Inflation glidepath



The Rural Valleys net profit results improves under the inflation scenario in line with additional revenues. We also note that the FFO Interest Coverage and FFO Net leverage metrics will also strengthen under this scenario and therefore improvements to the inflation forecasts as proposed will help improve the financeability of the Rural Business.

2.8.4 Financeability summary

To assist in ensuring WaterNSW is able to meet (or rather moves closer to) its financeability targets over the 2021 Determination period, WaterNSW:

- Notes that the Draft Determination as it stands is not likely to support a credit rating of Baa2 (or BBB as per the Fitch rating agency metrics) under the Base Case;
- The analysis above only considers the outcomes over a four-year period. A self-insurance product with lower water sales over a longer duration will exacerbate the outcomes in this analysis;
- The outcomes in the analysis above only considers the outcomes over a 4-year period. A self-insurance product with lower water volume sales over a longer duration will exacerbate the outcome in this analysis;⁶⁵
- Proposes that IPART does not apply the draft determination with respect to the volatility allowance (based on self-insurance model) and instead provides an allowance for an RTP based on the efficient costs of providing this mechanism as proposed by WaterNSW; and
- Proposes, as outlined in Section 2.8.1, that IPART calculates forecast inflation using a glidepath to the mid-point of the RBA’s target inflation band, rather than assuming that inflation will move to 2.5% in Year 2 which runs counter to the RBA’s inflation forecasts.

2.9 Pricing related matters

2.9.1 Fish River

[Redacted text block]

⁶⁵ There are significant qualifications in using the IPART self-insurance approach with the 20 year rolling average as any downward trend in usage will never be recovered.

2.9.2 Fish River Fixed: Variable tariff structure

IPART has applied a fixed: variable tariff structure of 80:20 to the total Fish River notional revenue requirement to calculate prices for unfiltered water. We consider that this allocation overestimates the variable portion of the Fish River cost structure as our capital allowances are 100% fixed.

The table below presents the application of the fixed: variable split to Fish River building block allowances, considering that capital allowances are fixed. The result is that 89% of Fish River costs are fixed. On this basis, we propose that the tariff structure in Fish River for unfiltered water customers be revised to be based on a 90: 10 fixed: variable ratio.

Table 20 - Fish River fixed cost structure

	FY22-25	Proportion fixed*	Fixed amount (\$'000s)
Operating expenditure	19,936	80%	15,949
Debt raising costs	272	100%	272
Return of RAB	9,234	100%	9,234
Return on RAB	4,866	100%	4,866
Working capital allowance	148	80%	119
Tax allowance	1,903	100%	1,903
UOM cost	397	100%	397
Total	36,756	89%	32,739

Operating expenditure is assumed to be 80% fixed based on IPART's assumptions however we expect the percentage is likely to exceed 80% fixed and approach 100% fixed given the majority of our operating expenditure is salary related.

2.9.3 Lachlan Valley – [REDACTED]

2.9.4 Water take forecasts

Due to the timing of its pricing submissions, WaterNSW proposed a usage forecast in regulated rivers based on a 20-year rolling average using data from 1999-20 to 2018-19. As data for the 2019-20 financial year is now available, we request that the 20-year rolling average be updated to include data from 2000-01 to 2019-20. The updated 20-year rolling average is presented in the table below.

Table 21 - Updated water take forecasts excluding Fish River

	20-year rolling average
Border	139,453
Gwydir	220,489
Namoi	138,241
Peel	12,625
Lachlan	182,100
Macquarie	232,545
Murray	1,379,454
Murrumbidgee	1,531,632
Lowbidgee	31,964
North Coast	676
Hunter	123,631
South Coast	4,165
Total excl Fish River	3,996,975

Table 22 – Updated water take forecasts for Fish River

	20-year rolling average
<i>Bulk Raw Water</i>	
Energy Australia	1,850
Sydney Catchment Authority	2,142
Oberon Council	681
Individual Minor Customers	51
<i>Bulk Filtered Water</i>	
Lithgow Council	826
Individual Minor Customers	103

2.9.5 Cost shares

There has been a significant change in industry structure and service delivery models since the 2017 determination. As such, in assessing whether the existing cost share ratios should be modified, we ask that IPART consider any changes in activities and responsibilities that were not contemplated during the 2018 IPART Rural Valley Cost Share Review. For example:

- Proposed scope increases due to changes in obligations, service standards and industry structure, e.g. expected cost increases as a result of the Government's metering reform agenda and compliance activities;
- Current period allowances are insufficient to fund the significant operating expenditure required to undertake the licensing function, as highlighted in the NRAR/DPIE and WaterNSW Pricing Proposals;
- Proposed changes in activity costs groupings that reflect recent changes in industry structure and service delivery models.

In particular, there has been a significant change in regulatory functions since the 2016 Determination with the establishment of NRAR.

As implied in our supplementary submission on non-urban metering reform, the trigger for the increased costs of metering is the recent changes to the NSW water management and planning framework.

The existing cost share ratio for metering costs is currently 100% user share. We consider that IPART could assess whether the existing cost share ratio should be modified for this activity to account for changes in the regulatory environment since the 2016 determination period and the impactor for the change in the NSW water management framework.

2.9.6 Yanco Creek Levy – survey results

To assist IPART in its deliberations on the Yanco Creek Levy, WaterNSW issued a survey to Yanco Creek customers asking them to complete a survey to gather customer feedback on IPART's Draft Decision regarding the proposed increase to the Yanco Creek levy price schedule by YACTAC.

The key messages of the survey included:

- IPART's Draft report includes a proposed increase to the Yanco Creek levy by YACTAC over the 2021 Determination which we are seeking feedback;
- Survey will collect customer feedback to assist with the determination process; and
- The survey is 4 short questions and completions are due by 13 April 2021.

The results of the survey are shown below.

Table 23 – Yanco Creek survey results

	Original email	Reminder email 9 April 2021	Final reminder email	Total as at 15 April 2021
Volume Sent	60	58	58	176 total emails sent
Volume bounced	3 (5.0%)	1 (1.7%)	1 (1.7%)	5 (8.6%)
Open rate	29 (50.9%)	24 (42.1%)	19 (33.3%)	40 (68.9%)
Click through	15 (26.3%)	22 (38.6%)	3 (5.3%)	37
Unique click throughs	6 (10%)	6 (10%)	6 (10%)	13 (22.4%)
Survey Commenced	2	1	1	4 (6.8%)
Survey completed	2	1	1	4 (6.8%)

2.9.7 Correction to comments on the Yanco Creek Levy

On Page 127 of the IPART Draft Decision, IPART states that YACTAC administers the *scheme on behalf of WaterNSW*. We assume IPART is referring to the scheme which is funded by the Yanco Creek Levy.

The comment implies that WaterNSW is responsible for the scheme. We wish to advise that this statement is not correct. We are not responsible for the administration of the scheme nor do we have oversight of the scheme. The scheme is managed by YACTAC directly. The revenue from the levy is passed onto YACTAC by WaterNSW.

We request that IPART amend this statement in its Final Decision.

The decision to set the levy for Yanco Creek customers was made by IPART in the 2006 Determination, not State Water. For instance, on page 142 of the Final Decision (2006), IPART stated that:

At the 2005 determination, the Tribunal included a levy on users in the Murrumbidgee valley and the Yanco Columbo System to fund a works program that had been initiated by irrigators in these valleys. This included rehabilitation of the Yanco Columbo System to improve flows and provide significant water efficiencies for the system and the Murrumbidgee Valley, based on the NRMP.⁶⁶

2.9.8 Volatility allowance and unders and overs mechanism fixed: variable split

In its Draft report, consistent with the 2017 Final Report, IPART has included the volatility allowance and the allowance for the unders and overs mechanism (UOM) in WaterNSW's notional revenue requirement. These costs have therefore entered prices under the standard fixed: variable split for each valley.

WaterNSW considers that these allowances should be recovered through 100% fixed charges. The intention for both of these allowances is to protect WaterNSW from revenue volatility. It is not consistent with this intention that the allowances themselves are subject to the same volatility.

In particular, the UOM was introduced to address the risk created by WaterNSW's tariff structure not matching its cost structure. The mechanism recorded the difference between actual and expected revenue and allowed WaterNSW to recover this over time. However, since the mechanism has been discontinued and because fixed: variable splits have been applied to this allowance, WaterNSW has significantly under-recovered these revenues over the current determination period due to the low observed sales volumes. WaterNSW has therefore not recovered these revenues as was intended.

We also note that the UOM being fixed is consistent with the WCR. This will ensure IPART can demonstrate that WaterNSW is able to recover its prudent and efficiency costs within the regulatory period.

Both the VA and UOM charges being 100% fixed is consistent with the 2010 IPART determination. It is also consistent with the National Water Initiative which states that customers should bear the costs of the risk of low water availability in particular in relation to lower or less reliable water allocations. The 2010 IPART Final Report for State Water states that:

"We note there are costs associated with revenue volatility, as shortfalls resulting from revenue volatility may occur before windfalls, leaving State Water to carry revenue shortfalls from year to year. Under the principles of the National Water Initiative, the costs of these shortfalls are to be recovered from water access entitlement holders. The National Water Initiative states that: Water access entitlement holders are to bear the risks of any reduction or less reliable water allocation...arising from reductions to the consumptive pool as a result of seasonal or long-term changes in climate; and... drought"

The volatility allowance suffers a similar issue as the UOM. This allowance has been provided to WaterNSW to allow it to recover the costs of managing revenue volatility, again due to the mismatch of tariff and cost structures which creates cash flow and revenue recovery risk for WaterNSW. However, since this allowance has been included in the fixed: variable split, WaterNSW will not recover this allowance consistently. For example, if a volatility allowance of \$500k is provided by IPART and 40% of this is fixed, only \$200k is guaranteed for the management of this risk. Importantly we will not recover these funds during periods of low sales and revenue under-recovery which is the precise situation this allowance is intended to address.

⁶⁶ https://www.ipart.nsw.gov.au/files/sharedassets/website/trimholdingbay/final_report_-_bulk_water_prices_for_state_water_corporation_and_water_administration_ministerial_corporation_1_october_2006_to_30_june_2010.pdf

This issue has been exacerbated further by the consistent over-forecasting of sales by the 20-year rolling average. Frontier's finding that the 20-year rolling average is a biased forecast highlights the concern that WaterNSW will not recover sufficient funds for managing revenue volatility over the long term.

2.9.9 RAB framework – MDBA BRC charges

Under the Draft Decision, IPART proposes to apply the building block approach to set Rural Valley MDBA and BRC charges as follows:

- IPART has moved to using this approach as it considers it is more efficient and equitable than recovering expenditure in the year it occurs (i.e. our current approach); and
- In particular, capital expenditure would be recovered over the useful life of the assets it creates.

It appears this funding model will create cashflow issues for the NSW Government as the payment of the NSW Government share of the MDBA contributions is based on the timing of expenditure, and not based on the RAB framework which recovers the costs over the useful life of the asset.

We ask that IPART consult with DPIE and the NSW Government on the practicalities of this funding arrangement for the recovery of MDBA/BRC costs. IPART should also consider the cost recovery arrangements applied in the other MDBA jurisdictions.

We note that WaterNSW does not have access to actual expenditure required to roll forward the MDBA/BRC RAB at a future price review. We also note that the MDBA/BRC does not appear to be subject to Economic Regulation by IPART nor does it appear that the MDBA is compelled to provide this financial information to IPART.

We ask that IPART consider our comments and we defer to the Department's guidance in relation to the practical implications of the proposed recommendations.

2.10 Output measures

IPART is proposing to introduce a customer service KPI using the 'Skyline' composite measure as recommended by Atkins.

However, WaterNSW does not support the 75% composite measure proposed by Atkins by 2024-25.

WaterNSW has achieved the ~50% composite measure for the Skyline results as at 2019-20. We consider that a 20-25 point improvement within the next determination period is unachievable in terms of customer satisfaction growth / improvement.

WaterNSW has adopted an internal target to achieve annual year on year increases/improvement of 2.5% per annum. This measure has been adopted by IPART in the WAMC determination for the W10-01 performance metric. For example, at page 204 of the WAMC efficiency report, Cardno recommends an *Improvement of 2.5% p.a. on 2021 level*.

We consider that the Rural Valley metric should be aligned with our internal reporting/customer survey results and with the WAMC determination.

2.11 Costs of non-urban metering reform

On 30 November 2020, WaterNSW provided a comprehensive supplementary submission on the costs of non-urban metering reform for the Rural Valleys and WAMC determination, referencing several pricing inputs and assumptions, changes (and expected changes) in legislative and regulatory requirements, the IPART operating licence, and NSW Government policy directives. The submission was also made in response to an IPART RFI on our 4-year expenditure plan for Rural Valley pricing.

The timing of the supplementary submission was flagged in our Rural Valleys and WAMC pricing proposals which were lodged with IPART on 30 June 2020. The timing was triggered by recent changes to both the NSW Government policy on non-urban metering and our regulatory obligations. Non-urban metering policies have been introduced in other Murray Darling Basin (MDB) Jurisdictions, such as Victoria, as recently as 2020.

IPART appointed Cardno to conduct the WAMC efficiency review, which includes the costs of non-urban metering reform. The agreed scope of works, as shared with WaterNSW, directs Cardno to have regard to:

- Legislative requirements and responsibilities and any other drivers or determinants of its monopoly services; and
- The extent to which the proposed services are mandatory (e.g. a clear legislative requirement) versus discretionary.

The scope of works states that Cardno is required to reach a conclusion on the reasonableness of expenditure levels and performance and to nominate levels of efficient expenditure.

In line with regulatory best practice, IPART is required to consider any regulatory requirements imposed upon the regulated entity. These requirements are set out in the Australian Competition and Consumer Commission (ACCC) Pricing Principles for MDB Valleys, which are legally binding on IPART. Similar guidance is set out in the IPART Water Agency Guidelines.

WaterNSW held several interview sessions with Cardno and IPART to discuss the regulatory costs of implementing the non-urban metering reform. We responded to all information requests related to the inputs and cost models. We also referred to several regulatory obligations and policy directives issued by the NSW Government as part of the review process.

We are continuing to work with IPART and its consultants Cardno to ensure prices incorporate the prudent and efficient costs of implementing the NSW Government's non-urban metering reform.

WaterNSW's comments on IPART's draft decisions with respect to the implementation of the NSW Government's non-urban metering reform, including additional sensitivity analysis on our cost proposal and a register of relevant risks based on Cardno's feedback, are provided separately to this submission.

Our detailed response to IPART's Draft Determination on metering charges is contained in a separate metering report called **Appendix B 'Costs of the non-urban metering reform'**.

Appendix 1 – COVID-19: Implications for the economy, water utilities and WaterNSW

This attachment sets out WaterNSW's views on the potential impacts of COVID-19 for the economy, water utilities and WaterNSW as may apply during the 2021 Determination period. This document is an update from our original submission.

1. Introduction

Australia has not been through a crisis of the magnitude of COVID-19 for generations. Governments locally and around the world have been scrambling. Policy responses are sometimes confused and contradictory, and leaders are under immense pressure to respond. A broadly consistent policy response to reducing the spread of the virus has seen the enforcement of a degree of lockdown of the population. These measures have created challenges for the global economy. While last year, we expected to see the sharpest recession Australia has seen since the Great Depression of the 1930s⁶⁷ the growth in the economy's size over the last six months is the strongest ever recorded since comparable statistics were first put together more than six decades ago.⁶⁸

While the economy seems to be getting back on track, there is still considerable uncertainty around several key factors:

- The impact of emergency government assistance falling away;
- The speed and efficacy of the vaccine roll-out;
- The opening of international borders; and
- The possibility of future mutations of the COVID-19 virus.

This means there is still significant uncertainty as to how long a full and sustained recovery will take.

Utilities, including the water sector, are not immune to such wide-scale disruptions. Our preliminary analysis at the start of lockdown protocols being put in place in 2020, suggested the short-term impact on the utilities sector will not be as harsh as in other sectors of the economy.

However, we noted that the severity of impact on utilities may be delayed. For example, in 2020 Deloitte Access Economics (DAE) estimated the utilities sector output will begin to decline in FY2021 and continue through FY2022. This compares to what DAE expected in other industries, such as accommodation and food services, where it expected to see a sharp drop in FY2020 and a recovery by FY2022. At this stage DAE still sees considerable uncertainties around a full recovery in the utilities sectors in part due to persistent lower population levels.

There is clearly great uncertainty as to what impact COVID-19 will have on water utilities. The following sections review the underlying uncertainty the pandemic has created and assesses:

- The latest macroeconomic indicators and forecasts;
- The implications the trends in macroeconomic indicators have for current framework IPART uses to regulate the water sector; and
- The likely impacts on the revenue and expenditure drivers for regulated water utilities in the short term (within the 2021 calendar year) and medium term (within the next five years), and the implications for WaterNSW.

⁶⁷ Deloitte Access Economics, March 2021, Business Outlook

⁶⁸ Deloitte Access Economics

2. Macroeconomic impacts – key indicators and trends

Australia's recovery from last year's lockdown has been remarkable. During 2020, real national income has increased by 1.4% - above average of the decade preceding the pandemic. However, as emergency government assistance continues to fall away, DAE expects that growth will gradually slow down and there remains significant uncertainty around the efficacy of the vaccine roll-out, monetary policy and wages growth.

In Australia, the key recent impacts on production and employment are as follows:

- In late March 2021, Deloitte Access Economics forecast Gross Domestic Product (GDP) would increase by 1.1% in FY2021 and 4.1% in FY2022 in real terms; however this growth is forecast to decline in succeeding years;⁶⁹
- In the utility sector, output declined by 1.8% in FY2020 and 0.4% in FY2021 and is only forecast to start increasing by 1.8% in FY2022;⁷⁰
- The unemployment rate is forecast to be 6.3% in FY2021, an increase from 5.6% in FY2020. This is expected to slowly recede to 5.3% by FY2023;⁷¹ and
- Australia's population growth is expected to fall from 1.5% in FY2020 to 0.4% in FY2021 and 0.5% in FY2023.⁷²

Australian prices and financial markets are responding:

- Inflation is expected to continue to remain at record lows, with headline CPI forecast at 1.3% in FY2021 and only a small decrease in following years.⁷³
- The Reserve Bank of Australia (RBA) has reaffirmed its setting for the cash rate at 0.1% - the lowest in 3 decades.⁷⁴
- The Australian dollar has recovered from last year's 18-year low, with the US exchange rate at US\$0.57 per AUD\$1 on 16 March FY2020. The Australian dollar is recovering and is expected to trade at US\$0.751 per AUD\$1 in FY2022.⁷⁵

It is uncertain if the speed of the current economic recovery can be maintained and DAE still believes that there is considerable uncertainty around the medium-term economic outlook.

3. Implications for IPART's regulatory framework

Economic conditions in general have improved compared to last year, but we are still experiencing and are expected to experience low inflation rates well into the future. At the same time, there is some uncertainty about output in the utilities sector. These changes in macroeconomic indicators resulting from the pandemic have implications for the regulatory framework that IPART uses to determine water business revenues and prices. In particular:

- The estimated rate of inflation used in the cost of capital and forecast prices and expenditures; and

⁶⁹ Deloitte Access Economics, March 2021, Business Outlook, p. 54.

⁷⁰ Deloitte Access Economics, March 2021, Business Outlook, p. 92.

⁷¹ Deloitte Access Economics, March 2021, *Business Outlook*, p. 138

⁷² Deloitte Access Economics, March 2021, Business Outlook, p. 138.

⁷³ Deloitte Access Economics, March 2021, Business Outlook, p. 103.

⁷⁴ RBA, Minutes of the Monetary policy Meeting of the Reserve Bank Board, 2 March 2021.

⁷⁵ Deloitte Access Economics, March 2021, Business Outlook, p. 114

- Efficiency adjustments, both ‘catch-up efficiencies’ and ‘continuing’ efficiencies, in which the concept of a ‘frontier company’ is used as a benchmark for water businesses’ efficient expenditure.

3.1 Inflation impacts on real returns

In determining cashflows for regulated water utilities, IPART uses the standard approach adopted by regulators in other sectors in Australia and in the UK of applying a real rate of return to an indexed regulatory asset base (RAB).

IPART’s latest estimate used to derive the real rate of return for utilities, is 2.2% which is higher than IPART’s forecast of expected inflation of 2.1% as at 31 July 2020.⁷⁶ This is counterintuitive given that actual headline inflation was 1.3% in FY2020⁷⁷ and forecast inflation is 1.3% for FY2021 and 1.4% for FY2022⁷⁸

As discussed in the CEG report on WACC, inflation and financeability (provided as part of our response to the Greater Sydney Draft Determination in 2020), the difference between actual inflation rates and the current rate of expected inflation used by IPART has already been highlighted as creating a financeability risk for water businesses. This is because over-estimated inflation rates will result in an under-estimated real WACC, resulting in real returns that are lower than expected. The analysis conducted by IPART already highlights the issues this creates for cash flow risk in its own assessment of the funds from operations (FFO) over debt ratio,⁷⁹ which tests whether we have generated sufficient free cash flow to repay our debts – payments which are based on nominal interest payments.

The expected low inflation rates resulting from the global pandemic will only serve to exacerbate the cash flow risk and financeability issues already identified. This further highlights the need for IPART to revise its approach to estimating the expected inflation rate, as the impact on financeability will be much greater, the lower the expected inflation rate is compared to IPART’s most recent 2.2% estimate.⁸⁰

We note our proposal for IPART to adopt the AER’s recent decision on forecasting inflation that is based on IPART’s standard approach with a ‘glidepath’ to the mid-point of the RBA’s target inflation range by the end of the regulatory period.

In particular, the AER notes that it considers that its final position addresses some immediate problems highlighted in stakeholder submissions, but that it will be enduring because it is capable of responding to changing economic circumstances. The problems highlighted by stakeholders in their submissions are consistent with the issues WaterNSW is facing in the low inflation environment under a real rate of return regulatory framework.⁸¹

The AER’s recent change in the methodology to estimate expected inflation signals that regulators are taking the impact of low inflation on the financeability of networks regulated under a real rate of return framework seriously and that they are actively making changes to address financeability concerns by making changes to the regulatory framework.

⁷⁶ IPART, WACC biannual update, February 2021.

⁷⁷ Deloitte Access Economics, March 2021, Business Outlook, p. 103.

⁷⁸ Deloitte Access Economics, March 2021, Business Outlook, p. 8.

⁷⁹ IPART, March 2020, Draft Report: Review of prices for WaterNSW Rural Valleys, p.84

⁸⁰ The expected inflation rate in IPART’s draft decision is based the RBA’s November 2020 Statement on Monetary Policy and IPART released a financial market update on 25 February 2021 which puts the expected inflation rate 10 bps higher than in its draft decision. We understand that IPART has used the RBA’s February 2021 Statement on Monetary Policy in its latest update.

⁸¹ AER, Final position, regulatory treatment of inflation, December 2020, p 6.

Finally, we note that the RBA indicated just recently that it still sees uncertainties around when inflation will move back to within its own target range. In particular, it noted that that wages growth had remained low, at 1.4 per cent over the year to the December 2020 quarter and that a materially lower unemployment rate would be needed to generate wages growth in excess of 3 per cent, which in turn would be required to ensure inflation was sustainably in the 2 to 3 per cent target range.⁸²

3.2 Achieving efficiency improvements in an economic downturn

The ‘frontier company’ approach that IPART’s consultants, Atkins and Cardno, have applied assumes that there will be ongoing productivity improvements in the operation of the business over time. The productivity improvements are predicated on underlying growth and improvements in the economy that should flow through to the sector.

The economic slowdown experienced during 2020 with a 0.2% contraction in FY2020 and a forecast growth of 1.1%% for FY2021 and 4.1% for FY2022, brings into question whether the frontier company approach is a valid or applicable in the current environment.⁸³ As noted above, while the current economic recovery is strong, we note that there are considerable uncertainties around whether this will be sustained. This uncertainty coupled with the effects of last year’s slowdown will challenge our ability to achieve the efficiency targets outlined in IPART’s Draft Report.

Efficiency improvements at the productivity frontier are underscored by the assumption that efficiency can be achieved through increased scale or technological change. With a slow-down in new connections growth, economies of scale will be difficult to attain. Similarly, investment in technological improvements are likely to be stifled in a time of economic downturn.

In addition, this new operating environment is likely to impact our productivity as:

- Social distancing protocols result in slower manufacturing plant operations, this may require expenditure on larger operating space to keep employees adequately separated while keeping operations timely; and
- Our employees transition to (or from) working from home.

There have been technology constraints as the capacity of the virtual private network in place prior to the lockdown had to be increased to support the volume of people now having to be online and working out of office.

There are risks to productivity as efficiency enhancing IT programs may be delayed to the extent there are any constraints in supply on ICT capacity with increased demand being placed on the resources across the State.

4. Expenditure drivers

The range of economic disruptions and government policies will have a mixed and uncertain effect on both water supply needs and the cost to deliver those needs. In particular:

- Changes in water usage behaviour and growth in new water connections in the future;
- New operational requirements on businesses, which may be moderated by downwards pressure on labour and electricity costs; and

⁸² RBA, Minutes of the Monetary Policy Meeting of the Reserve Bank Board, 2 March 2021.

⁸³ OECD, Economic Outlook, interim report, March 2021, p. 4

- The expected timing of major infrastructure projects and the cost of engineering, procurement and construction (EPC) and imported materials.

4.1 Water demand

4.1.1 Short term

The key consideration in the short-term is how structural and behavioural changes will impact existing water consumption.

As people continue to work and live from home under lockdown measures, residential water demand is likely to increase, as seen in other utility sectors such as electricity⁸⁴. This may be slightly moderated by migrants having returned to their overseas home and a general slowdown in population growth.

Small and medium enterprise (SME) water demand is likely to have declined as trading was halted and businesses now having to re-establish their operations, particularly in non-essential services such as hospitality and entertainment.

It is unknown how commercial and industrial (C&I) water demand will change as some trading is picking-up.

4.1.2 Medium term

In addition to behavioural changes on water usage, we must consider how changes in growth will impact future connections and increased water consumption.

It is uncertain how last year's lock-down protocols and isolation have impacted water demand, it is possible that the short-term impacts on water usage will continue well into the medium term.

Last year's economic downturn may result in slower growth in new connections, particularly if immigration (a major source of Australia's population growth) does not pick back up and lower population growth rates continue into the future.

However, it is still currently expected that construction of major developments and infrastructure will continue as planned, in particular the investment in Western Sydney and the Aerotropolis. This is in line with the New South Wales Government's commitment to continue to deliver its infrastructure pipeline.⁸⁵

4.2 Operating expenditure

4.2.1 Short term

New operational requirements

This new operating environment has brought on new expectations of businesses such as more frequent and rigorous cleaning of workplaces. In addition, working out of office has required investment in improved information and communication technology (ICT) such as greater virtual private network (VPN) capacity. This is in addition to maintaining office building costs.

⁸⁴ Residential electricity demand increased 14% following the lock-down measures in the Jemena distribution zone. Source: Energy Networks Australia, 16 April 2020, *Commercial down v residential up: COVID-19's electricity impact*.

⁸⁵ Dominic Perrotet, NSW Government Treasurer, *Letter to the construction and engineering sectors of NSW*.

The unemployment rate reached its peak in July 2020 with a rate of 7.5%. This has now declined to 5.8% in February 2021⁸⁶, but average weekly earnings growth of less than inflation is expected to occur well into FY2024.⁸⁷ This means that payment difficulties may create issues for WaterNSW.

4.2.2 Medium term

New operational requirements

It is likely that some of the short-term disruptions considered above could continue well into the medium term. Even as health concerns ease, certain requirements like improved ICT may continue to be pertinent, as working from home becomes the 'new normal' and businesses look to prepare in case of future office disruptions.

We will also need to consider how we're protected as we navigate these new risks, including changes to workplace safety and workplace interruptions. It is likely that we will require insurance extensions if we wish to be protected from the impacts of the next pandemic.⁸⁸

Supply of resources

It is likely that some proportion of businesses will never recover from last year's shutdown period, despite Government support payments and wage subsidies.

It is therefore likely that the short-term impacts considered above will continue into the medium term. Unemployed workers may be able to transition to low skilled jobs, such as cleaning, relatively quickly. However, it will take time before unemployed labour can transition to skilled areas, such as IT. Overall, higher unemployment is likely to prevail to some degree,⁸⁹ putting downwards pressure on labour costs as employment contracts are refreshed in the coming years.

If more businesses continue to fail over the medium-term, there is however the risk of market concentration of suppliers, which may put additional upwards pressure on our prices.

In addition, grid electricity prices may decline if gas prices remain low, more renewable energy enters the market⁹⁰ and demand continues to be subdued.⁹¹

4.3 Capital expenditure

Timing

Despite the potential slowdown in new growth areas as result of declining population growth, the NSW Government's commitment to deliver major developments and infrastructure means we are still expected to undertake capital expenditure related to Government projects, such as the three major dam projects in our rural valleys.

⁸⁶ Australian Bureau of Statistics, Labour Force, Australia, 18 March 2021.

⁸⁷ Deloitte Access Economics, March 2021, Business Outlook, p. 96.

⁸⁸ Foez Dewan from McCabe Curwood, 17 March 2020, *Will my Business Insurance cover me for the impact of COVID-19?*

⁸⁹ Deloitte Access Economics, March 2020, *Business Outlook*.

⁹⁰ Gas prices are closely linked to oil prices which are currently at all-time lows (reaching negative prices on 21 April). It is unknown when and to what extent oil prices will be able to recover.

⁹¹ Note that electricity prices are not expected to reduce in the short term as retailers and large energy users are often entered into hedged contracts and a delay is expected as retailers refresh their contracts with revised price forecasts.

As highlighted by the NSW Treasurer, continuing capital investments where possible will be vital to supporting the local economy during the economic downturn.

Cost

We are uncertain how the cost of planned capital investments will be impacted.

As mentioned above, local businesses are likely to experience reduced demand from the private sector, this includes businesses in engineering, procurement and construction (EPC). This could lead to lower EPC costs as businesses compete for fewer clients in the short term, potentially followed by higher prices due to greater market concentration following business closures in the medium term.

5. Summary of COVID-19 impacts

The rapid changes in macroeconomic indicators that the world experienced last year has impacted water utilities and is now posing unique challenges for the regulatory framework that IPART operates. In particular, the medium-term impacts of last year's lockdowns on the economy and the water sector are still unclear.

We already face significant risk to our financeability over the regulatory period as a result of the disconnect between IPART's assumed expected inflation rate and actual inflation. This issue is likely to be worse given the expected lower levels of inflation now prevailing. Further, it is questionable whether the efficient frontier used by the reviewer is still applicable given the downturn currently being experienced in the economy. We have seen our input costs increasing in a number of areas, and there are also potential declines to productivity as our workforce adapts to new working arrangements

Meanwhile, the impact of COVID-19 on water demand remains uncertain, with behavioural changes and economic growth factors yet to be revealed in actual consumption. Australia's transition to a post-COVID world is increasingly unclear with concerns around the supply, efficacy and safety of vaccines creating a significant risk to economic recovery. As we have noted, accurately forecasting demand and costs in the current environment for the upcoming four-year regulatory period presents considerable challenges.

Overall, we urge IPART to take these unprecedented levels of uncertainty into account in preparing its Final Determination. We believe this provides further support for our proposal for IPART to introduce additional mechanisms to manage risk in the regulatory framework, including:

- Addressing inflation forecasting risk and ensuring a return on capital that better reflects the need to attract capital to the water sector than the currently proposed post-tax real WACC of 1.3% for MDB valleys and 2.8% for the Coastal Valleys⁹² by adopting our proposed glidepath approach to inflation forecasting; and
- Rejecting the consultants' proposed catch-up efficiencies that lack theoretical foundation and any detailed analysis on the efficient frontier.

⁹² IPART, Review of WaterNSW's rural bulk water prices, draft report, March 2021, pp 205-206.

Appendix 2 – Fish Passage Offset

On 21 November 2020, Atkins provided WaterNSW with a letter outlining additional reductions for fish passage offsets to those contained in the 16 November 2020 draft report.

This attachment provides WaterNSW's response to the 21 November 2020 letter and IPART's draft decision on Fish Passage capital expenditure.

We also provide commentary on a matter raised in the draft report relating to contingencies for fish passageways.

Response to Atkins' letter on fish passages

The Memo from Atkins on Fishways dated the 20th of November 2020 states on page 1:

WaterNSW have been unable to provide any specific business cases (strategic or otherwise) that have been approved within the organisation to support the proposed \$71.6m of capital expenditure in the future four year determination period for the fish passage offset program. This demonstrates that there has so far been a lack of governance over the plans to develop the fish passage offset schemes. WaterNSW have provided concept level cost estimates within the SFIP that have been built up by consultants in support of the detailed program. WaterNSW propose to prove the concept for the novel construction methodologies at two pilot sites of Gunidgera Weir Fishway and Tyreel Weir. Upon achievement of proof of concept for these sites, WaterNSW plans to progress to delivery of the remaining offsets.

We considered three main options in making our recommendations of expenditure in the future determination period:

- i. Deferring all the proposed expenditure. Given that WaterNSW has not presented evidence that these schemes are appropriate, feasible and need to be delivered in the next Determination period, we considered not recommending including any of the proposed capital expenditure within the IPART 2021 determination. In most instances where there has been insufficient internal rigour or challenge of the business case, including justification, cost estimates, benefits and timing for the schemes we recommend deferring all the expenditure. This would imply delaying the expenditure until such time as internal governance processes have been substantively progressed and it can be demonstrated that the timing and quantum of expenditure is justified to deliver the required FM Act 1994 outcomes.*

The issue with this option is that it does not allow WaterNSW to make progress in implementing the Fishway Offsets Program.

WNSW response:

WNSW agrees with Atkins that Option (i) would severely impede the delivery of an important ecological benefit, especially now that WaterNSW has an innovative construction technique to reduce costs, quicken construction delivery and reduce the risks of mid-construction damage from high water events. WaterNSW notes Atkins' statement of evidentiary absence. This would ignore the interview discussions that imparted the collaborative interagency efforts to develop the SFIP Conceptual Fishway Designs (Jacobs) that arrived on 26/5/20, that these concept designs in late May 2020 were subsequent to the March 2020 determination submission and that legal advice had identified punitive risks to WNSW for the absence of the Fishway.

The business cases for the suite of Fishways have not yet been developed as internal WNSW discussion/digestion of the designs and external consultation on the concept designs with regulatory

agencies and customer groups has been undertaken. The internal and external consultation was intended to be an important input to these business cases, particularly the initial pilot project business cases. An Executive Paper has been drafted to with the intention to endorse the SFIP at the conclusion of the consultation.

The Memo states on page 2:

- iii. *Two pilot sites. WaterNSW propose to prove the concept for the novel construction methodologies at two pilot sites of Gunidgera Weir Fishway and Tyreel Weir. We could suggest deferring the remaining expenditure for the other fish passage offsets until these two schemes have been completed and the concept is proven. Within the expenditure proposals in the SIR submission WaterNSW have based its costs at Gunidgera on a traditional fish lock as they “consider it likely that an in lock fishway will be proven to be unfeasible at Gunidgera”. So although WaterNSW state that to DPI Fisheries they are exploring a new concept design here, this is not reflected within the expenditure proposed in the submission. We would also take this into consideration in our recommended expenditure.*

This option would be consistent with the letter written by WaterNSW’s CEO to DPI Fisheries dated 7 September 2020 setting out the plan to implement these two pilot schemes, albeit without a committed timeline.

WNSW response:

WNSW notes Atkins’ option to defer other Fishway projects until the pilot Fishway projects are proven. WNSW expresses disappointment at the further delays incurred to the non-pilot Fishways and WNSW proposes an alternative that would permit some progress on the non-pilot Fishway projects within this pricing determination whilst concurrently minimising cost burdens to the customers. WNSW proposes that subsequent to business case endorsement and once commissioning of the pilot Fishway projects has commenced, the planning phases for several of the non-pilot Fishway projects be allowed to commence and be parked at their conclusion, until the monitoring period for the pilot projects has concluded. The intention would be to progress the non-pilot Fishways and enable learnings from the pilot Fishway projects to be incorporated into the planning, final business cases and detailed designs of the non-pilot Fishway projects.

The WNSW alternative to ATKINS Option (iii) would also be consistent with the letter written by WNSW CEO to DPI Fisheries and the subsequent correspondence and discussions that have occurred.

The Memo also states on page 2:

We understand that at the current time there has been no formal Ministerial¹ (as required by s218) order provided to date, nor do there appear to be any robust regulatory incentives for WaterNSW to deliver these schemes within a certain timeframe. Given the significant expenditure proposed by WaterNSW; the lack of evidence of preparedness to deliver these schemes we have decided to recommend option iii). This will provide WaterNSW the opportunity to prove the concept designs are effective and efficient from a cost perspective. In the meantime, WaterNSW should be able to develop the detailed business cases for the remaining schemes following its internal governance processes. This will help ensure that the schemes are more likely to be delivered efficiently.

WaterNSW has a different view to Atkins of the current regulatory incentives for delivery. The regulatory obligation under s218 of the Fisheries Management Act has been with WaterNSW since 2007 (refer to Letter from DPI dated 29th January 2007).

The Dam Safety Upgrade Program commenced in 2006 and these works triggered s218 of the Fisheries Management Act and subsequently led to the development of the DSU Fishway Offset

Program in 2009. There have been significant events that have occurred which have resulted in the curtailment of the implementation of the DSU Fishway Offset Program. There were concerns over the escalating cost of fishways and although the required budgets were raised in 2013, there was a suspension of the Fishway Program in 2014 and the project funding in the ACCC 2014-2016 determination was reprioritised.

The IPART 2017-2021 provided operating expenditure and minor capital expenditure to undertake optimised fish passage program which led to the development of the Strategic Fishway Implementation Program (SFIP), to achieve least cost methods to implement fishways, this being the SFIP report by Jacobs that was delivered in later May 2020.

WNSW acknowledges the beneficial outcomes of these projects and very much understands the balance required when these beneficial outcomes have such considerable financial cost and a resultant customer burden. WNSW is particularly conscious of the customer burden, knowing and having had also experienced the recent few years impacts of severe drought, bushfire, flood and then COVID-19. WNSW considers to date there has instead been an interagency and Ministerial focus on cost efficient delivery of a beneficial outcomes, rather than a time focus, with the overall higher intention to ensure the delivery is sound, efficient and long term.

To this end, WaterNSW has identified a suitable schedule for the fishway program, that would deliver WNSW' alternate to ATKINS Option (ii). The tables below provide project milestones for the WNSW implementation of the DSU Fishway Offset Program.

The final table provides a cashflow for the WNSW alternate Fishway proposal.

There are 11 remaining fishway offsets sites to be delivered under the WaterNSW Dam Safety Fish Passage Offsets Program:

Fish Passage Offset Fishways	Site Name	Type
Gwydir Fishways	Tyreel Weir	JFCS
	Tyreel Regulator	JFCS + replacement of gates and road bridge
	Tareelaro Weir	In Gate Lock
	Booloroo Weir	In Gate Lock
Lachlan Fishways	Lake Brewster Diversion Weir	Lock
	Booberoi Weir	Lock
	Lake Cargelligo Inlet Regulator*	JFCS
Macquarie Fishways	Gin Gin Weir	JFCS
	Marebone Break Weir	JFCS
	Dubbo North Weir	JFCS
Namoi Fishways	Gunidgera Weir	In Gate Lock (Pending Hydrological Model Outcome)

*previously Lake Cargelligo Outlet Regulator this was changed in December 2020 in consultation with DPI Fisheries

The majority of Fish Passage Offset Fishways are based on the new design concepts (i.e. JFCS Fishway and In Gate Fish Lock). There are two sites in the Lachlan Valley (Lake Brewster Diversion Weir and Booberoi Weir) that have a traditional fish lock design.

WaterNSW identified in the rural submission two pilot fishway sites to be constructed at Gunidgera Weir (Namoi Valley) and Tyreel Weir Fishway (Gwydir valley) with the remaining fishway sites to be constructed once the new concept design fishways are commissioned.

IPART's recommended a capital expenditure in the Draft IPART report provided an expenditure for construction of the two pilot fishways and planning budget to progress detailed design for the remaining fishway sites (refer to Appendix in Table 5 for IPART proposed Fishway Cashflow).

In response to IPART's recommendation WaterNSW has developed an alternate program in consultation with DPI Fisheries in April 2021 which would result in the construction of 7 fishways within the FY22-FY25 period and complete the design phase and final business cases for the remaining 4 fishways.

WaterNSW has developed this based upon consultation with DPI Fisheries:

- Construction of 5 JFCS Fishway Sites at Lake Cargelligo Inlet Regulator, Marebone Break Weir, Tyreel Weir, Tyreel Regulator and Dubbo North
- Construction of 2 In-Gate Fish Locks at Gunidgera Weir and Boolooroo
- Proceeding with an amended pilot program with 4 pilot sites:
 - JFCS Fishway Pilot No 1– Lake Cargelligo Inlet Regulator⁹³
 - JFCS Fishway Pilot No 2 – Marebone Break Weir
 - In-Gate Fish Lock No 1 – Gunidgera Weir
 - In-Gate Fish Lock No 2 – Boolooroo Weir
- DPI Fisheries have confirmed that in their view the novel fishway concepts do not present a risk in terms of achieving biological outcomes, as such the pilots are to be focused on construction/ operability, which substantially reduces the required proving period to 3 months.
- Some geotechnical/ preliminary design activities can be undertaken on the post pilot sites prior to the end of the proving period.

Tables 1 provides project milestones for the WNSW implementation of the JFCS Fishways and Table 2 provides project milestones for In Gate and Fish Lock Fishways.

Table 3 provides a cashflow for the WNSW alternate Fishway proposal.

The JFCS Pilot sites were selected on the basis of that there are two construction approach, Lake Cargelligo Inlet Regulator Fishway will be an off channel fishway and Marebone Break Weir Fishway will be an in channel fishway.

It is proposed that both JFCS Pilot fishways will be completed by end of 2023 with the concept proving period of three months.

The In Gate Fish Locks are the most difficult and expensive fishways to construct, it is proposed that the delivery of the In Gate Pilot Fishways will be delivered through a staged approach with Gunidgera Weir Fishway completed by FY23, lessons learn from the construction with Gunidgera will be applied to Boolooroo Fishway which construction will be completed by FY25.

It is proposed in that there will be 3 additional JFCS Fishways that can be delivered within the determination period that being 2 in the Gwydir Valley at Tyreel Weir and Tyreel Regulator and 1 in Macquarie Valley at Marebone Break Weir which will be completed all will be completed by FY25.

Planning and detailed design of the remaining 4 fishways completed by FY25 with construction to be completed by FY26 and FY27.

Lachlan Valley – Environmental Planning and Protection Expenditure Increase

The revised plan for the Lachlan Valley would see Lake Cargelligo Inlet Regulator Fishway completed and planning and design completed for Lake Brewster Diversion Weir and Booberoi Weir within the FY22-FY25 period.

⁹³ WaterNSW and Fisheries have agreed to substitute the Lake Cargelligo Inlet Regulator as an offset in place of the Lake Cargelligo Outlet Regulator as confirmed by Fisheries in the letter sent on February 2021 (D2021/17106).

Construction of Lake Brewster Diversion and Booberoi Weir can commence construction in FY26 and completed by FY27 (Refer to Table 1 and 2 for delivery timeframes for Lachlan Fishways).

Gwydir Valley – Environmental Planning and Protection Expenditure Increase

WaterNSW proposes that two JFCS fishways (Tyreel Weir and Tyreel Regulator) and Boolooroo Fish Lock in the Gwydir can be constructed within the regulatory period and the Tareelaro Weir Fish Lock can commence construction in FY26 and completed by FY27 (Refer to Table 1 and 2 for delivery timeframes for Gwydir Fishways).

Macquarie Valley – Environmental Planning and Protection Expenditure Increase

WaterNSW proposes that two JFCS fishways (Marebone Break and Dubbo North Weir) in the Macquarie Valley can be completed and planning design for Gin Gin Weir can be completed within the FY22-25 period (Refer to Table 1 and 2 for delivery timeframes for Macquarie Fishways).

Table A2: Project Milestones for Traditional Lock Fishways

Fish Lock Pilot Fishway Sites		Namoi-Gunidgera Fishway (In Gate Fish Lock)		Gwydir-Booolooroo (In Gate Fish Lock)		Remaining Fishway		Gwydir-Tareelaro		Lachlan-Lake Brewster Diversion Weir		Lachlan-Booberoi Weir	
Project Task	Date	Duration	Date	Duration	Project Task	Date	Duration	Date	Duration	Date	Duration	Date	Duration
PBC	Apr-21	5 months	Apr-23	5 months	PBC	Dec-23	4 months	Dec-23	4 months	Dec-23	4 months	Dec-23	4 months
Detailed design	Aug-21	4 months	Aug-23	4 months	85% Design	Mar-24	6 months	Mar-24	6 months	Mar-24	6 months	Mar-24	6 months
Tender via new delivery partner	Dec-21	2 months	Dec-23	2 months	Final Design & Environmental Approval REF	Sep-24	4 months	Sep-24	4 months	Sep-24	4 months	Sep-24	4 months
FBC	Feb-22	2 months	Feb-24	2 months	Tender via new delivery partner	Jan-25	2 months	Jan-25	2 months	Jan-25	2 months	Jan-25	2 months
Construction	Apr-22	13 months	Apr-24	13 months	FBC	Mar-25	2 months	Mar-25	2 months	Mar-25	2 months	Mar-25	2 months
Commissioning	May-23	4 months	May-25	4 months	Schedule Contingency	May-25	2 months	May-25	2 months	May-25	2 months	May-25	2 months
Concept Proving	Sep-23	3 months	Sep-25	3 months	Construction	Jul-25	18 months	Jul-25	18 months	Jul-25	18 months	Jul-25	18 months
Completion	Dec-23		Dec-25		Commissioning	Jan-27	5 months	Jan-27	5 months	Jan-27	5 months	Jan-27	5 months
					Completion	Jun-27		Jun-27		Jun-27		Jun-27	

Table A3: WaterNSW Proposed Fishway Cashflow

Project	Project Description	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	Total FY22-25	Total FY21-27
GW280001.15	CPTN Fish Passage Offsets				2,573,885	14,822,750	4,733,486	158,370	17,396,635	22,288,491
LA280007.15	WYGL Fish Passage Offset		791,646	3,725,395	2,370,701	892,400	16,732,491	2,454,099	7,780,142	26,966,732
MA280002.15	MAQ Fish Passage Offset		952,511	4,482,405	680,563	2,247,457	4,777,645	177,125	8,362,937	13,317,707
NO280001.13	KEEP Fish Passage Offsets	82,088	4,852,045	4,582,836	63,872				9,498,753	9,580,841
Total									43,038,467	72,153,771

Table A4: IPART proposed Fishway Cashflow

Atkins recommended expenditure		FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	Total FY22-25
GW280001.15	CPTN Fish Passage Offsets	\$ 102,133	\$ 145,565	\$ 147,542	\$ 1,478,280	\$ 1,458,081			\$ 3,229,468
LA280007.15	WYGL Fish Passage Offset				\$ 153,657	\$ 1,529,256			\$ 1,682,913
MA280002.15	MAQ Fish Passage Offset				\$ 153,657	\$ 700,931			\$ 854,588
NO280001.13	KEEP Fish Passage Offsets	\$ 82,088	\$ 4,852,045	\$ 4,582,836	\$ 63,872				\$ 9,498,753
Total									\$ 15,265,722

As illustrated, WaterNSW proposes a revised estimate of **\$43.1 million** as the prudent and efficient expenditure for fish passageways for the 2021 Determination period, reflecting a realistic delivery timeline.

Contingency adjustment to Fish Passage offset schemes

The Draft Report states:

“We noted that in the consultant’s cost estimates report a 40% contingency has applied on top of construction, design and WaterNSW costs, on each and every project within the program. This has been applied directly into WaterNSW’s SIR submission. No specific risks or comparable risks from prior projects have been identified to justify the level of contingency applied across the program. There is no business case to justify this level.

We noted that within the Mollee fish pass project a 12.5% contingency has been applied and this appears to be more reflective of more mature projects within WaterNSW portfolio. We suggest a 12.5% contingency is more appropriate at this stage and does not pass through all of the project cost risk through into the expenditure proposed, WaterNSW should be encouraged to manage this program more keenly.”

WNSW response:

The draft report (and subsequent letter from Atkins) indicates that the overall capital reduction to Fish passage offset scheme is \$62 million representing an average reduction of 86%.

WaterNSW would like to draw attention to the fact that the capital costs included in the submission have been understated because the final costing provided by our consultant was received after the submission deadline.

Our final consultant’s estimate included 40% contingency to accommodate large risks associated with in-river structures. However, the estimates excluded WaterNSW capitalised overheads.

In Gwydir (the valley evaluated), there is \$22.3 million included in the submission for four fishway structures in Gwydir. The final consultant’s estimate is \$23.5 million, including contingency. With capitalised overheads this would have been approximately \$27 million including overheads.

Consequently, had Atkins applied the reduction to the contingency as per the draft report, a revised estimate of \$22.9 million would have resulted. WaterNSW would like the consultant to note that this revised value is still higher than WaterNSW’s submission. WaterNSW suggests it is inappropriate to apply a percentage adjustment to the submission number, when the estimate that this was evaluated against exceeded the submission value, even with the proposed efficiency applied. As such WaterNSW proposes that any specific adjustment to assumed project cost based upon contingency be removed.

Clarifications on Gunidgera Fish-lock

WaterNSW notes the consultant’s request for further information regarding the fishway type and cost at Gunidgera. The consultant’s report recommended a novel ‘in-gate’ fish-lock for Gunidgera Weir. However during the final review process it was identified that this may result in incremental impacts to customers during flood events. Should this prove to be the case, the option would have no realistic chance of receiving approval from the relevant regulatory bodies. Hydrological modelling is now in the process of being completed, which WaterNSW expects will confirm that a traditional fish-lock will be required.

Due to the timing of the design issue being identified, a revised estimate was able to be incorporated in the regulatory proposal; however, the final report on the concept design remained unchanged and reflected the original ‘in-gate’ option.

WaterNSW aims to provide a comprehensive response over the next few days. However, for comparison, the construction costs for the Mollee Fish-lock, a similar sized fish barrier in the same

valley, was \$5.9m (contract signed in FY2012), or approximately \$7.05 million escalated to current prices.

Following the Jacobs estimate structure with the addition of capitalised overhead, an equivalent current year total project cost is presented below. Note there is no provision for contingency, given that the cost is an 'actual' value.

Table A4: Cost Components Mollee Fish-lock

Cost Component	Amount
Construction	7,095,139
Detailed Design (10% of Construction Costs)	709,514
Client Costs (8% of construction and Design Costs)	624,372
Capitalised Overhead (18% of direct project costs)	1,517,225
Total Project Costs (following Jacobs Methodology)	9,946,250

Appendix 3 – Renewals and Replacement Efficiencies

The Draft Report states:

6.8.4. Renewals and Replacement pp 114 -118

Renewal and replacement capital expenditure efficiency targets methodology

The savings have been estimated from potential efficiencies in engineering/design, works packaging, purchasing efficiency and local contracting.

WaterNSW's internal costs and the capitalised overhead cost are calculated based on set percentages of the external cost elements.

Given that overall project savings are generally in the 10-15% range, overestimating the cost estimates by a similar percentage is a real possibility. As a result, efficiency savings on conservative cost estimates may not be true capital efficiency savings.

WaterNSW's efficiencies are essentially based on a project-by-project adjustment calculated from a percentage reduction of the estimated direct costs. The renewals and replacement efficiency targets and calculations do not make any assumptions related to gains to WaterNSW's own internal costs for each project based on the move to the new procurement and delivery model. We have taken these findings into consideration in our overall recommendations on capital efficiency.

WaterNSW's cashflow model process has applied the appropriate target efficiency for the relevant year of the cashflow for each project. Final project cashflows have been developed in collaboration with the delivery team incorporating the efficiency targets.

6.8.9. Assessment of efficiency p128

6.8.9.2. Catch-up efficiency

We have applied our judgement to determine the level of catch-up efficiency that could be achieved by WaterNSW based on our assessments of the capital processes and the review and analysis of sample projects representative of the capital program as a whole, we also draw on our findings in our Final Report for the Greater Sydney determination expenditure review as the overarching business processes are comparable.

WNSW response:

The target efficiencies were introduced as lessons learned from the Greater Sydney determination expenditure review. The target efficiencies are a self-imposed measure to eliminate the need for any further catch-up efficiencies imposed on asset renewals.

WaterNSW believes that Atkins' Greater Sydney determination is not an appropriate comparator as no WaterNSW target efficiencies were used at that time in the Greater Sydney determination.

WaterNSW draws attention to the fact that WaterNSW internal costs and the capitalised overhead costs are calculated based on set percentages of the external cost elements and therefore were not used for the calculation of target efficiencies. On the other hand, the target efficiencies rates are applied as well to internal costs and capitalised overheads during the cashflow process.

WaterNSW requests Atkins to remove the commentary related to the overstatement of estimates and to reconsider their view concerning catch-up efficiencies for capital renewals. Atkins' judgement to determine the level of catch-up efficiency is based on conclusions and assumptions that simply do not apply in our circumstance.

Murrumbidgee Valley – Murrumbidgee Renewal and Replacement Reduction

The Yanco Fishway Refurbishment Works had an estimated cost of **\$3.92m**. It was scheduled for completion in year 4 of the forthcoming regulatory period.

A recent internal review of the Murrumbidgee capital program called into question the prudence of WaterNSW to undertaking this scale of works on a 'legacy' fishway at Yanco Weir. There are also concerns that a future Yanco Sustainable Diversion Limit Adjustment Mechanism (SDLAM) project may render the works obsolete.

During recent customer engagement forums, key members of the Murrumbidgee CAG expressed similar concerns about the project's inclusion.

It is considered prudent to request the project is removed from our FY22-FY25 Pricing Submission, this change will result in a revised renewal and replacement provision profile for the Murrumbidgee as indicated below (reduction of **\$3.92m**).

Project Name	Project Code	Budget	Activity	FY22	FY23	FY24	FY25	Total
Murrumbidgee Renewals Provision	MB320034	IPART Submitted Budget	32 - Renewal and Replacement	\$6.1m	\$6.2m	\$6.2m	\$6.1m	\$24.7m*
		Updated Budget Numbers	32 - Renewal and Replacement	\$6.1m	\$6.2m	\$6.2m	\$2.2m	\$20.7m

* figures might not sum due to rounding.

Appendix 4 - Continuing efficiency

IPART's approach

IPART's current approach to determining an allowance for continuing efficiency is to consider 40-year average multifactor productivity ("MFP") estimate for the 'market sector' published by the Productivity Commission, which are originally compiled by the Australian Bureau of Statistics (ABS).⁹⁴

The market sector comprises the 12 or 16 industries identified in Figure A5.1 below.

Figure A5.1 – Industry classifications adopted by IPART

Market sector (12 industries)	Market sector (16 industries)
Agriculture, forestry & fishing	Market sector (12 industries) plus
Mining	Rental, hiring & real estate services
Manufacturing	Professional, scientific & technical services
Electricity, gas, water & waste services	Administrative & support services
Construction	Other services
Wholesale trade	
Retail trade	Non-market sector (4 industries)
Accommodation & food services	Public administration & safety
Transport, postal & warehousing	Education & training
Information media & telecommunications	Health care & social assistance
Financial & insurance services	Ownership of dwellings
Arts & recreation services	

Source: Productivity Commission, *Productivity Bulletin*, May 2019, Box A.1, p 49.

IPART's most recent estimate of continuing efficiency by this method is 0.7% per annum.⁹⁵

WaterNSW has two main concerns with IPART's approach:

- IPART rejects estimates of productivity for the 'utilities' (i.e., Electricity, gas, water & waste services) industry on the grounds that poor historical performance of the utilities industry (due particularly to the energy sector) is unlikely to be a good reflection of the efficient frontier for water utilities. Yet, IPART uses the historical performance of the market sector—which contains an even more diverse set of industries—to determine a continuing efficiency target for water businesses.
- By considering average productivity over a long (i.e., 40-year) historical period, IPART gives insufficient weight to the most recent historical trends in productivity when estimating the outlook for continuing efficiency over the regulatory period.

Each of these concerns is elaborated upon below.

Market sector data is a poorer reflection of potential efficiency gains than the utilities sector

⁹⁴ IPART, *Review of prices for Sydney Water, Final Report, June 2020*. Appendix F.

⁹⁵ IPART, *Review of WaterNSW's rural bulk water prices, Draft Report, March 2021*. Page 37.

IPART has explained that it considers the historical productivity rate of the utilities industry to be a poor indicator of the potential efficiency gains available to water businesses - largely due to the poor historical productivity of the energy sector:

While the utilities sector seems similar in profile to the water utilities, the negative rates of productivity growth shown in Table F.2 below are probably not reflective of an efficient frontier. Rather, they likely reflect the particular issues that have been experienced in Australia over these time frames, especially in the energy sector, which has seen significant restructuring and is not considered to be performing well.⁹⁶

WaterNSW does not agree with this reasoning.

IPART provides no evidence as to the extent to which poor historical performance of the energy sector has distorted the measured productivity of the utilities industry as a whole. Furthermore, IPART *assumes* without any evidence that negative rates of productivity growth are not reflective of the efficient frontier for water businesses.

If in fact the water industry has been experiencing negative productivity, then adopting IPART's approach (which assumes away such outcomes) would produce an unrealistic and unreasonable continuing efficiency target for the water businesses it regulates.

There is compelling evidence that the productivity of the water industry has been declining for many years - contrary to IPART's assumption.

WaterNSW notes that a 2017 study conducted by Economic Insights for the Essential Services Commission (ESC) in Victoria—covering a sample of 62 water businesses throughout Australia - found that the efficiency of the water industry *fell* by an average of 0.7% per annum between 1998 and 2016.⁹⁷ Economic Insights concluded that:

Changes in technical [i.e., catch-up] efficiency (as indicated by the parameter μ in the SF model) appear to have had a negligible effect on productivity over the period 1998 to 2016 on average for all utilities in the sample, whereas technical change [i.e., ongoing efficiency or frontier shift] is estimated to have had a negative effect.⁹⁸

That is, Economic Insights concluded that most of the reduction in productivity over the period was due to an inward shift of the efficient frontier for the water industry, rather than water businesses drifting away from the efficient frontier (i.e., negative catch-up efficiency).

The main reason given by IPART for not relying on the historical MFP for the utilities industry is that the poor productivity performance of the energy sector (which is part of the utilities industry) may mask the productivity of the water sector.

While historically there has been declining productivity amongst Australian energy networks, the Australian Energy Regulator's analysis indicates that there has generally been a significant increase in productivity amongst electricity distribution and transmission networks since 2015.⁹⁹ Hence, any decline in the productivity of the utilities industry since 2015 cannot be attributed to the influence of electricity networks. This also goes to the issue of the historical period over which IPART has assessed productivity, discussed in the section titled 'Period of measurement' below.

IPART's main concern over historical measures of productivity for the utilities industry is that the inclusion of the energy sector may produce an unreasonably low continuing efficiency target for water businesses. In response to that concern, IPART uses historical measures of productivity of

⁹⁶ IPART, *Review of prices for Sydney Water, Final Report, June 2020*. Page 216.

⁹⁷ Economic Insights, *Victorian Urban Water Utility Benchmarking, 21 August 2017*. Page 29.

⁹⁸ Economic Insights, *Victorian Urban Water Utility Benchmarking, 21 August 2017*. Page 28.

⁹⁹ Australian Energy Regulator, *Annual benchmark report – Electricity distribution network service providers, November 2020*. Section 3; Australian Energy Regulator, *Annual benchmark report – Electricity transmission network service providers, November 2020*. Section 3.

the market sector that encompasses businesses that are even less comparable to water businesses than are energy businesses.

This is problematic because there is no reason to suppose that:

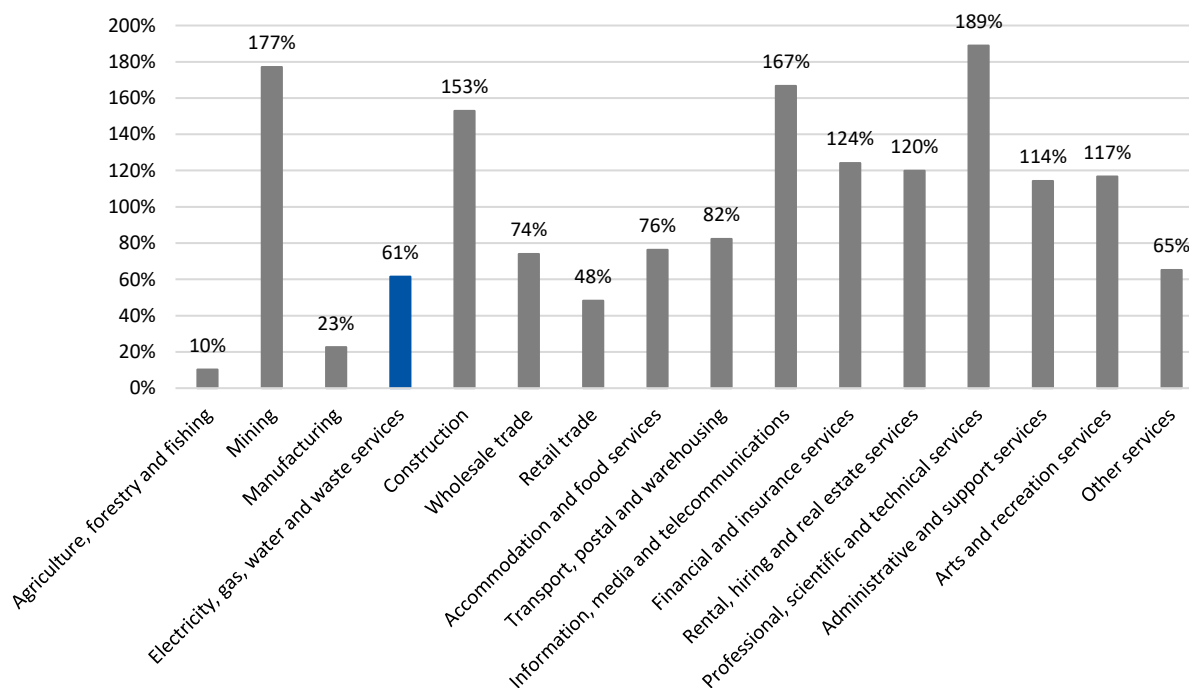
- The input requirements of water businesses (including the types of labour and capital employed, and the mix of inputs) is similar to most other firms in the market sector; or
- The output growth of the water businesses is comparable to the output growth of most other firms in the market sector.

On the first point above, the type and mix of labour and capital employed by water businesses differs vastly from the type and mix of labour and capital employed in nearly all of the other industries included in the market sector. Clearly, the scope for productivity improvements in a given sector will depend on the nature and mix of inputs used for production in that sector.

For instance, there may be greater scope for productivity improvements through advancement in ICT systems in industries that are very technology-intensive (such as media and communications) than in very labour-intensive industries (such as agriculture, forestry and fishing). Similarly, there may be greater scope to realise productivity gains through optimisation of logistics in the transport, postal & warehousing industry than in the utilities industry.

The differences in input requirements and input mix likely explains the significant variation in the growth in inputs used by different industries over time—as illustrated by Figure A5.2. The Figure shows that over the 25-year period between 1994-95 and 2018-19, the inputs employed by the utilities industry grew cumulatively by approximately 61%. This growth is very modest when compared to other industries such as mining (177%); construction (153%); information media and telecommunications (167%); and professional, scientific and technical services (189%).

Figure A5.2 - Cumulative change in combined inputs (labour, capital and intermediate inputs) by industry, 1994-95 to 2018-19



Source: ABS estimates of industry MFP

IPART assumes that productivity estimates for the market sector are representative of the potential productivity gains for the water industry:

Our view is that using economy-wide data (and focusing on the market sector of this data set) represents the efficiencies that could be available to utilities, through internal initiatives or incorporated

through supply chains. For instance, productivity initiatives like better logistics through operations research, and ICT systems replacing paper-based systems have affected all sectors of the economy, including water utilities. Wastewater and water treatment plant technology can continue to improve the performance on energy, labour, raw material and even land utilisation. New pipe-making technology continues to deliver pipes that are cheaper to buy and that perform better.¹⁰⁰

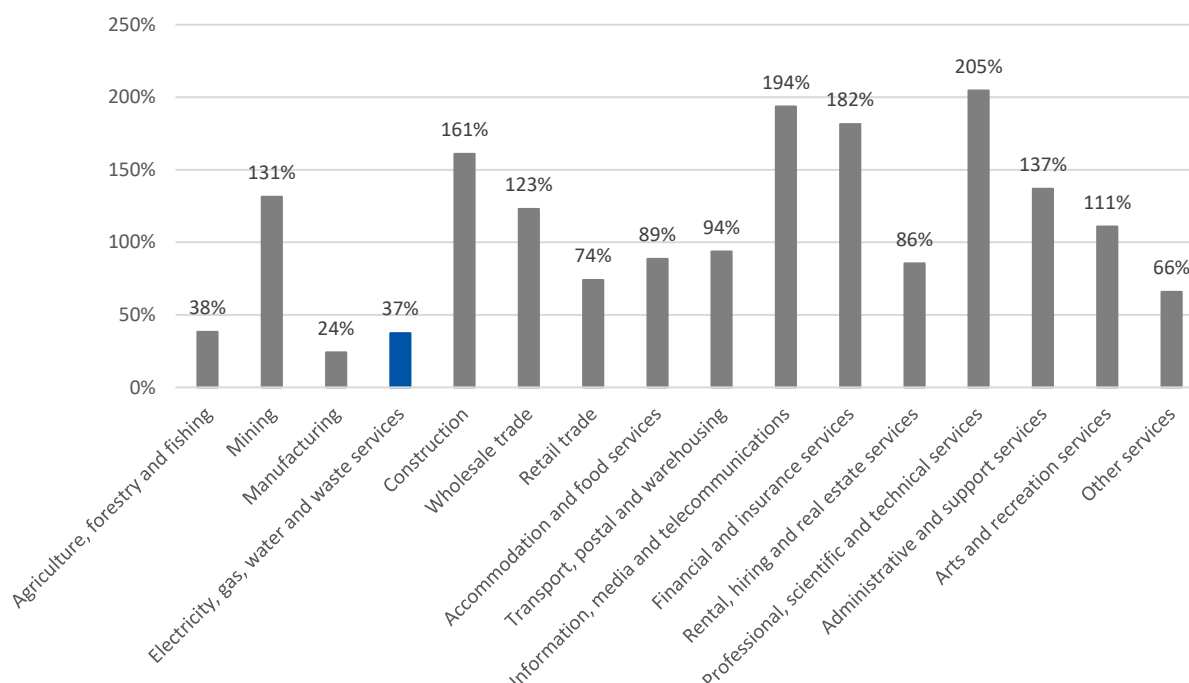
Given the very specific inputs used by the water industry, there is no reason to expect that productivity changes in the general economy are representative of the productivity changes that may be achievable by water businesses.

The ABS measures industry productivity as the ratio of the industry's outputs to its inputs. Output is proxied by sales.¹⁰¹ The sales (or revenues) of utilities (such as water businesses) would be expected to grow modestly over time as population grows, given that:

- The services delivered by utilities are typically essential services; and
- Many firms in the utilities industry are regulated through incentive regulation, so face incentives to reduce costs (and future revenue requirements) over time (all else remaining equal).

However, the revenues generated by other industries (e.g., mining; construction; information, media and telecommunications) have grown significantly over time, due to various factors such as a significant increase in global demand (e.g., for resources), growth in the property market, and the rapid development of new technologies in certain industries that have delivered new products and services that were previously unavailable to consumers (particularly in information, media and telecommunication and financial services sectors). This can be seen in the ABS data presented in Figure Figure A5.A5.3 below.

Figure A5.3 Cumulative change in output by industry, 1994-95 to 2018-19



Source: ABS estimates of industry MFP

Analysis of the input and output data that underly the ABS MFP estimates is revealing because it shows that while the growth in inputs used by utilities has been fairly modest, the outputs of the

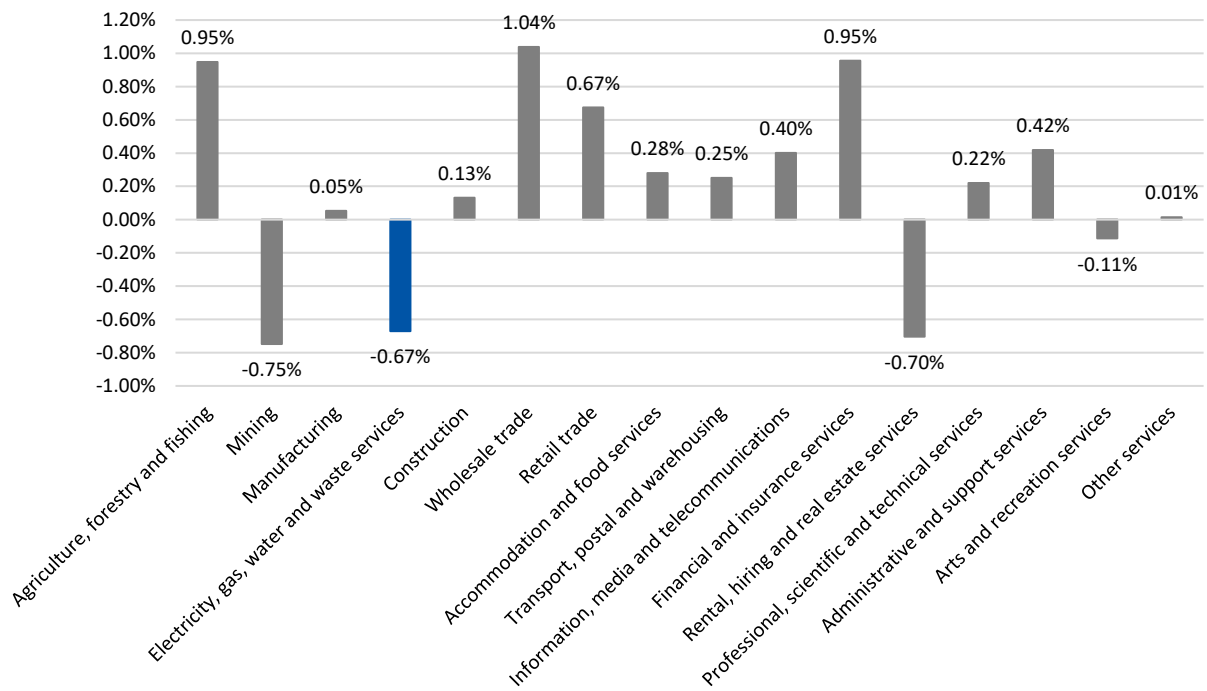
¹⁰⁰ IPART, *Review of prices for Sydney Water, Final Report, June 2020*. Page 217.

¹⁰¹ ABS, *Australian System of National Accounts – Concepts, Sources and Methods, 2015*. Page 110. See also: <https://www.abs.gov.au/articles/output-indicator-method-national-accounts>

utilities industry (i.e., sales) has grown much more slowly, given the inherent characteristics of the services delivered by that industry. Consequently, the productivity of the utilities industry appears to have declined over time, as shown in Figure A5.4.

By contrast, other industries (such as mining; construction; information, media and telecommunications; professional, scientific and technical services) appear to have become more productive over time, even though their inputs have grown substantially more than those used in the utilities industry, because they have experienced very material output growth.

Figure A5.4 - Average annual rate of change in productivity by industry, 1994-95 to 2018-19



Source: ABS estimates of industry MFP

Figure Figure A5.4 above also shows that there is very significant variation in measured productivity between industries because the inputs and outputs of the industries vary considerably. **This suggests strongly that it is inappropriate to determine a continuing efficiency target for water businesses based on the measured productivity for the market sector.** There is no reason why water businesses can increase their outputs (sales) or reduce their inputs in the same way as firms in non-utility industries.

Period of measurement

Another concern that WaterNSW has over IPART's approach to determining a continuing efficiency target is the 40-year historical timeframe over which MFP is assessed.

IPART has explained that it determines the continuing efficiency target by reference to a 40-year average of historical MFP (for the market sector) because that is the most reliable way of estimating long-term productivity growth:

*We maintain that our approach provides the most objective measure of long term average productivity growth in the Australian economy. We consider the sample needs to be sufficiently long to include a full business cycle (and it has been over 25 years since the last recession in Australia). Any decision to truncate the available data would be subjective.*¹⁰²

WaterNSW submits that for the purposes of setting expenditure allowances over the *forthcoming* regulatory period, what is required is the best estimate of expected productivity over the *forthcoming* regulatory period—not, an estimate of long-term productivity. Long-term productivity reflects the emergence and adoption of new technologies, substitution between inputs (e.g., between labour and capital) and long-term changes in outputs over a period of decades.

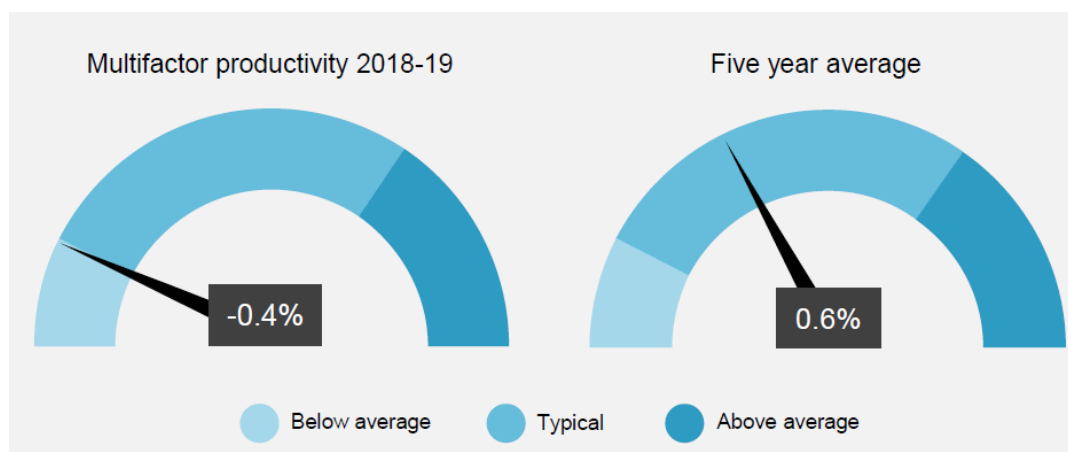
In the case of the water industry, in the short-term (i.e., over a single regulatory period):

- Inputs to production are fairly 'sticky', particularly given the capital-intensive nature of the industry;
- Outputs are largely fixed, since output growth in the short-run is driven largely by population growth; and
- Technological advances that might reduce the required inputs to production will emerge only gradually, rather than through large step-changes.

Hence, when setting continuing efficiency targets, IPART should consider what is feasible for the water industry over the *forthcoming* regulatory period, rather than over the long-run.

WaterNSW also notes that even at the market-sector level, estimates of productivity can be sensitive to the measurement period. This can be seen in Figure A5.5 below, which indicates that productivity in 2018-19 was below average, and considerably lower than productivity measured over a five-year horizon.

¹⁰² IPART, *Review of prices for Sydney Water, Final Report, June 2020*. Page 217.

Figure A5.5 – Multifactor productivity over different periods

Source: Productivity Commission, *Productivity Insights*, February 2020. Page 2.

The latest analysis by the ABS indicates that, in 2019-20, due largely to the COVID 19 pandemic:¹⁰³

- MFP fell by 0.7% across the market sector; and
- MFP fell by 3.5% in the utility industry.

Given that the economic effects of the pandemic have not been reversed, it seems highly unrealistic that WaterNSW should be expected to achieve a 0.7% per annum increase in productivity over the next regulatory period. However, that is what would be expected of WaterNSW if IPART were to apply its existing approach of setting a continuing efficiency target by reference to average MFP over the past 40 years.

WaterNSW's proposal

WaterNSW proposes that when determining a continuing efficiency target, IPART should:

- Give most weight to the measured productivity of the utility industry (rather than the market sector) since the utility industry most closely reflects the input and output characteristics of water businesses; and
- Give most weight to MFP estimates over the most recent historical years (rather than 40 years) in order to produce more realistic estimates of the scope for productivity gains over the forthcoming regulatory period.

Based on the evidence provided above, WaterNSW proposes that a continuing efficiency target of **0-0.35% per annum**, rather than the 0.7% per annum should be adopted in the Draft Determination.

The lower bound is set based on evidence from the utilities sector that suggests a productivity factor no higher than zero. Our proposed upper bound is 0.35%, which is the midpoint between the utility sector productivity measure (0%) and the long-term productivity measure applied by IPART (0.7%). We consider this to be a conservative range and that the appropriate factor for a water utility company over the next four years lies closer to the utility sector productivity factor (i.e. the lower bound).

¹⁰³ See: <https://www.abs.gov.au/statistics/industry/industry-overview/estimates-industry-multifactor-productivity/2019-20>.