27 April 2020

Dr Paul Paterson
Chair
Independent Pricing and Regulatory Tribunal of NSW
Level 15, 2-24 Rawson Place
SYDNEY NSW 2000

Dear Dr Paterson,

Review of bulk water prices for WaterNSW in Greater Sydney from 1 July 2020 – response to the IPART Draft Determination

WaterNSW is pleased to respond to IPART's Draft Determination on the review of regulated bulk water charges for Greater Sydney from 1 July 2020 (the "**Draft Determination**") published on 24 March 2020.

WaterNSW continues to support the pricing proposal we submitted to IPART on 1 July 2019 (our "**Pricing Proposal**"). Attached is our response to the Draft Determination

While we consider that the Draft Determination generally represents a well-balanced approach to the regulation of our Greater Sydney bulk water prices, we provide specific comments on a number of issues or concerns that we have identified. These key issues are addressed in our attached submission and expert reports.

We also highlight in our response the economic impacts of COVID-19 and the escalated financial risks that arise for WaterNSW with respect to its revenues, costs and Balance Sheet strength to meet our regulatory and customer commitments over the next four years. We have identified a number of proposals that we request IPART to consider to enable WaterNSW to continue to meet these commitments.

We look forward to working with IPART in addressing how our comments may be incorporated in the 2020 Final Determination.

If you would like to discuss our response further, please do not hesitate to contact me on [redacted].

Yours sincerely,

[redacted]

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Submission to the Independent Pricing and Regulatory Tribunal

Response to the IPART Draft Determination on the review of bulk water prices for WaterNSW in Greater Sydney from 1 July 2020

27 April 2020

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Contents

Attachments:

1. CEG expert report titled *WACC*, i*nflation compensation and financeability for WaterNSW*
2. INDEC letter re: Greater Sydney Resilience Provision - Prospect to Orchard Hills Transfer

1. Introduction

WaterNSW is pleased to respond to IPART's Draft Determination on the review of regulated bulk water charges for Greater Sydney from 1 July 2020 (the "**Draft Determination**") published on 24 March 2020.

WaterNSW continues to support the pricing proposal we submitted to IPART on 1 July 2019 (our "**Pricing Proposal**" or "**original 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 Greater Sydney 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:

- **Inflation forecasting risk impacting our financeability** – Market based measures of expected inflation have fallen dramatically over the last month and the breakeven inflation series suggests that bond market participants are pricing in close to zero inflation on average over the next four years. Maintaining IPART's current forecast for inflation of 2.3% is simply not sustainable and puts WaterNSW at significant financial risk when considering the current low inflation forecasts arising from COVID 19 impacts.

  We propose that IPART puts in place a mechanism to eliminate the impact of inflation forecast error on the compensation provided for WaterNSW's services. This includes lowering the inflation forecast in IPART's revenue model (e.g., to 1.7%) or by including a new building block in the model that captures the cost difference between an inflation forecast of 2.3% and 1.7%. Should IPART not adopt these proposals, an uplift to the equity beta would be required to address the increased risk for WaterNSW equity investors. This matter is discussed below and in the expert report from CEG provided as Attachment 1 - *WACC, inflation compensation and financeability for WaterNSW*.

- **Direct operating cost reductions** – Based on the increased risk to WaterNSW operating environment, WaterNSW contends that its proposed operating expenditure should be reinstated in full and that the direct operating expenditure reductions of $12.9 million over the 2020 determination relating to land management, water monitoring, our science program, the metropolitan water planning are reversed. For instance:

  - Reductions to land management allowances constitute a material risk and potentially compromise our ability to deliver on water quality requirements to protect public health when faced with significant bushfire outbreaks; and

  - Significant inflows have occurred in February 2020, post the Atkins-Cardno review. As the catchments (soil profiles and surface storages and swamps) are now wet, any significant rainfall would be expected to result in material inflows. This rain was a very significant event and followed a period of prolonged drought, resulting in some specific increased risks to water quality in the short-to-medium term. Managing this risk to water quality has resulted in upward, not downward pressure on costs.

- **Application of 'catch-up' efficiency reductions** – We have serious concerns both with IPART's findings and the methodology by which it has determined catch-up efficiency adjustments. In particular,

  - The catch-up efficiencies for operating expenditures are arbitrary, 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. Of most concern is the precedent this sets and impact this approach will have on businesses with respect to regulatory certainty in future IPART Determinations; and

- In addition to making program-specific adjustments, IPART has proposed catch-up efficiencies of between 2% to 9% per annum for our capital expenditures to move WaterNSW towards an 'efficiency frontier' over the 2020 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, noting that WaterNSW was only established in 2015. 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.

- **Demand Volatility Adjustment Mechanism (DVAM)** – IPART's regulatory processes aim to ensure an efficient regulated business has a reasonable expectation of recovering its efficient costs, including when facing extreme economic and or climate events. In the absence of a DVAM, price cap water regulated businesses would face large revenue exposures during times of decreased demand, which typically occurs in drought under the Metropolitan Water Plan when demand restrictions are imposed, or significant economic down turns, which NSW is experiencing now due to COVID-19.

  Recent extreme drought has highlighted the potential for significantly reduced demand for water with restrictions being put in place. While current drought restrictions could be lifted, there are still risks of future demand reductions arising from extreme and unpredictable weather, including drought, and, as we are currently experiencing, sudden social disruptions in the wake of a global pandemic. In light of recent events, we urge IPART to reconsider its stance and to introduce a DVAM for WaterNSW.

- **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. We do not support IPART's draft finding to significantly lengthen the asset lives for projects marked as 'Dams', 'Pipelines' and 'ICT'. WaterNSW considers that the adjustments which have been recommended by Atkins-Cardno and implemented by IPART are based on insufficient evidence and incorrect reasoning. We note that making significant changes to asset life assumptions at price reviews increases the regulatory risk faced by WaterNSW and customers and directly impacts the business case viability for projects planned and underway and would result in material increases in maintenance costs. We provide our rationale in the body of this submission for maintaining our originally proposed asset lives.

- **Greater Sydney Resilience program** – WaterNSW rejects the reductions recommended by Atkins-Cardno and IPART for this $20.5 million program and the suggestion it is a 'gold plating project'. These draft findings are inaccurate and do not reflect both the importance of the program in ensuring a secure water supply to Greater Sydney and the comprehensive and robust information that was provided in support of this project. The project involves making improvements to the supply resilience for the Orchard Hills water filtration plant (WFP) and represents an important and cost-effective measure to address an established, fundamental supply risk to over 200,000 residents and 12,400 local businesses in Greater Penrith, including St Marys, Emu Plains and the lower Blue Mountains. We seek the reinstatement of the relatively low costs of this important project into our capital program.

- **Shoalhaven transfer pumping costs** – WaterNSW supports both the continuation of the pass through mechanism for drought-related Shoalhaven pumping costs and IPART's proposed enhancements to the transfer formula relating to the cost of electricity.

  IPART has rejected our claim to recover the $1.7 million revenue shortfall arising from the operation of the transfer formula during the current regulatory period. We maintain that the current formula is (unintentionally) biased against WaterNSW recovering its efficient

costs. We consider that this is an exceptional circumstance and there is unintended bias in the forecasts whereby there is no potential for revenue increases in the Shoalhaven Transfers formula to offset the revenue shortfall. It would be inconsistent with good regulatory practice to claw back the current period operating efficiencies through 'catch-up' efficiencies to offset an activity cost which was not contemplated by the allowance and when bias is evident.

- **Managing investment uncertainty (contingent projects)** – While IPART should be congratulated for recognising the need to address the uncertainty of contingent projects, IPART's approach does not go far enough. For example, a letter of comfort for projects with 'medium materiality of risk' carries no formal standing and risks the delivery of major projects where a clear trigger for investment exists. For 'high materiality of risk, an early determination is impractical in most cases as it carries a high administrative impost for the business, IPART and customers that could be addressed in a more streamlined manner.

  A contingent project mechanism, that focuses only on the project at hand, is an efficient and effective feature of most effective regulatory regimes in Australia. We maintain that a mechanism that allows for intra-period adjustments to recover the costs of contingent projects would ensure that risks outside of our control are appropriately balanced between customers and WaterNSW.

We also bring to IPART's attention three material matters that have arisen since we submitted our original proposal:

- **The impact of COVID-19 on our operations, including operating and capital costs, financeability and sales volumes**. Information on the potential impacts of COVID-19 are summarised in Section 2.1.3 and discussed in detail in Appendix 2;
- **The historically low return on equity and its implications on obtaining funding from equity markets over the next four years**. The implications of IPART's Uncertainty Index being outside of its control limits for the first time should lead IPART to select a return on capital at the upper end of its stated range to address the risks of supporting efficient investment during unprecedented market conditions; and
- **The identification of updated planning costs of $74 million for the Greater Sydney [redacted] Program**. While this is the subject of separate correspondence with IPART on 15 April 2020, WaterNSW is seeking the additional planning costs to be included in the capital program for the 2020 Final Determination. The basis for the updated costs is discussed in Section 2.3, with responses to IPART's questions provided to us on 22 April 2020 provided in confidential Appendix 3.

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 Greater Sydney are set at efficient levels.

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

WaterNSW agrees with IPART's draft finding that a four-year period is appropriate for our Greater Sydney Determination. As noted in Section 4.2 of our Pricing Proposal, WaterNSW considers that the benefits of a four-year determination period in providing certainty and minimising both regulatory burden and administrative costs outweigh the costs and benefits of moving to a period shorter or longer than four years.

2.1.2 Alignment of regulatory determination periods

As an overarching principle, WaterNSW considers that alignment between determination periods for two entities that supply water where there is interaction between the entities is desirable, but should not be a critical feature of the regulatory framework. IPART's regulatory framework should be sufficiently flexible to accommodate different determination periods for WaterNSW and Sydney Water as circumstances warrant. For instance, it is not inconceivable that an event could occur where it may be appropriate to extend or defer the determination period for one of the entities without necessarily extending or deferring the determination period for the other entity.

As outlined in our response to the Issues Paper, Sydney Water purchases its bulk water from both WaterNSW and Sydney Desalination Plant (SDP). However, the regulatory treatment of the bulk water purchases differs for each of the suppliers:

- WaterNSW's bulk water costs are treated as an input cost (i.e. an operating expenditure) in Sydney Water's determination. Additional costs associated with any Shoalhaven transfers are passed through to Sydney Water customers in the following year. The WaterNSW and Sydney Water determination periods are aligned.
- SDP's fixed charges are included in the Sydney Water determination as an operating expenditure, with a cost pass through for the SDP variable charges. A cost-pass through is also in place to increase / reduce Sydney Water customers' water service charges for the difference between the forecast and actual SDP charges. The SDP and Sydney Water determination periods are not aligned.

A risk with IPART's current approach for aligning the WaterNSW and Sydney Water determination periods is the limited flexibility to address changed circumstances for WaterNSW without also triggering the need for an early determination by Sydney Water.

As an example (as outlined in our response to Question 1 in our response to the Issues Paper and as suggested by IPART on Page 78 of the Issues Paper) if one or more contingent projects proceed during the regulatory period and would have a material impact on the business such that it cannot wait until the next schedule price determination to correct for this impact, WaterNSW could seek an early price determination.

However, it would appear necessary for a corresponding early price determination for Sydney Water to be triggered in order for Sydney Water to incorporate the additional costs in its prices, unless appropriate cost pass through arrangements are in place to enable the pass through of the amended WaterNSW prices arising from the early determination.

While the simplicity of IPART's current approach has some attraction, it creates potentially significant limitations on flexibility and can increase regulatory costs if the two determinations are inextricably linked (rather than the timing merely aligned). This may lead to increased costs for

customers, the businesses and IPART if two reviews are undertaken when only one was required if pass through mechanisms were in place to allow the effects of one determination to flow to the other.

2.1.3 Impact of COVID-19

The rapid changes in macroeconomic indicators that the world is currently experiencing are already impacting water utilities and posing unique challenges for the regulatory framework that IPART operates. In particular, the duration of any lockdown and the related impact this will have on the economy and the water sector is still unclear. However, all economic forecasts are indicating that Australia is heading towards a recession as a minimum and it is highly likely that the current economic conditions will worsen before only marginally improving over the next four years.

Appendix 2 provides a detailed examination of the potential implications of COVID-19 for WaterNSW, water utilities and industry. As noted in Appendix 2, and according to Deloitte Access Economics:

> *It is uncertain how long the current economic downturn will persist, with optimistic forecasts suggesting recovery in 2021 and pessimistic forecasts pushing recovery back another half a decade.* [1]

As discussed later in this submission, we already face significant risk to our financeability over the regulatory period as a result of the disconnect between IPART's assumed 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, contractors and suppliers adapt to new working arrangements. The impact on working arrangements and how this risk is priced is already being discussed for a number of current contractor procurements.

In addition, State Super have also indicated the likely need for WaterNSW to make additional Defined Benefit superannuation contributions to fund additional asset shortfalls arising for the economic impact of COVID-19 on equity assets.

Meanwhile, the impact of COVID-19 on water demand remains uncertain, with behavioral changes and economic growth factors yet to be revealed in actual consumption. As noted in Appendix 2, accurately forecasting demand and costs in the current environment for the upcoming four year regulatory period presents considerable challenges.

As noted in the CEG expert report on WACC, Inflation and financeability:

> *The current levels of market wide uncertainty can be expected to raise the required return for equity investors across the economy including for investors in WaterNSW.*[2]

Overall, we urge IPART to take these unprecedented levels of uncertainty into account in preparing its Final Determination. Further, we believe this provides further support for our proposal for IPART to introduce additional mechanisms to deal with uncertainty in the regulatory framework, particularly DVAM, introducing a contingent projects mechanism with intra-period adjustments, addressing inflation forecasting risk and ensuring a return on capital that is at the upper end of IPART's feasible range.

[1] Deloitte Access Economics, March 2020, *Business Outlook.*

[2] See CEG Report on WACC, inflation and financeability, page 34 provided as Attachment 1.

2.1.4 Contingent projects and managing uncertainty

In our Pricing Proposal, and in our subsequent response to IPART's Issues Paper, we outlined a number of material contingent projects in the next regulatory period, and proposed an approach for balancing the risks of these projects between customers and ourselves.

While acknowledging that there is a need for a mechanism to deal with contingent projects, IPART's Draft Report outlined an alternative series of approaches to address these risks during the period, including a 'letter of comfort' on how IPART may deal with contingent projects, and an early price determination.

WaterNSW considers that the approaches outlined by IPART have a number of flaws:

- A letter of comfort has no legal standing and generates a material risk for WaterNSW; and
- Reopening a determination is impractical and imposes significant costs on WaterNSW and IPART.

The following sections outline the need for a mechanism to deal with contingent projects, discuss IPART's proposed approach as outlined in the Draft Report, our concerns with this approach, the customer outcomes supported by our proposed contingent project mechanism, and our proposed design of the mechanism, which illustrates the way that prices would be affected and transparently applied under the scheme.

Our Pricing Proposal and the need for a contingent projects mechanism

As outlined in our Pricing Proposal (Section 4.5), WaterNSW has identified a number of large major projects (or contingent projects) that are not included in our proposed capital expenditure program other than for some minor preliminary planning costs or early investigation works. These 'contingent' projects have not been included in our expenditure forecasts on the basis that there is a level of uncertainty as to whether and when these projects may proceed and their associated cost.

One or more of these projects may ultimately need to commence during the 2020 determination period for reasons outside of WaterNSW's control, such as to ensure water security should dam levels continue to fall at unprecedented rates, but more likely the need to support the outcomes of the Greater Sydney Water Strategy currently being developed by Government. In these circumstances, WaterNSW may face significant financial risk if the costs are not included in regulatory allowances and recovered through prices during (or commencing in) the 2020 determination period. In its draft decision, IPART agreed that given the uncertainty of contingent projects in terms of timing and scale, these projects should not be included in the expenditure program for the 2020 Determination.

Importantly, WaterNSW did not consider it reasonable to include these contingent projects in its capital expenditure program as their inclusion could result in allowances and prices that are significantly higher than potentially required, if the projects did not proceed within the determination period. The higher price would ultimately be borne by consumers in the Greater Sydney region.

WaterNSW therefore proposes the inclusion of a separate mechanism in the determination that would allow the costs of a contingent project to be assessed intra-period and its efficient costs incorporated into WaterNSW's regulatory allowance, once the need for the project, its timing and costs have been established with sufficient certainty.

As outlined in our original proposal, the use of contingent projects by WaterNSW is not unique and a number of other jurisdictions and sectors apply a comparable mechanism for the management of expenditure uncertainties.

A contingent project mechanism is the optimal approach to allowing us to deal with uncertainty and is in the long-term interests of customers.

IPART's Draft Report

IPART considers the contingent project mechanism to insufficiently allocate risk to customers and does not provide incentives for WaterNSW to manage planning gaps in the water sector which have contributed to high uncertainty around contingent projects. In this way, IPART recommends that more risk should remain with WaterNSW to incentivise improved water supply planning. IPART also argues that contingent projects would likely happen toward the end of the determination period and therefore prices could adjust during the next determination period.

IPART suggests that contingent project risks are managed through the following set of three options, dependent on the materiality of risk:

- **Low materiality of risk** - WaterNSW reprioritises capital expenditure to the next determination period, to allow the new major project to commence within the current period.
- **Medium materiality of risk** - WaterNSW seeks a letter of comfort from IPART regarding how contingent projects may be treated at the next price review, with the efficiency of expenditure and the recovery of costs to occurring in the next determination period.
- **High materiality of risk** - WaterNSW seeks an early price determination, if the business requires price adjustments in the short term.

WaterNSW's concerns with IPART's recommendations

We consider that IPART's approach to managing the risk of contingent projects does not appropriately allow us to manage the uncertainty associated with these projects. Regarding each of the options put forward by IPART:

- **Low materiality of risk** – The reprioritisation of capital expenditure risks the delivery of water services to customers, requiring efficient expenditure allocated under the previous determination to be allocated to the next determination period in order to allow the contingent project to go ahead.
- **Medium materiality of risk** – a letter of comfort carries no formal standing. It therefore risks the delivery of major projects where a clear trigger for investment exists. The lack of certainty regarding recovery also means that, if the project is not pursued within period, pressure will be placed on our ability to deliver required services to our customers. If the project is pursued within period, the reprioritisation of other efficient projects may need to occur.
- **High materiality of risk** – while we seek to retain the ability to seek an early or separate determination if a very large project is triggered with costs to be incurred within a determination period, we consider an early determination to be impractical in most cases as it carries a high administrative impost for the business, IPART and customers. A more streamlined approach through a contingent project mechanism, that focuses only on the project at hand, is more appropriate and efficient.

The customer outcomes supported by a contingent project mechanism

Customers would benefit from a contingent project mechanism to manage uncertainty. This is a result of two possible scenarios related to not having this mechanism in place in the event of the need for a major project arising during a regulatory period:

- The project does not proceed until the following determination period. Depending on when the need for the project is triggered within a regulatory period, this could lead to a project being delayed for up to four years, with consequential impacts and risks for the efficient and effective delivery of water services.

- The project proceeds but WaterNSW is unable to recover its efficient costs, resulting in a reprioritisation of existing programs to support expenditure and deliverability, or a shortfall in operating expenditure and return on and of capital as part of the regulatory asset base. This places WaterNSW at greater financeability risk and could result in other required and efficient projects and expenditure not proceeding as planned.

By avoiding these two scenarios, a contingent projects mechanism would provide the following benefits to customers:

- Customers pay prices that are reflective of the efficient costs of required investment, as risk is better balanced between customers and WaterNSW; and
- Service delivery standards are maintained for water customers as WaterNSW is able to undertake required investment.

The ability to pass through the costs of contingent projects would ensure that risks outside of WaterNSW's control are appropriately balanced between customers and WaterNSW. Introducing a mechanism for managing contingent projects also means that WaterNSW is able to recover its efficient costs. If not able to recover efficient costs, the financeability of WaterNSW is threatened, particularly at the margin. This is essential in the current low interest rate and low WACC environment facing water businesses. WaterNSW can meet its obligations and remain financially sustainable in the long term with the capacity to fund uncertain major projects. In turn, WaterNSW is able to invest sufficiently in its networks with continued maintenance and/or improvements in service quality, in the long term interests of its customers.

The above rationale regarding the positive customer impacts of a contingent projects mechanism can be similarly applied to cost pass through arrangements (Section 2.1.5 of this response), as both mechanisms reflect the management of uncontrollable costs incurred, or required to be incurred, during a regulatory period.

It is expected that the management of uncontrollable costs, including those related to contingent projects, will become increasingly important with a growing number of unknowable events for the water sector creating greater uncertainty. For example, extreme climatic change is driving natural events which are inherently uncertain in their frequency and impact. WaterNSW would be more resilient to this type of risk if empowered to efficiently manage the costs associated with such events. This can only be seen as a positive outcome for our customers. The design of a contingent project mechanism and a working example of a price adjustment mechanism that could be activated within a determination period is provided in Appendix 1.

WaterNSW congratulates IPART for recognising the need to include a mechanism within the regulatory framework for addressing contingent projects. We consider, however, that IPART's approach has not gone far enough. The inclusion of an intra period adjustment as outlined above and in our earlier submissions is an important enhancement to addressing this uncertainty.

2.1.5 Cost pass through arrangements

In our original proposal, WaterNSW sought two broad cost pass-through events to deal with unforeseen costs relating to:

- Regulatory change events to deal with regulatory change, service standards and tax events; and
- Catastrophic events to deal with a natural disaster event and a terrorism event.

We proposed a materiality threshold of 2.5% of the annual revenue requirement, which would be triggered if there was a change in costs of approximately $5 million. The specifics of these

proposals are contained in our original proposal and presented by IPART in Appendix J of its Draft Determination.

WaterNSW expressed its view that IPART's cost pass-through framework is not appropriate to deal with uncertainties during the determination period because it is impractical to forecast the efficient costs of these uncertainties at the time prices are set. Therefore, we proposed that IPART consider expanding the framework that applies for WaterNSW.

IPART's draft decisions is to not accept Water NSW's proposal to have cost pass-through mechanisms for regulatory change and catastrophic events. IPART's decision to reject an expanded cost pass-through framework is on the basis that;

> In summary, our view is that these proposed general events do not justify a cost pass-through mechanism. Our cost pass-through framework is designed to ensure that cost pass-throughs *are limited to situations where it is more efficient to pass the risk onto customers, and where prices become more cost reflective to provide better signal to customers. Where a utility is best placed to do so, it is important that it faces incentives to manage risks. If all (or substantial) risk is removed from the utility, it would face little incentive to effectively manage risks.*[3]

WaterNSW's response

It is important for infrastructure businesses to have the reasonable opportunity to recover, in future regulatory years, the efficient costs they incur as a result of unexpected events. The inability to recover the costs of uncertain events would have a significant financial effect on the ability of water networks to invest in and operate their networks.

Similar to a contingent project mechanism (Section 2.1.3), a cost pass through mechanism would benefit customers in the following ways:

- Customers pay prices that are reflective of the efficient costs of required investment, as risk is better balanced between customers and WaterNSW; and
- Service delivery standards are maintained for water customers as WaterNSW is able to undertake required investment.

A cost pass through event would provide an appropriate balance in the allocation of risks between WaterNSW (to recover costs to allow sufficient investment in its network) with customers (to ensure that prices are no more than necessary to provide an appropriate level of service). This improved balancing of risks would ensure that prices reflect efficient costs. For example, IPART noted in its 2020 draft decision for Sydney Water, that an increase in the water usage price through a drought cost pass-through mechanism ensures that the efficient costs of managing drought are recovered, and that prices provide a signal to customers of the increased value of water during periods of scarcity.[4]

Providing an effective cost pass through framework is also likely to improve customer outcomes by not providing an incentive to delay critical works to the subsequent determination period, which may not be in consumers' interests due to impacts on service levels and the potential that overall cost savings to consumers would also be deferred. It will also assist the business in being able to meet its financeability requirements.

[3] See IPART Draft Determination for Greater Sydney bulk water prices. Page 49.

[4] https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-metro-water-prices-for-sydney-water-corporation-from-1-july-2020/legislative-requirements-prices-for-sydney-water-corporation-from-1-july-2020/draft-report-review-of-prices-for-sydney-water-march-2020.pdf p.17

Our proposed cost pass through mechanism has also been designed to be **symmetric.**

The design of a cost pass through mechanism

WaterNSW considers that there is a need to have a cost pass through mechanism for regulatory changes and catastrophic events and we have specified the details of what the mechanism should look like (set out in in Section 4.3 and Appendix B of our Pricing Proposal). For example, we have provided details below on the definitions of the proposed pass through events and the threshold above which the events are triggered.

As part of the design of the mechanism, we consider that WaterNSW has **little or no ability to influence the likelihood of an event being triggered and is incentivised to reduce the costs** of the event (due to the primary objectives under the SOC Act and the IPART efficiency review).

- While in some (limited) cases, WaterNSW may have a role in influencing a legislative or regulatory change, we do not, as IPART suggests, have "no incentive to plan for, and engage with, potential regulatory changes" if a regulatory event and a catastrophic event were incorporated in the 2020 determination. WaterNSW has principal objectives under the SOC Act that include to exhibit a sense of social responsibility by having regard to the interests of the community in which it operates and to operate at least as efficient as any comparable business. Meeting these principal objectives drives our continued efforts to minimise the triggering (and costs) of potential regulatory changes. This is not minimised by the introduction of a regulatory change pass through event. We have no ability to influence the likelihood of a catastrophic event
- For similar reasoning regarding our ability, or incentive, to trigger a regulatory change event as discussed above, WaterNSW is guided by the principal objectives under the SOC Act to reduce the costs of any potential regulatory change event. This is also the case for a catastrophic pass through event where our clear objective would be to restore operations as quickly and efficiently as possible. In any case, any cost pass through under our proposed approach would require IPART to review and determine the efficient costs of complying with or rectifying the event. This should remove any concern that IPART has over our ability or incentive to influence the costs of the event.

Our proposed cost pass through mechanism has also been designed to be **symmetric**. This avoids the risk of the mechanism being used to retain upside risk and pass downside risk onto customers. Any potential risk of this occurring can be addressed by placing a positive obligation on WaterNSW to seek to pass through the costs associated with regulatory changes that reduce costs for customers or for IPART to initiate the triggering of a negative pass through event. Our proposed pass through mechanism would require WaterNSW to seek to pass through the costs of a regulatory change irrespective of whether the costs are higher or lower (and subject to the same materially threshold). While a catastrophic event is unlikely to result in lower costs, we nonetheless have proposed a symmetric framework that applies the same principles for positive and negative change events.

We also **do not support an early price review** or matters that can better be addressed through a relatively straightforward and administratively less burdensome approach. Seeking an early determination is a very blunt instrument that is disproportionate to the level of costs in question (e.g. cost pass through materiality thresholds in other jurisdictions are in the order of 1% to 3% of the annual revenue requirement). Providing infrastructure businesses with the reasonable opportunity to recover the efficient costs they incur as a result of unexpected events should be a core feature of the regulatory framework and not one that could be seen as a disincentive, or penalty, that is only applied for the harshest of events.

Examples of cost pass through mechanisms in other regulatory approaches

To provide support for our proposal to introduce an expanded cost pass through mechanism, we have assessed how other regulatory jurisdictions and industries have addressed cost pass throughs. The detailed analysis on other mechanisms is provided in Section 4.1 of the Appendix.

This analysis illustrates that addressing the unforeseen events through *intra period* cost pass through arrangements has been adopted by many regulators in Australia and overseas, including:

- The AER for electricity network businesses through cost pass through arrangements in the NER
- The ACCC for water utilities through cost pass through provisions in the new Water Charge Rules, including to address taxation and regulatory events
- The ESCV for water utilities through the addresses 'annual price adjustments' relating to cost pass through arrangements.

Can IPART administer the cost pass through framework we are seeking?

WaterNSW considers that there are directly comparable examples of where IPART has exercised discretion within a regulatory period in a manner that has enabled the pass through of costs that were uncertain at the time of the determination. The following two examples are provided in detail in the Appendix:

- Sydney Water 2016 determination for uncertain SDP costs
- Sydney Desalination Plant determination (2012 and 2017) - electricity network charges

The pass throughs in place for Sydney Water and SDP illustrate that IPART is able to develop a methodology that allows for the passing through of the costs of regulatory events, catastrophic events and contingent projects costs within the 2020 determination period.

Similar to IPART passing through a (yet to be determined) SDP cost in the Sydney Water 2016 determination, WaterNSW is requesting IPART to establish a cost pass through methodology for regulatory change events and catastrophic events that:

- Is symmetric in that WaterNSW is able to apply for the recovery of the costs of positive change events (i.e. where costs have increased) but is obliged to seek to reduce prices for a negative change event (i.e. where costs have decreased)
- Incorporates a materiality threshold
- Requires IPART to approve the efficient cost of complying with an eligible event
- Adjusts fixed service charges based on a 1-year lag after the event (e.g. T-1).

We note that, irrespective of whether IPART considers that providing additional cost pass throughs is appropriate on its merits, there is some contradiction as to whether IPART is able to exercise judgement during a regulatory period (as it has done for Sydney Water and SDP cost pass throughs as highlighted above) and whether IPART considers this *ultra vires*. If there is any doubt as to whether the legislation enables the introduction of effective cost pass through arrangements during a determination period, IPART should seek legislative change to address this uncertainty.

2.1.6 Efficiency carryforward mechanism

WaterNSW supports the following IPART draft decisions:

- To maintain having an efficiency carryover mechanism (ECM) for WaterNSW's operating expenditure for the 2020 Determination; and
- To not introduce an ECM for WaterNSW's capital expenditure in the 2020 Determination

We consider that a capital incentive scheme (either ECM or another) would not result in improved outcomes for the utility and customers; and that the lumpy nature of capital expenditure can be related to different stages of the asset life-cycle, business decisions and planning, and/or government directed investment, rather than efficiency

Extending the ECM to include capital expenditure or advocating an alternative capital incentive scheme (such as the Australian Energy Regulator's Capital Expenditure Sharing Scheme), would not improve incentives for capital efficiency or result in improved outcomes for the organisation and its customers at this time.

It should be noted that in the spirit of achieving the intent of the ECM, WaterNSW strongly opposes retrospective efficiency "catch-up" efficiencies to approved allowances. Businesses should be confident that they can operate and prioritise their expenditures to achieve the intent of ECM, without a regulator clawing back expenditures undertaken in accordance with the existing incentive arrangements.

2.1.7 Adjustments for Shoalhaven transfers

WaterNSW supports IPART's proposed continuation of the cost pass-through mechanism to allow it to recover the efficient costs of the Shoalhaven Transfer Scheme in line with our Pricing Proposal. The bulk water usage charge, in this case, is important for sending an appropriate price signal to Sydney Water regarding the cost of bulk water supply in times of water scarcity. It also allows WaterNSW's prices to more closely reflect efficient costs over the determination period.

We further support IPART's enhancement of the scheme formula to include all components of the cost of electricity. As set out in our Pricing Proposal, the formula applied in the 2016 Determination fails to include some of the components of the total energy cost typically faced by energy users. The inclusion of these components is critical to ensure the pass-through mechanism better reflects the underlying efficient cost of the transfer scheme.

Consistent with this view, we are seeking the recovery of the material revenue shortfall arising from the operation of the transfer formula during the current regulatory period on the basis that it is unintentionally biased against WaterNSW recovering its efficient costs.

Given the substantial benefit our customers obtained from the transfer, it is appropriate that WaterNSW's actual costs to achieve this outcome are recovered. We consider that it is inconsistent for IPART to propose retrospective reductions (i.e. 'catch-up' efficiencies) while also not allowing for the recovery of the efficient costs of the transfers that arose due to an (unintended) bias in the pass-through calculation.

Recovery of the revenue shortfall

As outlined in our original proposal, WaterNSW is seeking to recover the estimated revenue shortfall from the operation of the Shoalhaven transfer cost pass through event from the 2016 determination period. WaterNSW originally forecast that the shortfall would be $4.2 million, which we have revised downwards to $1.7 million based on our latest actual figures.

IPART's March 2020 draft report stated that:

> *"On balance, we decided not to accept Water NSW's proposal to recover the revenue shortfall it has incurred in the 2016 determination period from customer prices. This is because we typically do not make retrospective adjustments for any under- or over-recovery between determination periods unless in exceptional circumstances. "*

As indicated in our response to the IPART Issues Paper, we consider that this is an exceptional circumstance and there is unintended bias in the forecasts whereby there is no potential for revenue increases in the Shoalhaven Transfers formula to offset the revenue shortfall.

WaterNSW considers that it would be inconsistent with good regulatory practice to claw back the current period operating efficiencies to offset an activity cost which was not contemplated by the allowance and when bias is evident. On Page 21 of the 2016 Final Decision on Greater Sydney Bulk Water Prices, IPART outlined the intended effect of implementing the pass-through mechanism:

> *The pass through mechanism should ensure that WaterNSW recovers **the efficient costs** of Shoalhaven transfers **(no more or less),** and that these costs are passed through to its customers* (emphasis added).

WaterNSW has been unable to recover all the efficient costs resulting from the transfers, including the cost of greenhouse gas abatements schemes imposed by legislation and network and other ancillary charges typically paid for by energy users. WaterNSW believes that it is not an efficient outcome for WaterNSW to bear the revenue risk associated with these costs and schemes, particularly given that WaterNSW has no, or limited, ability to control the cost in terms of the unit cost, the type of cost and the projected energy volumes used to calculate the final energy bill.[5]

The revenue shortfall with respect to the Shoalhaven transfers is driven by errors in the underlying transfer formula, which have been recognised by IPART in its amendment of the cost pass-through mechanism as part of this determination. In this respect, it can be clearly differentiated from circumstances where operating and capital expenditure allowances previously determined by IPART as reflective of efficient costs, fluctuate within a regulatory period. The regulatory framework is designed to support the recovery of costs efficiently incurred and a failure to capture material cost elements within the transfer formula has inadvertently introduced bias into the forecasts. These costs are clearly uncontrollable in that they cannot reasonably be mitigated or avoided by WaterNSW. As a consequence, the pass-through mechanism has been incapable of supporting the recovery of efficient costs and the revenue shortfall should now be recognised and allowed.

WaterNSW reiterates that it is a mandatory requirement as a drought security measure for WaterNSW to implement the Shoalhaven transfers and incur the associated pumping costs. We work diligently to manage the impacts of drought and, as a result, it was necessary for WaterNSW to incur the actual pumping cost and the associated revenue shortfall in the interests of Sydney residents. WaterNSW therefore had no ability to avoid its current revenue shortfall position.

More broadly, a failure to permit recovery of the efficient costs for the Shoalhaven Transfer Scheme could further compound cash flow risk and, in combination with a low weighted average cost of capital and inflation rate environment, serve to exacerbate financeability risks for Water NSW.

2.1.8 Change in capitalisation policy

WaterNSW made a change to its capitalisation policy in 2018-19, in response to an external review of WaterNSW's capitalisation of overheads. The revised capitalisation policy allocated a higher level of corporate overheads to capital projects.

[5] WaterNSW cannot control the volumes it pumps given that the Shoalhaven transfers are a regulatory requirement. However, WaterNSW does pump in the cheaper off-peak pricing period to reduce the cost for the end user.

In its Draft Report, IPART agreed with Atkins-Cardno's recommendation to reverse the capitalisation policy applied by WaterNSW in 2019. Atkins-Cardno argued that this policy change reflects a change in capitalisation assumptions for the 2016 Determination, and that an amount should be converted to operating expenditure and removed from capital expenditure to avoid double counting. This resulted in a reduction to WaterNSW's regulated asset base of $25.9 million within IPART's Draft Report.

In the following sections, we outline the rationale for the change in capitalisation policy and its impact on capitalised overheads allocated to Greater Sydney, the approach taken by Atkins-Cardno in assessing the change, and our concerns with it and IPART's draft decision to remove $25.9 million from WaterNSW's RAB.

The rationale for the change in capitalisation policy

Under our previous capitalisation policy, WaterNSW only capitalised overheads within the Water Infrastructure Asset Delivery Business Units (BUs), and overheads related to corporate functions were not capitalised. This resulted in WaterNSW under-capitalising and under-valuing the true cost of a capital project.

KPMG found in a benchmarking exercise that WaterNSW, as a share of total capex, capitalised significantly less than some other entities (3% compared to 11% - 49%). This was despite the fact that a large percentage of WaterNSW's actual expenditure is expended on capital intensive projects resulting in additional corporate support costs.

The high capital intensity of the business was therefore not appropriately represented in the previous capitalisation methodology. For example, in 2016-17, 42% of total expenditure ("totex") was attributable to capital expenditure but only $4.7 million of capitalised overhead was allocated to capital projects.

The external review led to WaterNSW reviewing its overhead capitalisation methodology, which is summarised in the WaterNSW Cost Allocation Manual (CAM), Attachment 4 to our original proposal. The new methodology includes a number of corporate functions not previously included in the indirect cost pool for capitalisation, for example finance and commercial services, recruitment and human resources. The new methodology aims to provide a practical approach to identify and allocate a supportable proportion of indirect cost to capital projects, consistent with accounting standards. In the 2018-19 Financial Statement, the Audit office of NSW has audited and accepted the change in policy being in line with accounting standards.

The impact of the change in capitalisation policy is reflected in the table below. We note that:

- Before the capitalisation policy was applied in 2018-19, corporate overhead was not capitalised. In 2018-19, the amount of capitalised corporate overhead for the whole business was $9.6 million (the third row).
- Some changes in allocation are also reflected in the increase in business unit overhead from 2017-18 to 2018-19 (the second row).

It is also important to note that, as set out in Table 1, the increase in capitalised business unit overhead at an organisational level from $4.7 million to $9.3 million between 2016-17 and 2017-18 reflects WaterNSW recognising ICT as an asset delivery business unit. This demonstrates the trend increase in physical and digital capital expenditure for the business.

Table 1 – Capitalised overheads, 2016-17 to 2019-20

	2016-17	2017-18	2018-19	2019-20
All regulated business segments				
Total Capitalised Overhead, made up of:	$4.7M	$9.3M	$26.4M	$22.75M
1. BU Overhead capitalised	$4.7M	$9.3M	$17.91M	
2. Corporate Overhead capitalised	0	0	$9.62M	
Total Capex as percentage of total Totex (%)	42.2%	67.4%	58.5%	57.6%
Greater Sydney (GS)				
Share of Capitalised Overhead (% allocated to GS)	$1.8M (38.3%)	$1.58M (17.0%)	$15.37M (58.2%)	$13.92M (61.2%)
Capex as a percentage of total Capex (%)	74.6%	22.9%	28.2%	71.0%
Opex as a percentage of total Opex (%)	54.5%	47.4%	54.3%	56.0%
Totex as a percentage of total Totex (%)	63.0%	30.9%	37.8%	65%

In summary, the increase in capitalised overhead allocated to Greater Sydney since 2018-19 is driven by the following:

- Allocated overheads from corporate functions are now allocated to capital projects, in line with accounting standards. The new methodology increases the pool of capitalised overheads (as shown in the third row of the table above) and, based on expert advice, we believe is now aligned to the approach taken by all regulated entities; and
- Greater Sydney represents a higher proportion of Capital Delivery projects and hence attracts a larger proportion of the capitalised overhead pool (as shown in last row).

Over the next regulatory period (2020-24), WaterNSW also estimates that it will capitalise on average $24 million per annum in overheads across all regulated business segments based on the new capitalisation policy, of which approximately $15 million per annum has been allocated to Greater Sydney projected capital expenditure.

Atkins-Cardno's recommendations

In its review, Atkins-Cardno questioned whether it is equitable for WaterNSW to capitalise expenditure for which an allowance was already made in operating expenditure. Atkins-Cardno also noted that WaterNSW's change in capitalisation policy makes it difficult to compare expenditure based on the assumptions underpinning the 2016 Determination.

Table 2 outlines Atkins-Cardno's assumed net increase in capitalised overheads over the period, relative to the allowance made in operating expenditure at the start of the 2016 Determination

period. It highlights that Atkins-Cardno has assumed that the entire increase in capitalised overhead from 2018-19 was the result of the change in WaterNSW's capitalisation policy.

Table 2 – Atkins-Cardon's interpretation of capitalised overheads 2016-17 to 2019-20 ($m, $2019-20)

	2016-17	2017-18	2018-19	2019-20	Net increase in capitalised overheads over period
	Assumed at start of 2016 determination period		Increased under 2020 determination proposal		
Capitalised overhead	1.8	1.6	15.4	13.9	25.9

Atkins recommended removing $25.9 million from the RAB to account for this net increase. The $25.9 million reduction was distributed across 2018-19 and 2019-20 by subtracting the average of the amounts in 2016-17 and 2017-18 from the allocations in the last two years, as shown in Table 3 below.

Table 3 – Atkins' recommended capitalisation policy RAB adjustment 2016-17 to 2019-20 ($m, $2019-20)

	2016-17	2017-18	2018-19	2019-20	Total over period
Reduction in RAB			-13.6	-12.3	-25.9

WaterNSW's concerns with Atkins-Cardno's approach

We understand Atkins-Cardno's view that capitalising expenditure where an allowance had been made in operating expenditure would result in double recovery of expenditure (first as an operating allowance, and then as depreciation and return on the asset base). However, this view is based on an assumption that the full amount of actual capitalised overheads in 2018-19 and 2019-20 was previously allowed as operating expenditure in the 2016 Determination. While the increase in the amount of capitalised *corporate* overheads for the WaterNSW business was driven by the change in allocations, the increase in capitalised *Business Unit* overheads only partly reflects the change in capitalisation policy.

This is because there was also an increase in business unit overheads during the period, which was capitalised but had not been included in the 2016 operating expenditure allowance. This increase in overheads is reflective of the increasing capital intensity of WaterNSW and the Greater Sydney business segment in particular attracting additional overheads.

Breaking down the increase in capitalised overheads into components driven by the change in capitalisation policy itself (opex shifting to capex), and those driven by an underlying increase in overheads (due to capitalising ICT and increasing capital projects) demonstrates that removing $25.9 million from the WaterNSW RAB is unjustified and effectively reflects an asset base write-down for efficient capital incurred, without an efficiency review of that expenditure.

Applying both the current period capitalisation rules to the 2018-19 and 2019-20 financial results and Atkin's logic in deriving the proposed cuts results in approximately $17.57 million of capitalised overhead that is reinstated into the RAB as shown below.

Table 4 - proposed reduction to RAB based on the current period capitalisation rules ($m, $2019-20)

	FY17	FY18	FY19	FY20	FY19 Old Method applied)	FY20 (Old Method applied)	Total Reduction
Total Capitalised Overhead, made up of:	$4.7	$9.3	$26.4	$22.75	$17.44	$10.3	N/A
1. BU Overhead capitalised	$4.7	$9.3	$17.91	$5.51	$17.44	$11.7*	N/A
2. Corporate Overhead capitalised	$0	$0	$9.62	$17.24	$0	$0	N/A
GS Share of Capitalised Overhead (% allocated to GS)	$1.8	1.58	$15.37	$13.92	$10.11	$7.45	N/A
Reduction due to change in capitalisation:			$13.68	$12.23	N/A	N/A	$25.9
Revised reduction to RAB					$3.57	$4.77	$8.34
Amount reinstated into the RAB							$17.57

*capitalised cost for BU have been reallocated into 1. BU Overhead instead of 2. corporate overhead in FY20 as per the rules of the current determination.

Independent accounting advice provided to WaterNSW supports the fact that the true value of our assets should include corporate overhead costs attributed to the asset. Failing to allow this will result in WaterNSW also having to write down the value of its assets for accounting purposes, even though the capitalisation of these costs is in accordance with AASB16 and AASB36.

The change to our accounting policy to align with other regulated entities and the accounting standards was also approved by our auditors, the Audit Office of NSW, as part of their FY 2019 audit.

Finally, WaterNSW notes that there is no evidence that it is acting on incentives to increase capitalisation as part of this change to its capitalisation policy (as implicitly recognised in IPART's acceptance of the new policy itself for the next regulatory period). By contrast, WaterNSW's proposal not to apply for the ECM, despite significantly outperforming its opex forecasts, suggests that WaterNSW is not seeking to gain through increased capitalisation, and that its incentives between capex and opex are balanced.

We note that the AER's Better Regulation Capital Expenditure Incentive Guideline for Electricity Network Service Providers (NSPs) states that a change in capitalisation policy in the middle of a regulatory period only leads to capex being excluded from the RAB if the incentives for capex and opex are unbalanced.[6] This condition is based on:

- Ensuring that a change in capitalisation policy is not motivated by the business gaining from the capex-opex substitution; and
- Avoiding a situation where the capitalised opex will not benefit consumers.

WaterNSW therefore requests that the $25.9 million RAB reduction due to capitalisation is not incorporated in the Final Determination.

[6] https://www.aer.gov.au/system/files/AER%20capital%20expenditure%20incentive%20guideline%20-%20November%202013.pdf

2.1.9 Demand Volatility Adjustment Mechanism

IPART's regulatory processes aim to ensure an efficient regulated business has a reasonable expectation of recovering its costs for a defined period. Extreme economic and/or climate events can prevent this from occurring and therefore it is necessary to have appropriate mechanisms to manage such risks. The Demand Volatility Adjustment Mechanism (DVAM) is an example of such a mechanism. In the absence of a DVAM, price cap water regulated businesses would face large revenue exposures during times of decreased demand, which typically occurs in drought under the Metropolitan Water Plan when demand restrictions are imposed. [7]

Therefore, we challenge IPART's decision to refuse the introduction of a DVAM to our business. The recent extreme drought highlighted the potential for significant reductions in demand for water with restrictions being put in place. While current restrictions could be lifted, there are still risks of demand reductions in future arising from extreme and unpredictable weather, including drought, and the sudden social disruptions in the wake of a global pandemic.

Atkins-Cardno acknowledged the 'unusually high level of uncertainty in WaterNSW's projected sales volumes for 2020 due to the combined impacts of demand restrictions, weather, SDP charges and growth volatility'.[8] In the presence of heightened demand risk and its potential impact on our sales volume and revenue, we consider that the DVAM, as a risk management instrument, is both sensible and necessary.

The use of risk management instruments, such as the DVAM, should adhere to regulatory principles relating to:

- Protecting businesses against risks that are difficult to control. This would mitigate the impact of uncontrollable events that affect revenue; and
- Consistency where similar risks should be dealt with in a similar manner by the regulator.

The presence of the DVAM would help WaterNSW manage revenue risk resulting from significant reductions in demand. WaterNSW is currently experiencing an increasing incidence of extreme weather events. While there is less immediate concern about current dam storage levels in Greater Sydney, the recent extreme drought highlights how quickly conditions can deteriorate and harsh demand restrictions put in place. The last experience highlights that this can happen within a two-year window. If an extreme drought were to occur in the next regulatory period, and in accordance with the Metropolitan Water Plan demand restrictions were implemented, then this would contribute to a material variation in volumes and revenue. For example, Level 3 restrictions could reduce demand for water by up to 20%. The presence of a DVAM would help us protect against risks that are difficult to control.

We consider that there needs to be regulatory consistency in the way IPART manages risks, such that similar risks should be managed in a similar way. The SDP charging mechanism and the DVAM both aim to mitigate exposure to revenue risk. The SDP charging mechanism is triggered when the combined water storage levels in the major dams fall below 60% as outlined in the 2017 Metropolitan Water Plan.[9] The DVAM is triggered when there is a variation in forecast sales leading to an under- or over-recovery of revenue. Further, it is more likely to be triggered due to conditions arising from the Metropolitan Water Plan which impose demand restrictions as water supply diminishes.

While there are scenarios in which the SDP charging mechanism alone protects WaterNSW against revenue shortfalls, there are many scenarios in which it does not, leaving WaterNSW exposed to revenue shortfall. For example, if dam levels remain above 60% but water restrictions

[7] https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/About-us/Metropolitan-Water/2017-Metropolitan-Water-Plan.pdf
[8] Atkins- Cardno p52
[9] https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/About-us/Metropolitan-Water/2017-Metropolitan-Water-Plan.pdf

are in place, such as is the current situation, WaterNSW faces a revenue shortfall. Given that both mechanisms deal with revenue risks and arise from conditions beyond the direct control of WaterNSW, it is unclear why one mechanism is allowed, but not the other.

IPART's main justification for putting a DVAM in place for Sydney Water and Hunter Water is that those utilities have a water tariff structure where the usage component recovers more revenues compared to WaterNSW.[10] Our business has an 80:20 ratio between the revenue derived from fixed charges and usage charges, compared to a ratio of around 15:85 for Sydney Water. IPART conclude that as we have a significantly lower level of revenue exposure, a DVAM is not justified.

In practice, we consider that the differences in water tariff structures do not lead to as large differences to the overall revenue recovery between Sydney Water and WaterNSW as IPART suggests. When considering water services alone, it appears that because of Sydney Water's higher usage charge relative to our business, Sydney Water's revenue exposure is 4-5 times greater from a decrease in demand for water. However, when Sydney Water's total revenue exposure is taken into account, rather than just its revenues from water, the revenue exposure is just over 2 times greater than ours. The reason for this is that unlike WaterNSW, Sydney Water obtains revenue from additional sources with significant fixed charges, namely 48% from wastewater services and 2% from stormwater services.[11] Given the relatively comparable overall revenue exposure for Sydney Water and ourselves, we consider there is significant merit in implementing a DVAM for WaterNSW.

Our analysis indicates that the revenue at risk associated with the application of a:

- 5% decrease in sales volume over the upcoming regulatory period with or without drought restrictions[12] would be $7.7 million.
- 7.5% decrease in sales volume over the upcoming regulatory period with or without drought restrictions would be $11.5 million.

Currently, water businesses are facing challenges in relation to financeability given the low WACC and low inflation rate environment. In particular, the potential revenue outcomes in the examples provided above would have a material impact on Funds From Operations / Interest cover credit rating metric.

This is exacerbated by the need to plan for large capital investments, such as desalination plants. If our business is not provided a DVAM, then this would intensify our concerns around our business' ongoing financeability, particularly at the margin. This is especially the case if no adjustment to the inflation estimate of IPART is made.

For the reasons cited above, we request that IPART introduce a DVAM for our business with the materiality threshold of ±7.5% of revenues in the 2020-24 Determination period. This materiality threshold is higher than the 5% for Sydney Water in recognition that the revenue exposure of WaterNSW is not as high as Sydney Water's, but not being so different to justify the absence of a DVAM.

2.2 Operating expenditure

The efficiency of our operating expenditure program over the 2016 determination period has been the subject of a detailed technical review with IPART's consultants. We have actively participated

[10] IPART Page 60

[11] https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-metro-water-prices-for-sydney-water-corporation-from-1-july-2020/legislative-requirements-prices-for-sydney-water-corporation-from-1-july-2020/sydney-water-updated-pricing-proposal-12-november-2019.pdf

[12] Commence when dam storage levels fall below 60% and remain in place until storage levels reach 70%, assumes that the SDP supplies 91,250ML in each year.

in the consultants' review and responded to 220 requests for information to demonstrate the efficiency of our current programs. We are confident that our operating expenditure over the 2016 determination period represents the efficient level to provide required services to our Greater Sydney customers.

WaterNSW's proposal for 2020-24 was to reduce prices by passing on lower operating costs than previously approved by IPART due to efficiency reforms (and lower costs from financial markets).

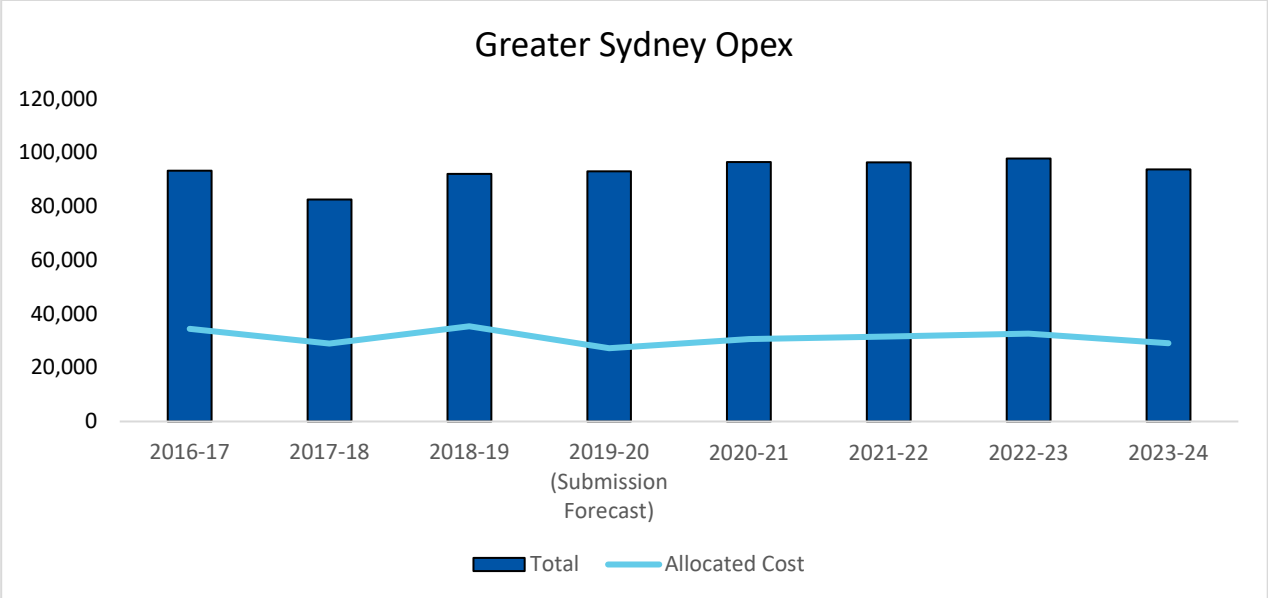
For the 2016 Determination 2020 period, WaterNSW submitted an operating expenditure proposal (revised during the efficiency review) which was $5 million per annum lower than the previous 2012 to 2016 period[13], with IPART further reducing the proposed expenditures by $0.7 million per annum, or 1%.[14]

It should also be noted that these savings have been achieved by spreading fixed overhead costs across the four determinations that WaterNSW is subject to.

As shown in the table below, operational expenses for the Greater Sydney business have increased over 2017-24 period. The primary driver for these cost increases are operational and legislative in nature as explained in our section where we dispute the cost reductions on proposed operating expenditure as well as the impact of the structural reform that occurred after the formation of WaterNSW in 2015 that suppressed spending levels during the current period.

Whilst increases in operational expenses generally leads to problems related to the increasing size of overhead and the resulting impact on customer charges, WaterNSW has managed to keep a lid on its fixed overhead costs. Overhead costs are relatively stable over the 2017-24 period. In fact. Overhead costs are expected to decline in FY24 to one of the lowest levels seen during the 8-year period as shown in Figure 1 below.

Figure 1– Total overhead costs over time



It is also worth noting that WaterNSW has outperformed on the merger efficiency targets adopted by IPART in the current period opex allowances.

[13] 2015 allowance of $102.2m. WaterNSW operating expenditure proposal (revised during the 2015 efficiency review) was $384,977,000 over the 2016-20 period, which is 96.2m p.a. on average.

[14] IPART recommended operating expenditure of $382.200,000 over the 2016-2020 period which is 95.6m on average.

As outlined in Section 7 of our Pricing Proposal and summarised in the Issues Paper, WaterNSW is expecting to achieve operating cost savings of $46.5 million (11.4%) compared with IPART's allowances from the 2016-20 determination. This includes a forecast 7.9% efficiency gain in 2019-20.

We are able to keep prices down for the 2020 determination period partly due to a continuous focus on driving efficiencies and the inclusion of a 'top down' efficiency dividend. WaterNSW considers this to be a considerable achievement given the recent pressures on our operational expenditure arising from the impact of climate change.

Over the past few years we have experienced extreme weather conditions. This includes severe drought, the worst bushfire season on record in 2019-20, and significant rainfall in February 2020. While extreme weather events are almost impossible to predict, with climate change they are expected to occur with greater frequency. As we highlight in the following sections, the recent bushfire and rainfall events highlight the need for increased, not reduced costs, for land management and water monitoring. Further, climate change considerations heighten the need for the development of a robust drought strategy options plan for Greater Sydney.

We have been able to achieve this at a time where we have had to deal with significant drought in Greater Sydney

Based on the discussion below and the increased risk to WaterNSW operating environment, WaterNSW argues that its proposed operating expenditure should be reinstated in full and that the direct operating expenditure reductions of $12.9 million over the 2020 determination as shown in Table 5 are reversed.

Table 5 – Direct operating expenditure reductions applied by IPART ($millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
Land Management	-0.4	-0.4	-0.4	-0.3	**-1.5**
Metro plan and strategy	-	-	-0.9	-0.9	**-1.8**
Water monitoring	-0.9	-0.9	-0.9	-0.9	**-3.6**
SW request for monitoring	-1.0	-1.0	-1.0	-1.0	**-4.0**
Science program	-0.5	-0.5	-0.5	-0.5	**-2.0**
Total	**-2.8**	**-2.8**	**-3.7**	**-3.7**	**-12.9**

The following sections provide WaterNSW response to the operating cost reductions recommended by Atkins-Cardo and accepted by IPART in the Draft Determination.

2.2.1 Land Management

The specific comments provided by Atkins-Cardno in its review of the WaterNSW price submission on land management were that there are:

- Potential savings from in-house costs after outsourcing to Rural Fire Service (RFS), and
- Savings due to a high estimate on contingency in the RFS Contract

The reductions proposed by IPART to the land management operating expenditure are $1.5 million over four years, with a $400k p.a. reduction in the period from 2020-23, shown in Table 6 below.

Table 6 – Direct management opex reductions applied by IPART ($2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
WaterNSW proposed land management opex	16,989,842	17,258,421	17,206,133	16,635,548	**68,089,944**
IPART reductions	-400,000	-400,000	-400,000	-300,000	**-1,500,000**
IPART recommended	**16,589,842**	**16,858,421**	**16,806,133**	**16,235,548**	**66,489,944**

The Atkins-Cardno report states that its review did not reflect the likely impact of bushfires and related emergency requirements which occurred in late 2019 and into 2020.

Background

Climate change increases the frequency of extreme weather events. Over the past few years we have experienced and had to deal with the impact of such conditions including:

- The worst drought in recorded history;
- The worst bushfire season on record in 2019-20; and
- A significant rainfall event in February 2020.

Land management is a particularly important activity to mitigate risks that bushfire and a combination of bushfire and rainfall can have on our water quality.

Fire is an extremely important element of land management within water catchments, particularly for large urban areas. Extensive bushfire damage to landscapes within a water catchment poses a material risk to water quality. In January 2003, Canberra lost its primary supply of water for over 12 months due to a bushfire that destroyed its Cotter Dam catchment and degraded the water quality to a point that it was unable to be treated.

The risk to water quality from bushfire is enhanced where an event is followed by heavy rain. This occurred in February 2020 within the Warragamba catchment, which typically provides 75-80% of Sydney's water supply. This had the potential to make the quality of water unsuitable for supply to Sydney Water as the treatment plants are designed to take water within a limited quality band. While major immediate impacts to water supply were ultimately avoided using the inherent flexibility in the supply system, there are likely to be ongoing water quality impacts and increased risks to water quality for the water stored in Warragamba Dam.

Although the duration and intensity of the recent bushfires was unprecedented, WaterNSW has identified that climate change will continue to result in warmer minimum and maximum temperatures, reduced winter rainfall, more intense summer rainfall and increased fire danger ratings.[15] These conditions combine to make fire management both more important and more complex.

Outsourcing to the RFS

In 2018, the WaterNSW Board approved the outsourcing of on-ground firefighting (including hazard reduction burns) to the RFS. There were many important reasons for this change, including internal WHS risks, growing fuel load in the catchment, additional Biosecurity Act requirements, and increasing risks from climate change.

[15] https://climatechange.environment.nsw.gov.au/Climate-projections-for-NSW/Climate-projections-for-your-region/Metro-Sydney-Climate-Change-Downloads

The Board's decision followed a comprehensive review of fire management across WaterNSW and the associated risks. In short, this review found that the previous level of internal strategic fire planning and on-ground firefighting resources was insufficient for future requirements, particularly given the increasing risks of bushfire from climate change. A new approach was necessary to protect key water supply catchments and infrastructure.

The new approach has necessarily increased the total costs of fire management for 2020-24 compared to the 2016-20 period. Importantly, the outsourcing of on-grounding firefighting to RFS was never intended to remove the need for ongoing in-house resources for internal strategic fire planning and fire management. While the RFS are considered the 'fire experts', the unique nature of fire management in water supply catchments means that in-house 'water experts' are also essential, particularly in relation to strategic planning and water expertise during bushfire incident response.

The recent 2019-20 bushfires have demonstrated the value of this new approach. These fires had a significant impact on Sydney's drinking water catchment with 90% of the catchment around the Warragamba Dam burnt. However, the bushfire impacts in the catchment would have been significantly worse but for the actions of the RFS in collaboration with in-house fire management staff. This new approach ensured that other key parts of the supply (i.e. the Metropolitan Dams) remained unaffected, which is crucial for both the short and long term management of water quality in the Greater Sydney supply.

Rural Fire Service Contract – contingent costs

The RFS contract has an allowance for the pass through of costs associated with the hire of helicopters. The helicopter hire is for a range of activities including stand up of helicopters on high fire danger days to provide a rapid response to ignitions, use on incendiary bombing to complete hazard reduction burns, reconnaissance for bushfires after electrical storms, and inserting remote crews into isolated fires. In summary, helicopter hire is an essential part of firefighting in any bushfire within the catchment, particularly in remote and inaccessible terrain.

This cost is misleadingly referred to as "contingency" by Atkins-Cardno and only $1.5 million was allowed. The need to be able to meet pass through costs is essential to ensuring the RFS contract is effective. It is inappropriate for the "contingency" costs to be lower than the cost of helicopters over the past four years given the prevalence and severity of high fire days is expected to increase going forward.

Additional Biosecurity Act Requirements

In 2018 the Biosecurity Act was introduced to provide better regionally based biosecurity planning and implementation. WaterNSW has included additional regulatory compliance costs associated with Regional weed and pest plans. However, the additional costs are predominately related to increasing feral animals, particularly deer, goats and pigs within Catchment Areas.

In response to the trends WaterNSW developed and costed approaches to cover the costs into the 2020-24 price proposal.

Additional Internal Resources

WaterNSW, over the course of the current regulatory period, has been unable to complete its assigned hazard reduction program with in-house resources. The hazard reduction program is the program agreed by the local bushfire committee. This prompted an internal review and development of a business case to establish a contractor – the Rural Fire Service (RFS) Contract – to provide additional resources to enable the assigned tasks to be completed.

While on-ground firefighting was outsourced to RFS, the new approach to fire management led to WaterNSW recruiting two additional specialist staff to roll out the program. WaterNSW has absorbed $1 million of cost for two specialist fire management positions (Fire Management Planning Specialist and Catchment Fire Program Manager) over four years.

Catchment Management Requirements and extreme weather events

The frequency of extreme weather events increases the need for adequate expenditure on catchment management. This is essential to ensuring we can uphold our objective to promote water quality, the protection of public safety, and the protection of the environment.

IPART's draft decision to reduce land management expenditure impacts the capability for us to ensure the necessary expenditure on catchment management.

Historical evidence from Ausgrid demonstrates the potential for severe consequences of inadequate vegetation management.[16]

Ausgrid's experience in underspending on vegetation management following operational expenditure cuts by the Australian Energy Regulator (AER) resulted in adverse impacts to consumers. On January 30, 2019 Sydney's eastern suburbs experienced a major network disruption due to 'overgrown weeds coming into contact with a power cable'.[17] This incident sparked mass disruption with 45,000 customers affected (including hospitals and schools) and highlights the potential implications if best practice vegetation (or in our case catchment management) is not incentivised.

Efficiencies Included in IPART Submission

WaterNSW has over the current price path already obtained cost savings through efficiencies achieved in the cost of implementing land management in National Parks within Special Areas of $1 million.

Further, WaterNSW only contributes funding to NPWS for enhancements to land management over and above the normal national park management practices for actions specifically targeting water quality improvements.

Summary position on land management

In the recent 2019-20 bushfires, WaterNSW's new approach to fire management, including the outsourcing of on-ground firefighting to RFS, was vitally important to protecting the catchment and ensuring protection of the water supply to Sydney. Given the recent experience with bushfires and the potential impact it has on people, infrastructure and water quality, any expenditure reduction in land management imposes material public health risk on WaterNSW. We therefore request IPART reinstate the $1.5 million in WaterNSW's proposed expenditure for land management activities over the 2020-24.

2.2.2 Metropolitan water plan and drought strategy plan

Atkins-Cardno in their review of the WaterNSW price proposal accepted that there is increased work to develop plans for the medium term, but questioned whether the level of additional activity would continue throughout the 2020-24 regulatory period.

[16] https://www.aer.gov.au/system/files/ETU%20NSW%20-%20Submission%20on%20Ausgrid%202019-24%20draft%20decision%20and%20revised%20proposal%20-%20McKell%20Institute%20-%20February%202019.pdf

[17] https://www.smh.com.au/national/nsw/overgrown-weeds-the-source-of-sydney-blackouts-20190131-p50uwq.html

IPART has proposed a $1.8 million reduction to the operational expenditure related to the Metropolitan Water Plan, Drought plan and strategy (shown in Table 7 below). The reductions occur in 2022-23 and 2023-24.

Table 7 – Direct metropolitan water plan and strategy opex reductions applied by IPART ($2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
WaterNSW proposed metro plan and strategy opex	1,198,071	1,217,944	1,246,154	1,712,776	**5,374,945**
IPART reductions			-900,000	-900,000	**-1,800,000**
IPART Recommended	**1,198,071**	**1,217,944**	**346,154**	**812,776**	**5,574,945**

The expenditure under this line item includes essential work on the Greater Sydney Supply Augmentation (GSAA) and metropolitan water plan and the long-term new water and hydro strategy work. Specific milestones include the development of the Greater Sydney Water Strategy with DPIE, a new Metropolitan Water Plan and the Revision of GSAA.

WaterNSW notes that the vast amount of drought work involves identifying and packaging drought policy positions and projects into joint Strategic Capital Investment Plan for the Greater Sydney supply system.

These deliverables will be supported by a reallocation of existing resources from the Rural Valleys Levels of Service work stream into the Greater Sydney work stream. The levels of service work stream for Rural Valleys is expected to be finalised in or around FY20 as an input to our 2021 Rural Valley Submission to IPART. This will allow for the existing resources to be reallocated.

The current advice from DPIE-Water is that the Greater Sydney Water Strategy is due to be finalised in mid-to-late 2020. As a result, WaterNSW is anticipating budget increases in 2019-20 involving significant payroll and consultancy expenditure for development of the strategy. The proposed expenditure from 2020-21 and onwards also encompasses additional follow up work, which would be required from the outcomes of the strategy.

WaterNSW is subject to a regulatory requirement to maintain continuity of supply to the residents of Greater Sydney. To further these objectives, the strategy projects involve a significant amount of work to refine and update WaterNSW's infrastructure strategies to ensure their continued relevance within the context of both stakeholder and customer expectations, as well as regulatory requirements.[18]

WaterNSW believes that it would be prudent for us to manage our assets and supply requirements not just in light of short-term requirements, but with an eye to its longer term, strategic objectives. This approach will lead to more efficient outcomes in the long-term. The proposed strategy projects and additional activity will therefore continue throughout the 2020-24 regulatory period to support these objectives.

The benefits to customers of this work include the:

- Development of asset strategies that are relevant and current, and
- Development and implementation of a more streamlined approach to undertaking risk assessment and cost/benefit analysis for potential projects that meet Sydney's future water needs.

[18] For example, the Levels of Service work stream - an example of which can be found here https://www.waternsw.com.au/__data/assets/pdf_file/0019/132616/20-Year-Infrastructure-Options-Study-June-2018.pdf

The asset strategies are a crucial input into WaterNSW's future operational and capital expenditure plans, including the NSW Government's Greater Sydney Water Planning Framework, which is reviewed at regular intervals.

In addition, the proposed strategy work is driven by the NSW Government's new strategy and long-term approach to managing Sydney's water supply. The new 'Greater Sydney Urban Water Framework' as endorsed by Government is comprised of the following components:

- The Greater Sydney Water Strategy;
- A joint Sydney Water and WaterNSW Long-term Capital and Operational Plan;
- A joint Sydney Water and WaterNSW Emergency Drought Response Plan; and
- A performance monitoring framework to support Sydney Water and WaterNSW's implementation of the two long-term integrated plans and other NSW Government policy objectives.

On 8 March 2019, the Department of Industry wrote to WaterNSW advising WaterNSW of its responsibilities in implementing the new Greater Sydney Water planning framework. In the letter, WaterNSW was directed to commence work on the NSW Government water planning framework. WaterNSW was also advised that its Operating Licence will be amended to require WaterNSW to develop the Long-term Capital and Operational Plan and the Joint emergency Drought Response Plan, which will be reviewed at regular intervals.

The letter confirms that the strategy work is independent of drought and is primarily driven by both a direction by Government and future regulatory requirements. In particular, the development of the plans and reviewing them at least every five years will be a requirement of Sydney Water and WaterNSW's operating licence. Hence the level of additional activity proposed by WaterNSW is expected to continue throughout the 2020-24 regulatory period.

We also point out that the expenditure required to support the expected revisions and updates to the Metropolitan Water Plan is not contingent on drought. The Plan has wider policy objectives with the aim of ensuring safe, secure and sustainable water supply for Greater Sydney's growing population and is reviewed regularly. For instance, the Plan was established in 2004 and has been subsequently reviewed with input from us in 2006, 2010, and 2017. The Plan is expected to be reviewed in the upcoming regulatory period and lead up work is expected to commence for any subsequent reviews.

Additional activity to continue in 2022-23 and 2023-24

The Greater Sydney Supply Augmentation (GSSA) project was undertaken under the 2017 Metropolitan Water Plan (MWP) policy framework. The MWP will be replaced with Greater Sydney Water Strategy (GSWS) by DPIE and is expected to be finalised in late 2021. As a result, the GSSA will have to be revised after the GSWS is finalised.

The proposed expenditure for 2022-2023 is required to be sufficient to hire an external consultant to deliver the work to the standard in which the GSSA was delivered ($1 million). It will incorporate a new policy framework, updated hydrology, updated demand forecasts, and experiences gained during the latest drought. This makes it a significant piece of work.

According to the Australian Government, energy storage is also an increasingly important part of our electricity system. It allows energy to be available for supply even when there is no generation from variable renewable solar or wind generation. Pumped hydro is the most common and most mature form of energy storage.

In 2023-24 there is a need to investigate the potential of WaterNSW assets to help with the transition of the National Electricity Market (NEM) through providing storage capabilities to support the development of wind and solar technology. It is also needed to investigate alternative water sources, inter-basin transfers and climate change on availability of water.

On this basis we submit that WaterNSW's proposed expenditure on the metro plan and drought and strategy planning activities should be reinstated in the 2022-23 and 2023-24 financial years.

2.2.3 Water Monitoring

Climate change events, as noted above, can contribute to a deterioration in water quality. This deterioration in turn requires a greater level of water monitoring and results in higher operating expenditure on these activities.

In their review of our Pricing Proposal, Atkins-Cardno recognised that some increase in monitoring activity above the current determination period was warranted, but not to the extent proposed by WaterNSW, This resulted in a reduction of $0.9 million per year to the expenditure over 2020-24, as shown in Table 8 below.

Atkins-Cardno's consideration of our expenditure was, however, completed before the significant rainfall event in February 2020. This, when combined with the prior extreme drought and bushfire conditions, has contributed to poorer water quality and an increased need for monitoring.

Table 8 – Direct water monitoring opex reductions applied by IPART ($2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
Water NSW proposed water monitoring opex	13,179,337	13,858,193	14,298,262	13,819,647	**55,155,439**
IPART reductions	-900,000	-900,000	-900,000	-900,000	**-3,600,000**
IPART Recommended	**12,279,337**	**12,958,193**	**13,398,262**	**12,919,647**	**51,555,439**

Post inflow / drought

WaterNSW notes that Atkins-Cardno have made some allowances for the fact that costs incurred during the previous period were materially depressed as less monitoring was required during the drought. An 'average' year cost base has been developed and applied by Atkins-Cardno.

However, WaterNSW notes that significant inflows have occurred in February 2020, post the Atkins-Cardno review. This has significant implications for monitoring costs as discussed below.

Allowance for Current Wetter Weather Cycle

WaterNSW notes that the drought has been broken in Sydney and the catchments are wet. As a result, WaterNSW expects that conditions during the next determination period are not likely to represent an 'average' year.

WaterNSW submits that there is a material likelihood that rainfall will be above average over the next few years. As the catchments (soil profiles and surface storages and swamps) are now wet, any significant rainfall would be expected to result in material inflows, triggering costs increases.

As per previous advice to IPART, WaterNSW's contractual arrangements for Water Monitoring activities provide an allowance of $660k p.a. for wet weather monitoring. As a major inflow event has occurred in Feb 2020 (prior to the final determination), it is highly likely that at least 50% of

this allowance will be expended or on average an additional $330k p.a. will be required over the next determination period.

Inflow Response

The February 2020 rain was a very significant event and followed a period of prolonged drought. This has resulted in some specific increased risks to water quality in the short-to-medium term. We have assessed these risks and in conjunction with Sydney Water and NSW Health developed a detailed monitoring program.

This program has been valued at $125k in 2020-21, reducing by 25% in each subsequent year as the risks to water quality are better understood and reduce over time.

Post Fire Recovery

The Atkins-Cardno report states that its review did not reflect the likely impact of bushfires and related emergency requirements which occurred in late 2019 and into early 2020.

Since the material was provided by WaterNSW for the Atkins-Cardno review, the majority of the Warragamba Special Area was burnt by significant bushfires in late December 2019 and January 2020. In order to better understand the risks associated with these burnt catchments, WaterNSW has worked to develop a rehabilitation plan, which includes monitoring. The anticipated cost of this monitoring program in 2020-21 is $60k.

WaterNSW notes that the 2019-20 Bushfires may represent a step change in the frequency, extent and ferocity of fires in the Australian environment.

Therefore, the proposed monitoring is essential to understand the implications and the potential risks around future fire events. It is also anticipated that the increased fire risk will put ongoing pressure on WaterNSW's monitoring budgets over the upcoming regulatory period.

Mining

WaterNSW indicated that there are likely to be additional costs for monitoring the impact of mining in the catchment, following a report from the Independent Expert Panel on mining.

WaterNSW understands that the additional costs will be met by mining interests and on this basis, should not be funded by customers.

Catchment Audit Recommendations

The Draft Report of the Sydney Drinking Water Catchment – 2019, was received by WaterNSW in March 2020 after the Atkins-Cardno review.

This three-yearly audit is required under legislation and is conducted on behalf of the Minister to assess the health of the catchment and propose steps to improve catchment health and water quality.

The draft report includes three recommendations for additional monitoring - in the Endrick and Upper Cox's catchments, and the groundwater network. WaterNSW has estimated the cost of this additional monitoring to be $70k pa.

As mentioned previously, the significant inflows that occurred in February 2020 resulted in a number of additional cost implications for water monitoring over the regulatory period that will continue to put pressure on WaterNSW's water monitoring budget over the next few years.

These cost implications are summarised in Table 9 below:

Table 9 – Cost increases for water monitoring due to recent inflows ($2019-20)

Monitoring Change	Status	2020-21	2021-22	2022-23	2023-24	Total
Bushfire Recovery	Specific planned program	60,000	-	-	-	**60,000**
Inflow event Response	Specific Planned Program agreed with Sydney Water and NSW Health	125,000	94,000	63,000	31,000	**313,000**
Allowance for wet weather monitoring (wetter than average conditions)	Anticipated given climate cycle	330,000	330,000	330,000	330,000	**1,320,000**
Draft Catchment Audit Recommendations	Draft Report – likely to be adopted by Government	70,000	70,000	70,000	70,000	**280,000**
Mining (IEP Report)	Confirmed that the expenditure will be fully funded by the Mining Companies	NA	NA	NA	NA	**NA**
Total		**585,000**	**494,000**	**463,000**	**431,000**	**1,973,000**

2.2.4 Additional Water Monitoring requested by Sydney Water

In their review of the WaterNSW's pricing proposal, Atkins-Cardno noted that the additional monitoring requested by Sydney Water was reasonable and accepted the additional water monitoring requirements at Ducklamoi Weir. However Atkins-Cardno questioned why Sydney Water and WaterNSW needed to sample and test at each works inlet.

Atkins-Cardno considered that it would be more efficient for one utility to sample and test at these locations. It concluded that the savings derived from the reduction in duplication would be sufficient to offset the additional cost of sampling requested by Sydney Water. On this basis, Atkins-Cardno stated that there is no need to include any operating expenditure for WaterNSW over the next regulatory period to fund the additional water monitoring requested by Sydney Water.

The cuts proposed by IPART to WaterNSW's proposed water monitoring opex for Sydney Water requested services are shown in Table 10 below.

Table 10 – Direct Sydney Water water monitoring opex reductions applied by IPART ($2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
WaterNSW proposed water monitoring opex for SW	1,146,790	1,146,790	1,146,790	1,146,790	**4,587,160**
IPART reductions	-1,146,790	1,146,790	1,146,790	-1,146,790	**-4,587,160**
IPART Recommended	**0**	**0**	**0**	**0**	**0**

Misunderstanding on duplication of water monitoring activities

In the material provided to Atkins-Cardno, including the detailed proposed monitoring associated with each Water Filtration Plant, WaterNSW notes that there is no current or proposed duplication of any monitoring in the dams.

The vast majority of the additional cost ($860k p.a. or 98%) is associated with the deployment of boats on the reservoirs at increased frequency and with additional laboratory analysis. This is incremental to WaterNSW's existing costs should the additional monitoring proceed over the next regulatory period.

Atkins-Cardno observed that there is currently some duplication of monitoring at locations downstream of the dams.

However, WaterNSW notes that the samples at these locations are typically taken from a tap in a pipe close to or immediately downstream of the offtake from the dam. As both organisations have staff and contractors at these locations, there is little additional cost associated with taking the sample in practice.

Nevertheless, the proposal for the additional monitoring would require samples to be collected by Sydney Water and analysis to be undertaken for both WaterNSW and Sydney Water with data shared between the organisations. Therefore, the proposed water monitoring arrangements are designed to achieve the efficiencies suggested by Atkins-Cardno.

With regard to laboratory costs, WaterNSW submits that there are two categories where potential duplication arises.

For each Water filtration Plant (WFP), WaterNSW notes that there are 13 analytes for which Sydney Water conducts monitoring at varying frequencies. This is also conducted by WaterNSW on a monthly basis.

WaterNSW accepts that this is a specific example of actual duplication, however the annual savings that would arise from any reduction in duplication is approximately $16,000, This has been factored into the overall cost increase as part of WaterNSW's quote for the proposed water monitoring arrangements, as shown in the table below.

For each WFP, WaterNSW also notes that there a range of analytes which are tested for only by WaterNSW. These are usually done on a quarterly basis. This is shown in orange below. This is a unique requirement and therefore, the proposed monitoring arrangements will not result in any reduction in laboratory costs for this analysis under the new arrangements.

Table 11 below itemises the cost elements of the proposed water monitoring arrangements, including the analytes monitoring, the expected savings from the analytes monitoring and the additional monitoring at Duckmaloi.

Table 11 – Itemised cost elements of WaterNSW's proposed water monitoring arrangements

Category	No of Sites	Analytes per Site	Duplication	Change in Direct Cost (pa)
Water NSW Site Upstream of Dam or WaterNSW Pipe	15	Varies – Approx 35 Includes a number of expensive analytes with high laboratory costs	No	$860k (extra)
Sydney Water Site Inlet to Water Filtration Plants	8	13 (monthly) – required by both organisations Some analytes are field measurements with no laboratory costs	Yes	$16k (saving)

Category	No of Sites	Analytes per Site	Duplication	Change in Direct Cost (pa)
		44 (generally quarterly) – required only by WaterNSW	No	NA – included in existing WaterNSW monitoring plan and budget
Duckmaloi Weir	1	Allowed in Draft Determination		$250k (extra)
Total	This is the additional cost with only one utility undertaking any required sampling and testing			$1.1m (extra)

Note 1 – cell shading corresponds to shading on Nepean Filtration Plant (as an example) in Monitoring Plans for WFPs document
Note 2 – this table includes only that sampling which is relevant to WaterNSW's submission for additional monitoring allowance as a consequence of Sydney Water's proposal. Monitoring undertaken by and funded by Sydney Water is excluded.

On the basis of the information presented above, WaterNSW requests that $1.1 million p.a. of expenditure related to Sydney Water's additional monitoring arrangements should be approved.

2.2.5 Science Program

The Atkins-Cardno review recognised the need for increased water quality science expenditure by WaterNSW above the 2016 period, but not to the level proposed. The justification for Atkin's decision was that the proposed program includes a wide range of initiatives that remain subject to the internal WaterNSW business plan process. Additionally, Atkins-Cardno questioned if WaterNSW had sufficient resources available for the level of expenditure proposed.

On this basis, IPART proposed reductions to WaterNSW's science program operating expenditure of $0.5 million p.a. as shown in Table 12 below.

Table 12 – Direct science program opex reductions applied by IPART ($2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
WaterNSW proposed science program opex	2,365,596	2,515,446	2,622,395	2,500,374	**10,00,811**
IPART reductions	-500,000	-500,000	-500,000	-500,000	**-2,000,000**
IPART recommended	**1,865,596**	**2,015,446**	**2,122,395**	**2,000,374**	**8,003,811**

There is an ongoing water quality program to meet the obligations under the WNSW Act. In addition there is a new operating licence requirement to undertake research into catchment heath and this is delivered through the science programs.

WaterNSW submits that its proposed science program expenditure should be approved by IPART in full.

WaterNSW notes that its last Science Program was developed shortly after the formation of WaterNSW and the business has evolved. During this time, WaterNSW has experienced an increased focus on contaminants of concern, extended drought that reset our lowest inflows on record, changes in climate patterns and extensive bushfires followed by significant rainfall around Greater Sydney's major supply storage.

These events are challenging the BAU operations and putting ever increasing pressure on the delivery of new solutions to ensure the security of our water supply and protection of public health for our customers. The delivery of the science program allows WaterNSW to optimise medium to long term investment by enhancing our understanding of our catchment and lake behaviour and how to best mitigate risks to water supply. It has also delivered benefits in the areas of WHS, water quality for public heath, water security, environmental protection and positive public perception.

WaterNSW has just completed a science prioritisation project that aims to align our internal effort in science and research to address these emerging risks and identified business needs. This includes an uplift in research effort in the following areas:

- Understanding the resilience of the declared catchment and the implications to our land and water quality management practices as the catchment changes, including research around bushfire impacts, significant climatic events in close succession and contaminants of concern;
- Understanding the impact of climate change on catchment process and the subsequent impacts to water quality and security of supply to protect public health, including the generation of difficult to treat natural organic constituents and frequency of nuisance and harmful algal blooms; and
- Understanding in lake dynamics and the impact of advanced supply security strategies on water quality, including impacts on lake ecology and behaviour and subsequent biologically mediated water quality issues such as public health risk and taste and odor production. This also includes supporting the delivery of the Greater Sydney Integrated Water Quality Model project that is designed to deliver a step change in water quality modelling capability, including enhancing and integrating existing tools and models (such as PSAT), and development of state of the art modelling capability from the sub-catchment level to the lakes and delivery system.

The science prioritisation project is currently going through the required business approval processes and this involved extensive consultation to also produce the focus areas for the next determinations science program. It has been reviewed by the WaterNSW Executive with progress overseen by the Board Committee on Water Quality, Health and Catchment Protection.

WaterNSW acknowledges that the delivery of a stronger science program to address emerging risks may require additional internal resources, but WaterNSW also has established a solid research partnership with Water Research Australia and an extensive network of research providers to facilitate the delivery of the science program. WaterNSW is confident that it will be able to deliver on its proposed science program over the upcoming regulatory period.

2.2.6 Continuing efficiencies

The ‘frontier company’ approach that IPART’s consultant, Atkins-Cardno, has applied, 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.

We have concerns about the use of continuing efficiencies of 0.8% p.a. in addition to scope reductions. We believe that the combination creates a potential risk of double counting of costs. This is highlighted further in our concern over the catch-up efficiencies as outlined below.

Further, we question whether given the current economic slowdown being experienced with COVID-19, whether the frontier company approach used by Atkins-Cardno and adopted by IPART is a still valid or applicable.

Deloitte Access Economics preliminary forecast prior to the more extensive lockdown being put in place, was a decline in Gross Domestic Product (GDP) of 6.7% in FY2021.[19] There is also now great uncertainty over the duration and extent of this slow-down with some more pessimistic forecasts pushing recovery back another half a decade.[20] This 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. If the result of policies is a slow-down in new connections growth, economies of scale will be difficult to attain. Similarly, investment in technological improvements may be stifled in a time of economic downturn. Finally, the lockdown is likely to impact labour force productivity for a period as it adapts to social distancing measures and working from how for prolonged periods of time.

2.2.7 Catch-up efficiencies

In addition to making program-specific adjustments, IPART has adopted the recommendation of Atkins-Cardno, and proposed a cumulative catch-up efficiency adjustment of 0.9% per year to move WaterNSW towards an 'efficiency frontier' over the 2020 Determination period. This is based on:

- Findings that WaterNSW has not driven efficiencies in either the 2016 Determination period or the 2020 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 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.

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

Findings of operating inefficiency over the 2016 and 2020 Determination periods

In relation to these findings, we note that WaterNSW has delivered a $47 million or 11% saving in operating expenditure compared to IPART's allowance of $407 million for the 2016 determination period. This includes savings over and above the effects of changes in capitalised overhead policy as noted by Atkins-Cardno. We have further outperformed all merger efficiency targets included in our operating expenditure allowance, as set by IPART for the 2016 determination period. While we could have sought an ECM carry forward for these savings, we chose not to on the basis that there would already be upward pressure on bulk water prices over the 2020 determination period and that this would not be in the best interests of our customers.

In addition, our proposed operating expenditure for the 2020 determination period is lower than that for the current period. We have further strived to drive efficiencies, by offering up an additional 1% efficiency adjustment in our original Pricing Proposal.

[19] Deloitte Access Economics, March 2020, *Business Outlook*
[20] Deloitte Access Economics, March 2020, *Business Outlook*

The findings of IPART and Atkins-Cardno that we have not driven efficiencies over the current and future determination periods as such appear to be unfair and unfounded, in light of the above savings and efficiency targets we have been able to achieve and outperform.

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 even 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.

   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. Atkins-Cardno itself 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". Despite this, the benchmarking analysis is critically used to inform a notional 'frontier' to which WaterNSW must reach and as a 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 13 the following recent IPART decisions:

Table 13 – Benchmarking analysis in recent IPART Decisions

Benchmarking analysis in recent IPART Decisions		
	Methodology	**Proposed operating expenditure adjustments**
Central Coast Council (2019 Price Review – Final Report)	• 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	No catch-up efficiencies, but note program-specific adjustments were made to labour costs.

Benchmarking analysis in recent IPART Decisions		
	2% in catch-up efficiencies, on the basis of insufficient capacity and being a newly merged entity.	
Hunter Water (2020 Price Review – Draft Report)	• 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.
Sydney Water (2020 Price Review – Draft Report)	• 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.

Based on the above decisions, we suggest that it would be more consistent for IPART to make program-specific adjustments to our heads of corporate and support expenditure and ICT expenditure in line with the Central Coast Council and Hunter Water decisions. This would appear to be more appropriate and less arbitrary than IPART's current approach of using a corporate and support and IT operating expenditure benchmarking analysis to inform across-the-board catch-up efficiency adjustments on all our operating expenditure.

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-Cardno report has adequately considered these matters in arriving at its conclusions.

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 0.9% catch-up efficiency adjustment to our operating expenditure over the 2020 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 WAMC licensing fees (payable as a result of our licence holdings), compulsory Treasury Managed Fund insurance contributions for our infrastructure assets, land tax payments payable to the NSW Revenue Office and Rural Valley bulk water fees (arising from our entitlements under the Fish River Water Supply Scheme (FRWS), which are set by IPART.[21] These are summarised in Table 14 below.

   With respect to our superannuation defined benefits liability, The Trustee has requested an increase in the size of contributions of $1.2 million per annum to offset this liability. The additional funding request is due to unfavourable movements in the assessment of the value of the Trustee's expected defined benefits liability. The step up in funding has been requested by the Trustee and is therefore outside the control of WaterNSW.

   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. We estimate these uncontrollable costs total $42.3 million over 2020-24.

   We note that IPART's Draft Report suggested that catch up efficiencies were applied excluding uncontrollable costs, however that this appears to be an error in the IPART Report.[22]

Table 14 – Our Uncontrollable operating costs ($ millions, $2019-20)

	2020-21	2021-22	2022-23	2023-24	Total
WAMC Licensing Fees	3.6	3.6	3.6	3.6	14.4
Treasury Managed Fund insurance contributions	1.8	1.8	1.8	1.8	7.2
Land tax	1.9	1.9	1.9	1.9	7.6
Bulk water purchases	2.1	2.1	2.1	2.1	8.4
Defined Benefits Liability – Superannuation	1.2	1.2	1.2	1.2	4.8
Total uncontrollable costs	**10.6**	**10.6**	**10.6**	**10.6**	**42.3**

[21] IPART, *Review of prices for rural bulk water services from 1 July 2017 to 30 June 2021*, June 2017, <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>. IPART, Determination - WAMC- Maximum prices for water management services from 1 July 2016, <https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural-Water/Prices-for-WAMCs-water-management-services/07-Jun-2016-Determination/Determination-WAMC-Maximum-prices-for-water-management-services-from-1-July-2016>

[22] IPART, *Draft Report Review of Prices for WaterNSW Greater Sydney,* March 2020, Page 111.

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:

   - Land management
   - Water quality science, and
   - Additional monitoring for Sydney Water.

   These programs, totalling $76 million over the 2020 determination period (after accounting for program-specific adjustments), appear to have been included in base operating expenditure, when IPART applies its top-down catch-up efficiency adjustments. 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 $37.6 million uncontrollable costs and the $76 million of programs subject to specific efficiency-based adjustments from our base operating expenditure, when making any top-down catch-up efficiency adjustments.

WaterNSW has serious concerns that IPART's catch-up efficiencies are retrospective, thereby 'changing the rules of the game' at each determination and double count efficiencies. We urge IPART to allow WaterNSW time to achieve greater efficiencies, rather than reducing our forward expenditures based an arbitrary and unsubstantiated frontier.

2.3 Capital expenditure

2.3.1 Preliminary planning costs for drought projects

WaterNSW has written to IPART with an updated forecast of its planning costs for drought-related projects. We look forward to working with IPART and their advisors in the review of these proposed expenditures.

2.3.2 Greater Sydney Resilience

WaterNSW considers that the review findings of Atkins-Cardno with regard to the Greater Sydney Resilience Provision are inaccurate, and do not reflect the comprehensive and robust information that was provided in support of this project.

The Greater Sydney Resilience Provision proposed by WaterNSW involves making improvements to the supply resilience for the Orchard Hills water filtration plant (WFP). The project costs of $20.5 million over the 2020-24 period were removed from our capital allowance by IPART on the basis of Atkins-Cardno's comment that it appears to be a "gold plating project".

WaterNSW considers that the Greater Sydney Resilience Provision represents an important and cost effective measure to address an established, fundamental supply risk in an important growth area of the Sydney region.

Atkins-Cardno described the scope of the Prospect to Orchard Hills Transfer resilience provision as:

> *"Works would include a new pipeline and infrastructure from Prospect reservoir to Orchard Hills offtake."* [23]

It rejected the provision, noting:

> *"We consider this to be imprudent on the basis that there are two existing pipelines with interconnectors already in existence and this would appear to be a gold-plating project. We were not provided with significantly robust evidence on the need for this project to justify its expenditure."* [24]

Based on these comments in its final report, it appears as if the nature of this proposed project has been misunderstood.

The Greater Sydney Resilience Provision does not involve the construction of a new pipeline. Rather, it involves configuring part of the existing Warragamba to Prospect pipeline to enable reverse pumping from Prospect. This would occur in the event that the pipeline from Warragamba to the Orchard Hills offtake is taken out of service.

Prior to developing our pricing submission, we commissioned HARC Consulting to conduct a Greater Sydney bulk water system risk study. The objective of the study was to assess the risk of supply failure across the network with a view of identifying opportunities to mitigate unacceptably high risks. The study found that whilst most parts of the network had some resilience due to multiple supply sources, there were a number of system vulnerabilities within the network. Supply to Orchard Hills WFP was one of the higher risk vulnerabilities identified by the study.

Attachment 2 – *Indec letter on the Greater Sydney Resilience program* provides additional support from an external specialist firm of the need for the project.

Ensuring the continued and effective operation of this asset is vital considering the expected growth in Western Sydney over the long term. Orchard Hills WFP provides safe drinking water to over 200,000 residents and 12,400 local businesses in Greater Penrith, including St Marys, Emu Plains and the lower Blue Mountains. Between 2017 and 2100, demand at Orchard Hills is expected to increase by 65% as a result of targeted State and Federal Government initiatives to encourage industry and population growth in the area. This includes the $5.7 billion Western Sydney Airport and the associated Western Sydney Aerotropolis, which by 2036 is projected to create 200,000 jobs in the region.[25]

Currently, the Warragamba Dam is the sole source of supply to the Orchard Hills WFP. The water supply is reliant on the dual pipelines from Warragamba to Prospect. The pipelines were built in the 1960s and are in the latter part of their operational life.

If one of the pipelines between Warragamba dam and the Orchard Hills offtake were to fail catastrophically there would be two consequences:

1. The rupture of one pipeline will rapidly release a large volume of water and is likely to cause the failure of the adjacent pipeline; and
2. There is no alternate supply to the 200,000 people and 12,400 local businesses supplied from Orchard Hills WFP.

If one of the pipelines between the Orchard Hills offtake and Prospect were to fail, the consequences would be less severe in the short term for the following reasons:

[23] Atkins-Cardno, p. 114.

[24] Atkins, p. 114.

[25] Greater Sydney Commission, Western Parkland City vision <https://www.greater.sydney/metropolis-of-three-cities/vision-of-metropolis-of-three-cities/western-parkland-city-vision>.

1. Orchard Hills could continue to be supplied from Warragamba;
2. Prospect WFP has at least partial alternate supply from the Upper Canal system; and
3. There is approximately 30 days of supply available from Prospect Reservoir.

The investment will allow water to be pumped from Prospect to Orchard Hills WFP through the existing Warragamba to Prospect pipelines. This will reduce the risk profile to those relying on Orchard Hills WFP to a similar level to those relying on the Prospect WFP.

WaterNSW therefore urges IPART to reconsider its draft decision on this matter. The proposed investment of $20.5 million to reduce the risk exposure of this nationally vital growth area in Western Sydney to a level commensurate with other Sydney regions is warranted and reflects value for money for the customers that would benefit from the investment.

2.3.3 Proposed reductions to Greater Sydney Supply Augmentation costs

WaterNSW disagrees with the reasoning provided by Atkins-Cardno to justify the proposed cuts to the Greater Sydney Supply Augmentation (Burrawang to Avon Tunnel) project. Atkins-Cardno argue that WaterNSW overestimated the overheads applicable to this project in its pricing submission. This was on the basis that the Preliminary Business Case for this project included an overhead estimate that was larger than the overhead amount included in WaterNSW's pricing submission. The difference between these overhead amounts was proposed by Atkins-Cardno to be eliminated from WaterNSW's proposed capital program.

WaterNSW considers that this argument is based on a misunderstanding of the build-up of proposed costs. The costs proposed by WaterNSW in its pricing submission include budgeted direct costs and an allocation of budgeted overhead. These costs do not include any uplift to align the budgeted overhead amount to the overhead estimate calculated as part of the business case developed two years prior.

The overhead presented in the preliminary business case reflected an outdated overhead estimate based on the overhead cost pool and methodology at the time the preliminary business case was developed in 2017. The overhead included in WaterNSW's pricing submission for the project is lower than the overhead presented in the preliminary business case. The cuts proposed by Atkins-Cardno therefore have the effect of reducing the direct costs of the project. On this basis, WaterNSW submits that these cuts are inappropriate as they are cuts to direct project costs without any reference to the efficiency of the project itself.

2.3.4 Proposed reductions to CIMS costs

WNSW disagrees with the draft determination conclusion that the CIMS expenditure for project delay and assurance measures were imprudent and that $0.6 million should be removed from the RAB.

WaterNSW notes the comments provided by Atkins Cardno Final report starting on page 157:

> *"We understand that a 3½ month delay was agreed after a period of negotiation which resulted in a settlement of $1.5m in the consortium's favour. External independent assurance was also sought to provide the Board with comfort about how the project was being managed. This assurance confirmed that some of the scope in the original business case has not been delivered and so some of the benefits are not being realised at this stage."*

> *"We concluded that the $1.5m settlement with the consortium as well as the ~$100,000 of additional assurance requested by the Board should be treated as imprudent expenditure. When the 37% allocation to the Greater Sydney price control is applied, this translates into $592k imprudent expenditure for this price control."*

The project delay settlement was principally driven by the recognition of significant increase in scope complexities that were not identified in the original estimates and only unfolded throughout the execution phase. This was recognized by both parties and on this basis, it was agreed to share the costs associated with that additional complexity on a 50/50 cost share basis.

Project Assurance is good project management practice and the level of assurance is best based on ongoing project risk assessments. That WaterNSW increased assurance based on identified increased project complexity and therefore risk is evidence of a prudent risk control measure, not imprudent as concluded in the draft determination.

WNSW believe that IPART Should take global view of what investment was responsible and prudent in the context of the outcome and comparable projects. To this end Atkins Cardno observed on page 155 of their final report:

> *The overall costs of implementation nearly doubled from original business case ($15m to $28m including some nominal expenditure in the future price path), however our initial reaction was that the original cost estimation appeared low for this type of project. The early estimates were based on feedback from the market on buying the product and estimated time inputs for internal resources as well as a fixed price lump sum contract with the external implementation consortium.*

2.3.5 Proposed reduction to ICT data center costs

WaterNSW notes that sole justification for the proposed cuts to the ICT data center expenditure are related to Data Storage efficiency as shown on Page 161 of the Atkins Cardno final report:

> *"We do not believe that there is sufficient justification for the 10% assumption for capacity growth each year on top of the headroom already being allowed for. This also does not set the right incentive to manage data in an efficient way; WaterNSW should be looking at opportunities to reduce its data. This is supported by the Water Services Association of Australia's report on the digital economy which identified that:*
>
> *New data is being produced at an extraordinary rate: 50% of the data existing worldwide was generated in the last 10 months. Most data remain under-analysed, presenting a real business risk and cost. The Veritas Databerg Report estimates that by 2020, worldwide $4.6 AUD trillion will be wasted due to gathering and storing too much data that is not being used…. only 10% of current data collected in Australia is tagged as 'business critical' while 62% of it remains 'dark' (of unidentified value) and 28% are ROT (redundant, obsolete or trivial).*
>
> *We propose that there is a reduction of $300k per year to incentivise efficient behaviour which, when the 37% allocation for the Greater Sydney price control is applied, results in a reduction of $111k per year over the future price path."*

Further on Page 159 Atkins Cardno note that the total annual capital investment provisioned by WNSW for the Data Centre is $700k:

> *Augmenting capacity by procurement of increased storage, capability and processing growth (the headroom in the Data Centre is set at around 80% with 10% growth assumed per year, equivalent to $700k total investment*

WaterNSW advises that of the annual $700k investment, $300k is provisioned to fund infrastructure growth with the reminder provisioned for mandatory firmware upgrades and software licensing.

Therefore, the $300k annual reduction proposed in the draft determination removes all of the required funding for growth over the upcoming regulatory period. On this basis, WaterNSW submits that the overall $300k per annum reduction in the Data Centre project is excessive and should be reversed.

2.3.6 Catch-up efficiencies

In addition to making program-specific adjustments, IPART has proposed catch-up efficiencies of between 2% to 9% per annum to move WaterNSW towards an 'efficiency frontier' over the 2020 determination period. This is 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 has not taken into account progress on the development of a number of our capital processes, noting that WaterNSW was established only in 2015. 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.

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. Being newly established, it can be expected 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.

Despite this, we have sought to adopt a mature approach in several capital and asset management processes. We provide some examples in Table 15 below.

Table 15 – WaterNSW capital and asset management processes

	Our approach
Value engineering	While we recognise that our value engineering approach will improve with our implementation of asset class strategies, we believe we have always had a robust approach to value engineering. For example: • On the **Renewals program**, we used a selection of risk/benefit/cost optimised options to reduce the program budget by 20%.
Cost estimating and management of contingencies	• On the **Avon Deep Water Access Project**, we applied a three-stage cost estimation process, whereby we sought preliminary estimates for the project, and conducted an initial internal review of unit rates and quantities and a second internal review of contingency costs. This reduced the estimated cost of the project by 35% from $368 million to $238 million. • On **Water Infrastructure Renewals**, we applied a similar three stage cost estimation process, but subjected initial cost estimates to internal reviews on option selection and estimate, and contingency costs. This process reduced the estimated cost of the project by 34% from $58 million to $38 million.
Procurement processes	We have well-developed procurement plans on a number of large capital projects including: the **Avon Pipeline; Warragamba E-flows;** and **Warragamba Pipeline and Corridor Restoration projects**.

During the review process with Atkins-Cardno, 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 Cardo's 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.

Additionally, Atkins-Cardno has mischaracterised the 'management reserve' which is mentioned in WaterNSW's business cases, stating that it is 'over and above contingency and capitalised business unit overhead amounts'.[26] As was explained during Atkins Cardo's review of our capital program, WaterNSW's 'management reserve' constitutes advice to decision makers on a potential upper bound expenditure scenario, and is not included in capital budgets. The 'management reserve' is listed as advice to our business leaders on a potential upper bound of cost risk, and is provided for the purposes of transparency in business cases. It is not included in the project approval, and does not form a part of forecast capital expenditure. Given we are a project orientated business with the capital program largely made up of specific one-off projects that make it difficult to draw on comparable historical evidence, a 'management reserve' is used to advise management on the worst-case scenario, so that it might be recognised and prudently managed.

Finally, Atkins-Cardo's final report contains particularly strong criticism of WaterNSW's Asset Class Strategies, which are in the process of being developed. As identified by Atkins-Cardno, we have a logical asset management process which supports the development of prudent and efficient expenditure proposals.

The development of effective Asset Class Strategies requires significant time investment. While they are under development, WaterNSW contends that this has had no impact on our ability to identify the strategic direction as to how assets should be managed regarding 'trade-offs between risk, performance and cost'[27] for our capital program in the next regulatory period. In place of specific Asset Class Strategies, strategies have been developed at the asset class level for each project, for example, in the Upper Canal Interim Works Stage 2 and Warragamba Pipeline Restoration Programs. We therefore contend that Atkins Cardno's criticism of our Asset Class Strategies, which are under development, has no practical bearing on outcomes for the next regulatory period.

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% to 9% a year, on top of a further cumulative continuing efficiency adjustment of 0.8% per year over the 2020 determination period. This effectively means that we face total efficiency targets of between 3% to 12% a year over the 2020 determination period. This is not an insignificant 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 become a 'frontier' company within 4 years' time.

We note in IPART's recent 2019 Central Coast Council Decision that IPART did not accept Atkins-Cardno's 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".

[26] Atkins Cardno, Final Report, p. 47.
[27] Atkins Cardno Final Report, p. 44.

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

2.3.7 Warragamba E-Flows

With respect to the recommended rephasing of the Warragamba E-Flows Project, WaterNSW wishes to clarify that the phasing in the submission aligns with our current understanding of when the works are likely to proceed, thus a rephasing of the project as recommended may result in a shortfall in capital funding for the project over the pricing period.

2.3.8 Updated [redacted] planning costs

While this is the subject of separate correspondence with IPART on 15 April 2020, WaterNSW is seeking $74 million of additional planning costs to be included in the capital program for the 2020 Final Determination, given:

- The need to continue incurring planning costs [redacted]
- The need to plan for water security is a regulatory obligation on WaterNSW to ensure water supply to the Greater Sydney region; and
- The financing pressure we will face if these costs are not funded during the 2020 Determination period, given the current and forecast economic climate and other balance sheet pressures arising from requests of Government for WaterNSW to debt fund other major infrastructure planning (such as the three new dams in regional NSW).

Our response to IPART's questions from IPART on 22 April 2020 are provided in **confidential** Appendix 3.

2.4 Return of assets (depreciation)

2.4.1 Asset lives

Do you agree with the asset categories and asset lives contained in Water NSW's March 2020 proposal? Or do you think the asset categories and asset lives we have used in the Draft Report continue to be appropriate?

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 notes IPART's assessment that adjustments should be made to the proposed asset lives of projects marked as 'Dams', 'Pipelines' and 'ICT'.

WaterNSW considers that the adjustments which have been recommended by Atkins-Cardno and implemented by IPART are based on insufficient evidence and incorrect reasoning. We note that making significant changes to asset life assumptions at price reviews increases the regulatory risk faced by WaterNSW and directly impacts the business case viability for projects planned and underway.

Dams

In the Draft Determination, in response to WaterNSW's use of a 100 year asset life for capital classed as 'Dams', IPART applied a new assumption of 200 years for dams with the accompanying statement that it is:

> *"...based on Atkin's experience, the technical consultant's report and noting that Water NSW uses an asset life of 200 years for accounting purposes."*[28]

WaterNSW considers this significant change made by IPART has been based on insufficient evidence and incorrect reasoning.

Firstly, the application by WaterNSW of 200 years for accounting purposes is the consequence of a disconnect between the regulatory life and accounting life carried over from the Sydney Catchment Authority (SCA) prior to the establishment of WaterNSW.

In its 2009 Review of Asset Life Determination for SCA, WorleyParsons, IPART's consultant, recommended a 100 year asset life for dams as opposed to the 200 years put forward by SCA[29]. IPART accepted this recommendation and applied a 100 year regulatory asset life for dams. The accounting life was not revised, resulting in an inconsistency between the regulatory life and accounting life. This is therefore no evidence of itself that the regulatory asset life for dams should be 200 years. On the contrary, it demonstrates that the 200 year regulatory asset life for dams had to be revised upon the technical consultant's analysis in 2009, which was accepted by IPART.

In reference to the same 2009 Review of Asset Life Determination for SCA, Atkins-Cardno noted that WorleyParsons stated:

> *"Given the nature of SCA's dams, an economic asset life of 200 years may be justified."*[30]

This statement was made in relation to SCA having considered it unlikely that any new dams would be built in the foreseeable future. This assumption is not relevant to WaterNSW. Despite the comment that 200 years may be justified, **WorleyParsons ultimately determined an asset life of 100 years for dams**.

It should be noted that in SCA's 2009 Final Report, the proposed asset lives for SCADA Equipment of 40 years and unsurfaced roads of 100 years were also much higher than industry standards. Consequently, WorleyParsons recommended that these two asset lives be revised down to 10 years and 20 years respectively.[31]

Common industry practice in tendering for construction and civil works is to assume that asset life for a new dam construction is 100 years. In the same 2009 review by WorleyParsons, it is highlighted that Melbourne Water and ActewAGL also put forward 100 year asset lives for dams.[32] The Australian Taxation Office (ATO) Ruling TR 2019/5 for water supply utilities determines a 100 year asset life for dams[33]. The Australian Competition and Consumer Commission (ACCC) determined a standard economic life of 100 years for dams in its final decision on pricing for State Water for the 2014-15 to 2016-17 pricing period.[34] This was informed by a final report for the ACCC by Deloitte Access Economics in 2013 which states that 100 years is the useful asset life determined for dams by most water businesses and regulators. On the prospect of extending dam asset lives, this report claims:

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[28] IPART, *Draft Report Review of Prices for WaterNSW Greater Sydney,* March 2020, Page 120

[29] WorleyParsons, *Review of Asset Life Determination Sydney Catchment Authority (2009 Determination),* January 2009, Page 12

[30] WorleyParsons, *Review of Asset Life Determination Sydney Catchment Authority (2009 Determination),* January 2009, Page 9

[31] WorleyParsons, *Review of Asset Life Determination Sydney Catchment Authority (2009 Determination),* January 2009, Pages 10-13

[32] WorleyParsons, *Review of Asset Life Determination Sydney Catchment Authority (2009 Determination),* January 2009, Page 7

[33] Australian Government Australian Tax Office Taxation Ruling TR2019/5, *Income Tax: Effective Life of Depreciating Assets (Applicable from 1 July 2019),* Page 181

[34] Office of the Tasmanian Economic Regulator*, 2018 Water and Sewerage Price Determination Investigation Final Report,* May 2018, Page 152

> *"Although it is possible for longer lives to be achieved, our view is that taking into account the long term possibility of asset stranding that 100 years is appropriate."* [35]

Secondly, notwithstanding common industry practice, the capital projects classified as 'Dams' comprise of several components which each have lower design lives than 100 years. Atkins-Cardno's final report suggests that:

> *"...an asset life assumption should be disaggregated for large project expenditure as this enables large components to a project to have their appropriate lives assigned."* [36]

The disaggregation of asset categories in the Warragamba E-Flows Project is provided in the table below. This project is currently classified under 'Dams', yet comprises works with substantially shorter asset lives than a new dam construction. For example, the 'Major Civil' component is predominantly comprised of submerged reinforced concrete which cannot be expected to approach 200 years life in practice. For this project, implementation of a 200 year asset life for dams could result in a RAB life extending a century beyond the expected useful life of the longest-lived asset.

Table 16 - Disaggregation of asset categories in Warragamba E-Flows Project

Asset Category	Project Costs ($m)	Asset Class	Asset Life (WaterNSW)	%	Average Life
Civil/Structural	30.3	Major Civil (New Class)	100	26%	25.7
Mechanical	68.2	Major Mechanical	30	58%	17.3
Electrical, Instrumentation and Control	19.6	Major Electrical	25	17%	4.1
Total	**118.1**			**100%**	**47.1**

If the proposed 100 year asset life for dams is not retained, WaterNSW suggests that all projects currently classified as 'Dams' in the submission should be reassigned as 'Major Civil' with a useful life of 100 years, to ensure that the effective useful lives of the relevant assets are appropriately reflected. This will avoid asset stranding, which would impact WaterNSW's longer term financeability and would not be in the long term interests of water consumers.

Pipelines

For 'Pipelines', IPART's Draft Determination recommended a useful life of 120 years rather than 80 years proposed by WaterNSW, with the following justification provided:

> *"...noting that Sydney Water uses a useful life of 140 years."* [37]

WaterNSW notes that there is an important distinction between the pipeline asset lives of WaterNSW and Sydney Water.

Sydney Water typically constructs pipelines and pumping stations under separate programs with distinct asset lives assigned to each. This is not the case for WaterNSW. Projects classified under 'Pipelines' comprise a mix of asset construction, with a substantial percentage of assets being for pumping and associated electrical and mechanical infrastructure, which have much shorter asset lives than the pipelines themselves.

[35] Deloitte Access Economics, *Final Report - Asset Lives for State Water's 2014 Pricing Proposal for the Australian Competition and Consumer Commission,* December 2013, Page 13

[36] Atkins- Cardno, *WaterNSW Expenditure and Demand Forecast Review, Final Report for IPART*, February 2020, Page 138

[37] IPART, *Draft Report Review of Prices for WaterNSW Greater Sydney,* March 2020, Page 120

An 80 year asset life is in line with common industry practice and prior IPART determinations. In its 2009 Review of Asset Life Determination for SCA, WorleyParsons recommended an economic asset life of 80 years for pipelines.[38] In the same 2009 review by WorleyParsons, it is highlighted that Melbourne Water and ActewAGL also proposed an 80 year asset life for pipelines.[39] The ATO Ruling TR 2008/4 determines an 80 year asset life for pipelines.

A 2014 Western Australian Auditor General's Report on the Water Corporation's management of water pipes determined that the standard asset life of pipelines falls within a range between 80 to 110 years, depending on their construction material and size.[40] Consistent with the discussion on the various components of dams above, this confirms that the asset life of pipelines depends on the specific construction components included in the larger project.

WaterNSW maintains that the appropriate asset life for 'pipelines' should be 80 years.

ICT

Atkins-Cardo's and IPART's blanket allocation of 10 year asset lives for ICT is neither reflective of the accounting life, nor the useful life of the specific assets included in our ICT projects. Atkins-Cardno has provided the following limited justification for its assessment on ICT asset lives:

> *"...what we have seen in WaterNSW and elsewhere is that there is a tendency to invest in larger IT corporate systems with longer asset lives."*[41]

WaterNSW applies a more granular approach to analysis of its ICT assets than that suggested by Atkins-Cardno, reflective of the specific ICT assets included in its projects.

It is not reasonable to apply a single life value to all categories of ICT assets. There is a significant difference between physical hardware infrastructure and computer software applications. Physical ICT assets age based on actual usage and physical environmental factors such as temperature, humidity and electrical load. Software assets age based on how well they continue to meet the business needs which they were developed or purchased for. While physical ICT assets are replaced, software assets are generally upgraded, enhanced or changed to meet the evolving business needs.

The table below provides WaterNSW's approach to the treatment of asset lives by asset category, consistent with the ATO Ruling TR 2019/5.[42]

Table 17 - WaterNSW asset lives for ICT

Asset	Life (Yrs)	Comment
Computers and Computer equipment:		
Computers and computer equipment (not specified below)	4	From TR2019/5
Computer Monitors	4	From TR2019/5
Desktop Computer – Including personal computers	4	From TR2019/5
Mainframe computers	5	From TR2019/5
Mobile/portable computers (including laptops, tablets)	2	From TR2019/5

[38] WorleyParsons, *Review of Asset Life Determination Sydney Catchment Authority (2009 Determination),* January 2009, Page 10

[39] WorleyParsons, *Review of Asset Life Determination Sydney Catchment Authority (2009 Determination),* January 2009, Page 7

[40] Western Australian Auditor General's Report, *Water Corporation: Management of Water Pipes*, February 2014, Page 12

[41] Atkins- Cardno, *WaterNSW Expenditure and Demand Forecast Review, Final Report for IPART*, February 2020, Page 137

[42] Australian Government Australian Tax Office Taxation Ruling TR2019/5, *Income Tax: Effective Life of Depreciating Assets (Applicable from 1 July 2019)*

Asset	Life (Yrs)	Comment
Network equipment (including hubs, modems, routers, switches, etc)	5	From TR2019/5
Servers & SAN equipment	4	From TR2019/5
Security Appliance	5	WaterNSW derived
Telephony:		
Mobile phones	3	From TR2019/5
Telephone systems (including analogue and digital telephone systems, PABX/PBX systems, key/commander systems, VoIP systems and hybrid telephone systems such as IP-PBX systems etc)	7	From TR2019/5
Telemetry:		
Telemetry (including modems and remote transfer units)	10	From TR2019/5
Computer Software:		
Corporate Business Applications	7	WaterNSW derived
Desktop Applications	3	WaterNSW derived – now primarily subscription based

The following table presents WaterNSW's ICT Projects and their associated ICT asset components.

Table 18 - WaterNSW ICT projects

Project	% Software	% Hardware	Software Life	Hardware Life	Asset Class
ICT Renewals and Replacement	50%	50%	7	4	Software System/Hardware - laptop, phone, videoconferencing etc
TM1 Design and implementation	100%		7		Software System
ICT Cyber Security	75%	25%	7	5	Software System/Security Appliance
ICT Telecommunications	100%			5	Network Equipment
ICT Corporate Systems	100%		7		Software System
ICT EUC & Collaboration	100%		7		Software System
ICT Data Centre	50%	50%	7	4	Software System/Server
ICT Analytics	100%		7		Software System
ICT Operational Technology	30%	70%	7	4	Software System/Server
ICT Water Market Systems	100%		7		Software System
Risk based Surveil - new instrum (all sites reviewed)	-	-	-	-	-
Hydraulic Piezometer Assess & Maint all applicable sites (16)	-	-	-	-	-

Project	% Software	% Hardware	Software Life	Hardware Life	Asset Class
ICT Business Process Automation Program	100%		7		Software System
Dubbo - Refit / Refurbishment	-	-	-	-	-
Motor Vehicle Fleet procurement	-	-	-	-	-
Geospatial equipment and Software	-	-	-	-	-
ICT Cyber Security	75%	25%	7	5	Software System/Security Appliance
ICT Corporate Systems	100%		7		Software System
WaterNSW CIMS	100%		7		Software System
WaterNSW Seismic Monitoring Network	-	-	-	-	-

WaterNSW's view on the appropriate average age for ICT asset lives is supported elsewhere.

In its 2017-2018 Annual Report, Sydney Water provided a normal life expectancy of computer hardware equipment ranging between 3 to 12 years.[43] This confirms the variability of IT asset lives depending on the breakdown of the specific assets being referred to. The recommendation of a 10 year asset life lies at the upper end of the range.

In 2014, the ACCC determined a standard economic life of 6 years for IT assets in its final decision on State Water pricing for the 2014-15 to 2016-17 pricing period.[44] In its 2021-26 Regulatory Proposals, the electricity distributor Powercor proposed a standard asset life of 6 years for non-network general IT assets[45] and the electricity distributor Jemena Electricity Networks used a standard asset life of 5 years for ICT systems.[46]

Extending IT asset lives to 10 years will not reduce the need to replace equipment earlier at the end of practical life. It will lead to a situation where assets are disposed of before they are fully written down, which will force an operational expenditure write-off of the written down value. As noted above, this would result in asset stranding, which will impact WaterNSW's longer term financeability and would not be in the long term interests of water consumers.

In addition, not enabling WaterNSW to maintain the currency of these assets is likely to drive additional IT operating costs (e.g. maintenance) and limit organisational efficiency through limiting investments in Artificial Intelligence software, digitalisation, and analytics.

2.4.2 Disaggregating the RAB

WaterNSW notes that IPART asked in its Issues Paper:

[43] Sydney Water, *Annual Report 2017-18*, Page 81

[44] Office of the Tasmanian Economic Regulator, *2018 Water and Sewerage Price Determination Investigation Final Report,* May 2018, Page 152

[45] PowerCor Australia, *Regulatory Proposal 2021-26,* Page 142

[46] Jemena Electricity Networks, *2021-26 Regulatory Proposal – Overview,* Page 73

> *"What other factors should we consider? For example, do you agree that there is merit in this review (or a future review) to take a more disaggregated approach to the calculation of WaterNSW-Greater Sydney's regulatory depreciation by unbundling its RAB into separate asset categories each with an asset category-specific asset life?"*

On 10 March 2020, WaterNSW submitted a proposal to disaggregate the RAB for new assets.

WaterNSW considers that a disaggregating the RAB into separate asset categories each with a category-specific asset life provides a more accurate alignment of our costs and revenues.

We believe this is a better reflection of our forward looking costs than applying a single weighted average useful life of approximately 62 years for new assets which is consistent with WaterNSW's position to adopt an average useful life of 60 years for new and existing assets.

WaterNSW intend, for the subsequent (i.e. 2024) determination to undertake a detailed review into disaggregating the our 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, as is the case for our future expenditures. This review will include examining unbundling the RAB into asset categories (each with a specific life) as well as assessing the 'year-on-year' approach to calculating the RAB that is commonplace in other regulatory jurisdictions.

2.4.3 Applying cost reductions to a disaggregated RAB

In its Draft Determination, IPART has made several specific adjustments to WaterNSW's proposed capital program for the 2020-24 period. The impact of these adjustments has been pro-rated by IPART across each of the future RABs. We assume that this approach was done as an interim measure until the final expenditures are set.

WaterNSW considers that it is more appropriate that any adjustments made to specific capital projects should be entirely reflected in the RAB which includes that project. The below table provides a mapping between the specific capex adjustments in Atkins' Final Report and asset class as per WaterNSW's Pricing Proposal.

Table 19 – Adjustments to the RAB for capital program cuts

Adjustment to Capital Program	Asset Class
Supply Augmentation Overhead Adjustment	Other Storages
Greater Sydney Resilience Provision	Pipelines
Warragamba E-flows	Dams
Avon Deep WA adjustment	Pipelines
DRS K project on hold	Pipelines
DRS SDP project - updated cost adjustment	Major facilities
DRS IDP project - updated cost adjustment	Major facilities
DRS SDP project - separate reporting adjustment	Major facilities
DRS IDP project - separate reporting adjustment	Major facilities
CIMS adjustment (37% allocated of total WNSW expenditure)	IT systems
Data Centre (37% allocated of total WNSW expenditure)	IT systems
Property - South West Corridor Depot adjustment	Buildings
Fleet - error adjustment	Vehicles

The following table provides a breakdown of capital expenditure over the 2020-24 period, as per IPART's draft decision, by asset class assuming that adjustments were made to specific asset classes rather than pro-rated. There is a significant difference to the figures used in IPART's Draft Determination due to the treatment of the Avon Deep Water Access project which was classified in WaterNSW's Pricing Proposal as a pipeline.

Table 20 – Capital expenditure as per IPART Draft Report with adjustments to specific asset classes

Asset Class ($'000s)	2020-21	2021-22	2022-23	2023-24	Total
Dams	5,306.7	18,488.7	45,620.6	28,614.6	**98,030.6**
Other Storages	1,364.4	-	-	-	**1,364.4**
Meters	1,212.2	1,171.7	1,129.5	1,108.3	**4,621.7**
IT systems	11,820.4	8,051.9	6,919.7	7,603.3	**34,395.3**
Vehicles	1,423.3	555.6	535.8	805.3	**3,320.0**
Buildings	9,117.2	4,449.3	1,361.0	1,330.3	**16,257.8**
Plant & machinery	1,358.0	1,013.4	1,526.6	541.2	**4,439.1**
Pipelines	5,001.0	-	-	-	**5,001.0**
Major Mechanical	7,358.0	6,980.8	2,243.5	-	**16,582.3**
Systems/ Controls	4,239.6	2,305.9	1,400.6	1,509.7	**9,455.8**
Roads/ Minor Civil	44,707.5	38,100.9	37,817.8	40,566.1	**161,192.4**
5 yearly Inspections	283.4	145.8	269.1	376.6	**1,074.9**
Major facilities	18,179.8	-	-	-	**18,179.8**
Total	**111,371.5**	**81,263.9**	**98,824.2**	**82,455.5**	**373,915.1**

2.4.4 Updating our approach to cost allocation - allocating corporate capex using totex

Do you agree with Water NSW's proposal to allocate corporate capital expenditure across its business segments using total expenditure (totex) as the allocator? Or do you think the current allocation (which uses direct salaries as the allocator) continues to be appropriate?

Our approach for allocating costs across the IPART determinations was set out in our Cost Allocation Manual (CAM) which was attached to our Greater Sydney pricing proposal. The CAM was prepared in line with the IPART Cost Allocation Guide.

In the 2016-20 Greater Sydney determination, Greater Sydney received a 67% allocation of corporate capex allowance based on the proportional value of the Greater Sydney RAB, with the balance (33%) allocated to the Rural Valley Determination.

As outlined in our CAM, from 2020, corporate capital projects were proposed to be allocated to each IPART determination based on the proportional value of direct salaries. Under this approach, the Greater Sydney Determination would receive a 37 % allocation of corporate capital projects, while WAMC and Rural Valleys would receive a 28% and 36% allocation of corporate capex, respectively. WaterNSW's original proposal reduced the share of Greater Sydney corporate capex from 67% in the 2016 Greater Sydney determination to 37%.

WaterNSW's is subject to four IPART pricing determinations: Greater Sydney Determination, Rural Valleys (RV) Determination, WAMC Determination and the Murray River to Broken Hill Pipeline Determination. WaterNSW is in a unique position in that its shared corporate capex must be recovered through multiple IPART determinations.

A core element for managing these separate regulatory processes is the adoption of a clear, concise and effective approach to the allocation of shared corporate capex, which is applied consistently across the multiple determinations.

However, WaterNSW notes that the regulatory cycles for each of its determinations are not aligned. Furthermore, the pricing issues concerning WaterNSW's customers will differ across multiple determinations, depending on the customer base, determination specific issues, the

context and any bill impact considerations.

Shared corporate capex is assessed by IPART across multiple IPART price reviews. This can cause a number of challenges and sequencing issues for IPART. For example, managing multiple efficiency reviews on the same corporate expenditure plan, maintaining consistent decisions across multiple determinations and implementing pricing outcomes which are acceptable to all customers.

WaterNSW argues that it is not desirable for IPART to consider the allocation of corporate capex in isolation of the impacts to the WAMC and RV determinations.

Upon review, and after considering the flow on implications to the WAMC and Rural Valley determinations, WaterNSW has decided to amend its approach to allocating shared corporate capex to its determinations.

WaterNSW is proposing to allocate shared corporate capex using total expenditures ('totex') (excluding lumpy, one-off capital expenditure)[47] as an allocator, instead of direct salaries. The effect of the revised proposal on WaterNSW's determinations is shown in the table below:

Table 21 – Impact of updating our approach to cost allocation ($millions, $2019-20)

Segment	Greater Sydney Allocation**	WAMC Allocation*	Rural Valley Allocation
% allocation (Salaries)	37% ($36.47)	36% ($24.71)	28% ($32.81)
% allocation (Totex)	63% ($59.01)	13% ($12.27)	24% ($22.71)
% Variance	+26% ($22.54)	-23% (-$12.44)	-4% (-$10.10)
Marginal Revenue Impact ($, %) – Salaries	$1.23 (0.6%)	$3.99 (15.0%)	• **Immaterial marginal impact at determination level.** **Totex represents a more reliable and stable driver to allocate corporate capex within the Rural Valley Pricing Regions as discussed below in table 2.**
Marginal Revenue Impact (%, %) - Totex	$1.88 (0.9%)	$2.01 (7.5%)	
Revenue Impact of change in allocation ($m, %)	**$0.64 (0.3%)**	**-$1.98 (-7.4%)**	

*the marginal bill impact for WAMC has been calculated by measuring the variance (%,$) from WNSW share of the user revenue requirement as a result of the allocation. The additional revenue for WAMC has been calculated by assuming a 6 year asset live for corporate assets and a WACC of 3.2%. The existing revenue requirement for WNSW share of WAMC services has been calculated by multiplying the FY20 total revenue requirement for water management and planning charges of $56m in table 7.1 (page 75) of the WAMC Final Report by 44%. The 44% split has been sourced from IPART's March 2018 advice to the Minister on the allocation of the WAMC revenue requirement between WNSW, DPIE and NRAR.
** We have assumed a WACC of 3.2% for both our pricing proposal inputs and the scenarios. This is to align with the February 2020 WACC market updates and the 2020 Draft Determination for Hunter Water Prices and to present a more accurate assessment of the marginal impacts of WaterNSW's proposal.

The effect of the revised proposal is to allocate a greater share of corporate capex from WAMC into Greater Sydney (i.e. increase from 37% to 63% for Greater Sydney and a reduction from 36% to 13% for WAMC), while maintaining an allocation rate for Greater Sydney which is comparable to the rate applied by IPART in its 2016-2020 Greater Sydney determination (i.e. 67% in the 2016-2020 determination compared to 63% in the proposal). This proposed change to totex results in greater consistency with our overhead allocation methodology and an allocation to Greater Sydney that is better aligned with the allocations from the 2016 Determination.

WaterNSW's revised proposal reflects a more holistic approach to allocating shared corporate capex across each of the determinations. WaterNSW has considered a number of factors including the materiality of the impact of the change, consistency, administrative simplicity, pricing

[47] As per the WaterNSW CAM and the calculation for totex to allocate opex overhead across the IPART determinations. WaterNSW totex calculation excludes certain lumpy, one-off project expenditure to ensure overheads are allocated to core, steady state projects.

stability, causality, adherence to Accounting Standards and industry practice as shown in Table 22 below:

Table 22 – Considerations for moving to a 'totex' allocator for corporate capex

Matters	Considerations
Consistency ✓	• Using totex values to allocate corporate capex to each of the determinations is consistent with the allocation method for indirect and corporate opex. It also represents a more streamlined approach to allocating all indirect and corporate cost (opex and capex) to each of the determinations.
Administrative simplicity and stability ✓	• Using totex values for both corporate capex and opex provides a practical, simple and equitable allocator for shared corporate assets. It also reduces the need to apply separate allocation processes for both corporate capex and opex. • As WaterNSW is required to allocate shared corporate costs across multiple rural valleys (for both WAMC and RV RABs), WaterNSW has considered the administrative cost of collecting the allocation values for each pricing region or subcategory against the benefits, such as whether the proposed allocator is reliable, accurate and stable. • WaterNSW considers that there would be a number of distortionary impacts in using direct salary and wages data to allocate WaterNSW corporate capex across the WAMC and RV subcategories or pricing regions. • Direct salary and wages data for each WAMC and Rural Valley subcategory is not a reliable and stable driver to allocate corporate capex across the WAMC and RV RABs. • For instance, although WaterNSW's timesheets for direct salaries are accurate and stable at the IPART determination level, these timesheets are less accurate and/or highly unstable at the rural valley or pricing subcategories. • This is because a high proportion of RV salary costs are captured under several 'all valley' project codes in WaterNSW's timesheet system. 'All valley' costs are specific to the RV determination. However, they are not specific to a Rural Valley or a WAMC subcategory or pricing region. • 'all valley' costs include shared asset services such as the costs incurred by WaterNSW to implement ISO standards, asset standards, audits and dam safety surveillance programs across multiple Rural Valley and WAMC pricing regions. • The use of 'all valley' projects for time sheet reporting purposes reflects the operating structure of WaterNSW's maintenance and operations teams who are responsible for servicing assets across multiple locations and valleys. • Given the nature of these costs and the structure of WaterNSW' maintenance and operations teams, direct salaries would not represent a reliable and stable driver to allocate shared corporate capex across each Rural Valley or each WAMC subcategory or pricing region. • Totex is seen as a more reliable and stable driver to allocate corporate capex across the WAMC and RV RABs given its accuracy. We also note that WaterNSW's totex calculation excludes certain lumpy, one-off project expenditure. • The use of totex as an allocator also has the added benefit of avoiding the distortionary impacts of using an unstable allocator as discussed above. • Totex values by subcategory are readily available and easy to calculate, reducing administrative costs and burden to WaterNSW.

Matters	Considerations
Pricing Implications ✓	WaterNSW has considered the materiality of the change of approach for both Greater Sydney and the WAMC customers. Based on the pricing implications, WaterNSW considers totex values to represent an equitable allocator for shared corporate assets across the IPART determinations. As presented in Table 1, we note that there will be significant price shock to WAMC customers in maintaining the current methodology where corporate capex is allocated to the determinations by salaries. The bill impact for WAMC customers are further compounded due to the following regulatory decisions: • The WAMC 2016 determination did not provide sufficient capex allowance for ICT systems and corporate assets to support the transfer of WAMC functions into WaterNSW, including the startup/establishment costs required to support an additional 220+ FTEs, thereby placing additional pressure on WaterNSW's ability to reduce costs and minimise bill impacts for WAMC customers. • in 2012, IPART wrote off the value of the WAMC FY12 starting RAB. Given its low regulatory value, and minimal capex allowance for ICT systems and corporate assets, WAMC charges are particularly sensitive to any proposal to allocate shared corporate capex to the WAMC RAB. In contrast, using totex values to allocate corporate capex to the determinations can reduce the bill impacts for WAMC customers by approximately 7%. The impact of the change in allocation is relatively minor for Greater Sydney customers (e.g. Sydney Water) at 0.3% as shown in Table 1. WaterNSW observes that its revised Greater Sydney allocation (%) is comparable with the Greater Sydney allocation (%) applied by IPART for its 2016 Greater Sydney determination (i.e. 67% in the 2016-2020 determination compared to 63% in the proposal).
Causality ✓	WaterNSW considers totex as an allocator to represent a reasonable proxy for the corporate asset base and is therefore consistent with the IPART causality principle. WaterNSW considers that its amended proposal reflects a more effective approach to allocating corporate capex across the multiple IPART determinations.
Adherence to Accounting Standards ✓	There are no specific accounting standards for the selection of a cost allocator in this regard. However, more broadly, WaterNSW notes that its approach to capitalising overheads was reviewed in 2018 by KPMG, which found that 'Overall, WaterNSW's approach to overhead capitalisation and allocation appears to be in line with accounting standards' (KPMG p1).
Industry practice ✓	In its review of our overhead capitalisation policy, KPMG noted that Totex is commonly applied as an overhead allocator by other regulated entities, for example, Essential Energy and Jemena. It noted that the approach was 'reasonable, and similar to the approach currently adopted by comparable entities' (KPMG p2).

2.4.5 Potential Braidwood land disposal

As indicated in our response to the Issues paper, in our Pricing Proposal (Section 7.4.2), WaterNSW indicated that we intend to dispose of land parcels at Braidwood, which we consider

are in excess of our operational requirements. WaterNSW requested a ruling on whether the disposal of land parcels at Braidwood would be excluded from the operation of the IPART Asset Disposal guidelines. However, WaterNSW's request for advice has not addressed by IPART as part of its draft decision.

The Braidwood land parcel consists of approximately 28,050 hectares, which were originally acquired by the then Sydney Water Board between 1968 and the 1980s with the intention of building the 'Welcome Reef Dam' as part of Stage 2 of the Shoalhaven Scheme.

IPART indicated in the Issues Paper (Page 44) its policy position on asset disposals - if a business can make a convincing case that an asset was clearly non-operational at the line-in-the-sand, then, on an exception basis, IPART would not adjust the RAB for that asset sale.

IPART's rationale is that the RAB represents the economic value of the utility's assets used to provide customers with regulated or 'monopoly' services and that if an asset is not used to supply customers with these services then it should not be in the RAB. It follows that if an asset's value has never been included in the RAB (which means that customers have not been paying for its use) then its value should not be deducted from the RAB when it is sold.

In addition, WaterNSW notes that the stated reason behind IPART's policy position on the treatment of non-operational assets is because the Initial RAB established for the SCA and Sydney Water was not determined by reference to the value of the physical assets. IPART indicates in its 2017 Asset Disposals Policy Paper that:

- The Initial RAB was calculated by *discounting the operating profit of Sydney Water* using the Weighted Average Cost of Capital (WACC). That is, the initial RAB did not represent the aggregation of the accounting value of its physical assets and hence it is *not possible* to identify which specific assets contributed to that RAB and in what proportion;
- Given the difficulty of unravelling which assets were operational (and therefore included in the RAB) and which were non-operational at the time the line-in-the-sand was drawn (and the Initial RABs established), IPART considers that it should remove the regulatory value of all pre line-in-the-sand assets from the RAB when they are sold (by applying the RAB to DRC ratio to the sale values of these assets); and
- However, if a business can make a convincing case that an asset was clearly non-operational at the line-in-the-sand, then, on an exception basis, IPART would not adjust the RAB for that asset sale.[48]

The line of reasoning cited above was applied by IPART in its 2016 Sydney Water Determination when IPART decided that Sydney Water was not required to share the proceeds of the sale of its Central Workshops site with customers, as the site was non-operational in 2000.[49]

WaterNSW notes that IPART set an Initial RAB valuation for the former SCA which was derived from a number of valuations provided by Sydney Water and determined by IPART in its 1996 Sydney Water determination. The initial valuation was developed by Price Waterhouse Coopers (PWC) taking into account a number of factors including the net book value, economic values indicated in Sydney Water's 1996 price determination, and the Modern Engineering Equivalent Replacement Asset (MEERA) / Depreciated Optimised Cost (DOC) valuation. As part of the review, PWC was required to consider a number of issues including:

- Minimising the account and taxation adjustment which may be required on transfer and in the figure;
- Assessing the implications for the treatment of the remining asset within Sydney Water;

[48] See IPART *Asset Disposals Policy Paper 2017.* Page 24.

[49] See IPART Review of prices or Sydney Water Corporation from 1 July 2016 to 30 June 2020 Final Report June 2016. Page 119.

- Achieving an acceptable commercial rate of return, recovery of costs through revenue; and
- Supporting a level of debt reflective of an appropriate capital structure of the SCA and one which satisfies a credit rating of around 'A'.[50]

WaterNSW also notes that in the 1996 IPART determination, the value of Sydney Water's RAB, which incorporated bulk water assets, was determined using the *capitalisation of the current level of gross operating surplus*.[51]

If Sydney Water's Central Workshop land was assumed to have not entered the RAB, then it follows that the same treatment should apply to the Braidwood land parcels given that both land parcels were non-operational in 2000 and noting that the Initial RAB established for the former SCA was initially derived from a Sydney Water IPART valuation.

In summary, WaterNSW maintains that the land parcels meet the criteria for being non-operational (and hence not included in the RAB) at the time the 'line-in-the-sand' RAB was established in 2000. Therefore, the RAB should not be adjusted for the proceeds of any future Braidwood land sales.

If the land is ultimately sold it would be inconsistent with IPART's policy position and the Sydney Water Central Workshop precedent to reduce the RAB for the asset sale.

We note that IPART has established a process for WaterNSW to seek a letter of comfort in respect of capital projects that have not been included in current/forward prices. It would be consistent with the letter of comfort process for IPART to provide an opinion on whether the Braidwood disposals are exempt from the operation of the IPART Asset Disposal Rules.

WaterNSW has provided sufficient information to IPART on why the Braidwood land parcels should be considered a non-operational asset prior to the 'line in the sand' (e.g. date of acquisition precedes the establishment of the Initial RAB; the Welcome Reef Dam was not operational prior to (or post) the establishment of the Initial RAB; the Government has postponed the construction of the Welcome Reef Dam indefinitely).

2.5 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, reduce or eliminate the prospect of extreme windfall gains/losses accruing to stakeholders as a result of regulatory forecast error;

[50] Page 8 Sydney Catchment Authority Prices of Water Supply Services Mid term review of price path from 1 October 2000 to 30 June 2005 Independent Pricing and Regulatory Tribunal May 2003.

[51] https://www.ipart.nsw.gov.au/files/sharedassets/website/trimholdingbay/sydney_water_corporation_-_prices_of_water_supply_sewerage_and_drainage_services_-_medium_term_price_path_from_1_july_1996.pdf

- The implications for the financeability of WaterNSW's business were IPART to not adapt its regulatory framework and methodology to the new economic circumstances; and
- How heightened uncertainty should be reflected in the WACC.

In relation to how uncertainty around the inflation can be best mitigated, we note that market based measures of expected inflation have fallen dramatically over the last month. They are now a full 2.0% below the current IPART method estimate of 2.3%.

Our response is summarised below and is supported by an expert report by CEG titled *WACC, inflation compensation and financeability for WaterNSW*. The CEG report is provided as Attachment 1.

In summary, to address financeability concerns, WaterNSW proposes that IPART puts in place:

- A mechanism to **eliminate the impact of inflation forecast error** on the compensation provided for WaterNSW's services through annual adjustments;
- **Increasing revenues in the 2020 Determination period** by either lowering the inflation forecast in IPART's revenue model (e.g., to 1.7%) or by including a new building block in the model that captures the cost difference between an inflation forecast of 2.3% and 1.7%; and
- Should IPART decide not to implement the above measure, then as a minimum we consider that an **uplift to the equity beta** of at least 0.2 should be applied in recognition of the financeability facing equity holders and the risks of locking in a low ROE for four years. A 0.2 uplift to the equity beta raises the post-tax WACC by around 0.6%.

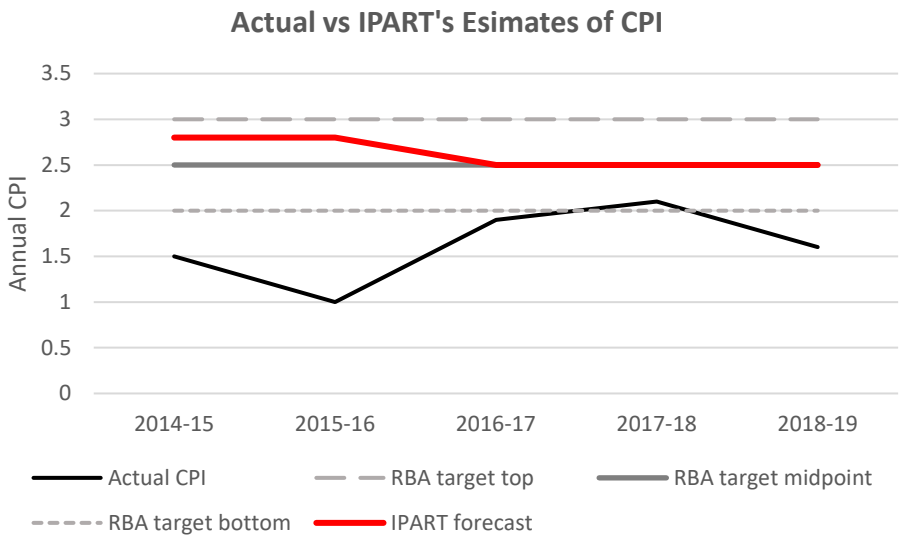
IPART indicated in the Draft Report that it will adopt an inflation estimate of **2.30%**[52] per annum for deflating the post-tax nominal WACC to a post-tax real WACC.

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.

The following figure illustrates how IPART's inflation forecasts have tracked against actual inflation over the past five years.

[52] See IPART February 2020 Bi-annual WACC update.

Figure 2 - Regulatory forecasts of inflation and actual CPI



Source: WaterNSW using RBA (June Qtr.) data

As illustrated above:

- Actual inflation has not reached the RBA's midpoint target of 2.5% for the past 5 years; and
- Actual inflation has been above the RBA target range lower boundary (2.0%) once in 2017-18.

In addition:

- Actual CPI has been above the regulators' forecasts only twice since 2006-07 (once was the onset of GFC and the other instance (2011) saw broad-based inflationary pressure across the economy
- Actual CPI has not been above the regulators' forecast since 2010-11 (was equal in 2013-14).

Systemic over-forecasting of the WACC results in prices set at artificially low levels that are insufficient to achieve the post-tax nominal WACC calculated by the IPART, thereby placing pressure on the credit metrics and financeability of the businesses. WaterNSW has been bearing the forecasting risk given the largely asymmetric nature of the estimating process.

The effect of overestimating inflation and producing a lower WACC (and therefore artificially low prices) over the determination period, is significant and WaterNSW calculates that it has experienced a revenue shortfall of **$56 million** over the four years of the 2016 Determination due to asymmetric forecasting risk.

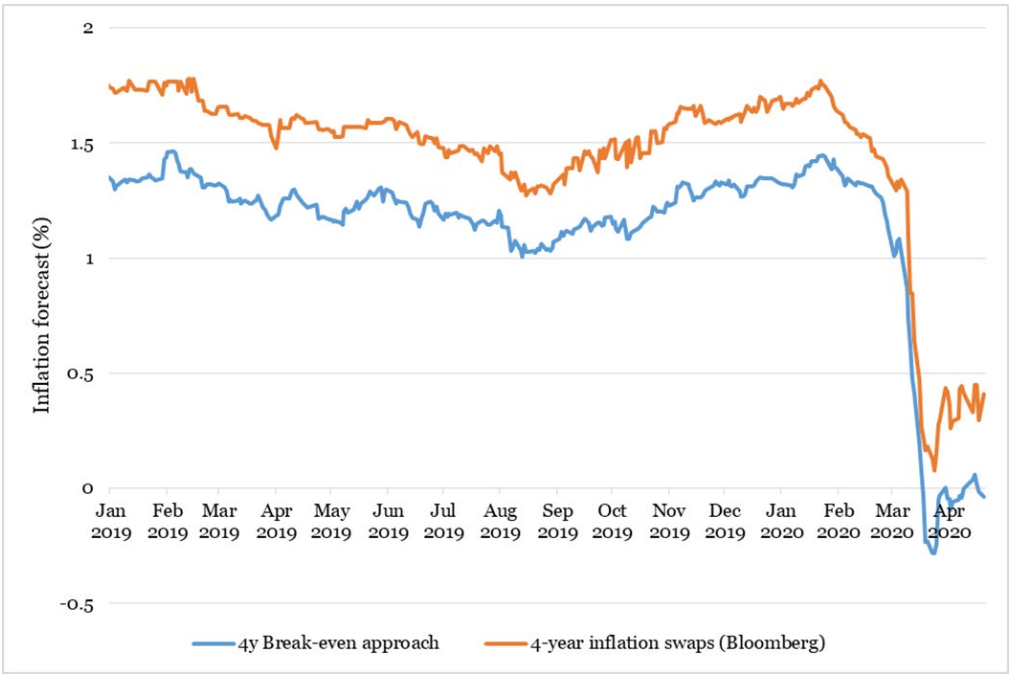
Addressing the financial impacts associated with IPART's inflation forecasts that systemically overestimate inflation is an important element when ensuring the financeability of a regulated firm. We propose the following principles to guide our approach to addressing inflation forecasting risk:

- Businesses should not solely bear the risk of IPART's inflation forecasting error;
- Revenue shortfalls due to inflation forecasting error should be recovered, ideally within the regulatory period to avoid significant financeability pressures and to ensure businesses are able to recover their efficient costs as set out in the Determination;

- Pricing stability should be maintained and the risk of large price adjustments both within and between determination periods should be avoided;
- Addressing the forecasting risk should result in no windfall gains or losses and that any revenue shortfall (or increase) is measured in net present value (NPV) terms;
- As far as practicable, be consistent with IPART's 2018 WACC Review outcomes; noting however
- The economy is in uncharted territory due to the effects of COVID-19 and bushfire and drought recovery that is placing significant pressures on economic growth and unemployment, leading to a low inflation environment that was not forecast at the time of the 2018 WACC Review. The current approach to forecasting inflation is not 'fit for purpose' given the economic conditions we face today and is impacting on the financial sustainability of business with returns on equity at an all-time low. The current **unprecedented economic conditions have escalated the need for changing the approach to how inflation is accounted for.**

As illustrated in Figure 3 below, market based measures of expected inflation have fallen dramatically over the last month. They are now a full 2.0% below the current IPART method estimate of 2.3%. In addition, the breakeven inflation series suggests that bond market participants are pricing in close to zero inflation on average over the next four years. Whether one considers these market estimates of inflation will be borne out in reality, they are, at a minimum, indicative of extremely high levels of uncertainty about the future path of inflation.

Figure 3 - 4 year breakeven inflation and inflation swaps



Should IPART fail to adapt its approach to the new economic circumstances, then it is highly likely that its forecast for inflation, based on its previously published method, will be materially different to actual inflation, thus creating very material windfall gains and losses for stakeholders (of more around than 12% of RAB per annum if market based estimates turn out to be correct)

Even if IPART's forecast for inflation is assumed to be accurate, there will still be a financeability problem for WaterNSW - a problem which will be extremely aggravated if, as is highly likely, IPART's inflation forecast does not accurately forecast actual inflation.

At a high level, and as detailed in Attachment 1, WaterNSW proposes that IPART should:

- Put in place a mechanism to eliminate the impact of inflation forecast error on the compensation provided for WaterNSW's services (i.e. a true up); and
- Put in place a mechanism by which revenues in the upcoming regulatory period are increased, in a present value neutral manner, to improve the financeability of WaterNSW's business.

There are a number of different ways for IPART to implement policies that give effect to these solutions. The specific implementations CEG examines in its report are:

- Eliminate windfall gains and/or losses from inflation forecast error by having a mechanism to **"true up" any inflation forecast error**. The mechanics for how this could be achieved include the following two options:
    - Rolling forward the opening RAB in 2024 by using the same value for inflation as the forecast for inflation that is used in IPART's revenue model to derive a real WACC. That is, instead of using actual inflation in the RAB roll forward model, the forecast of inflation that was used in the revenue model could also be used in the RAB roll forward model;
    - Creating a new asset value to be included in the RAB in 2024 that is calculated as the value of the inflation forecast error in the 2020-24 regulatory period. This can then be depreciated over a defined period (e.g., one or two regulatory periods). (This is mathematically identical to approach above if the period over which this asset is depreciated is the remaining average life of the RAB); and.
- **Increase revenues in the 2020 Determination** period to address financeability concerns by one, or all, of the following measures:
    - Adopt an effective inflation forecast that is lower than that derived from IPART's previously published method. A lower effective inflation forecast can be achieved by:
        - Directly lowering the inflation forecast in IPART's revenue model (e.g., to 1.7%); or
        - Including a new building block in the model that captures the cost difference between an inflation forecast of 2.3% and 1.7%; and or
    - Accelerate depreciation over the 2020-24 period in order to bring forward compensation to the 2020-24 period in an NPV neutral manner.

An **annual true up** for inflation forecast error within 2020 Determination period is a single measure that combines both solutions (i.e., combines both an NPV neutral inflation true up and raising revenues in 2020-24 to account for the high risk of below forecast inflation).

Specifically, if there was a difference between actual and forecast inflation during a given year of the 2020-24 regulatory period, prices in subsequent years of the 2020-24 regulatory period would be adjusted upwards/downwards as appropriate to eliminate the NPV impact of the forecast error.

While annual true ups could be avoided if IPART increased revenues in the 2020 Determination period to address financeability concerns, they would be critical to achieving acceptable credit metrics and financeability if IPART maintains an effective inflation forecast of 2.3%.

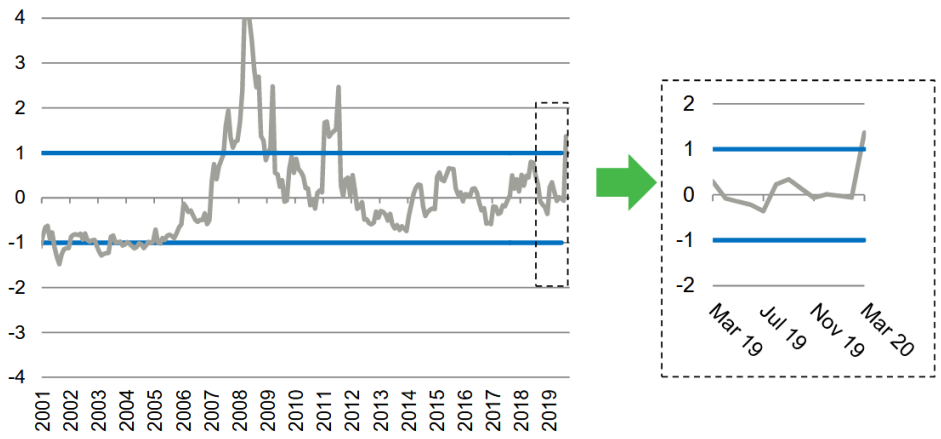
In terms of the effect of heightened uncertainty on the WACC, we consider that if the policies set out above are implemented then no uplift is warranted. However, if these proposed policies are not adopted then, **an uplift of around 60bp to the WACC as a minimum** is warranted.

IPART's uncertainty index

IPART publishes an uncertainty index and in March 2020 the index exceeded the 'one standard deviation' threshold that IPART established as a trigger for it to review its WACC estimates.

Figure 4 – IPART's uncertainty index

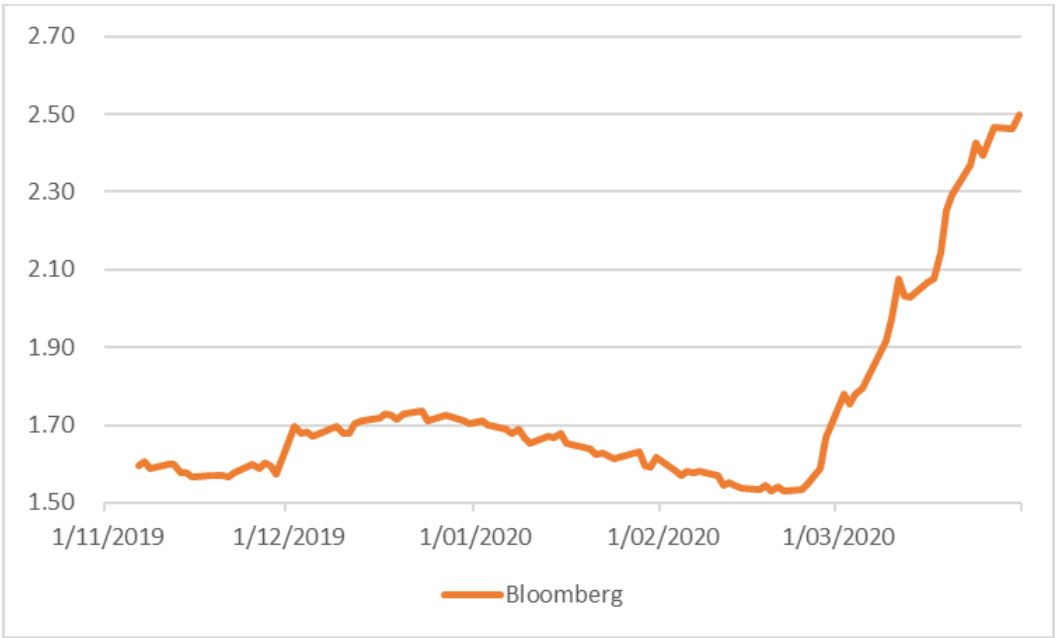
Figure 1 IPART's uncertainty index for end of March 2020



Source: IPART

Consistent with this, the risk premium on 10 year BBB debt, as reported by Bloomberg, has increased by 65% in Australia since 31 January 2020 and by 74% to 94% in the USA, Canada and the UK. The risk premium on Australian BBB 10-year debt as estimated by Bloomberg is provided in Figure 5 below.

Figure 5 - Risk premium on AUD BBB 10 year debt as estimated by Bloomberg



Source: Bloomberg, CEG analysis

The RBA has intervened in financial markets in unprecedented ways and, with the official cash rate reduced to just 0.25%, has committed to unorthodox monetary policy - undertaking the purchase of government bonds targeting interest rates at the 3 year tenor (rather than the overnight rate which has, until now, been the RBA policy target). Major corporations, such as Virgin Australia, are entering into administration.

As indicted by CEG regarding current economic uncertainty:

> *The uncertainty around economic activity generally is similar, if not amplified, when it comes to forecasts of inflation. Consistent with the IMF's commentary on severe economic uncertainty and strong downside risks to forecasts, many respectable economic forecasters are warning of the potential for deflation.*
>
> *…*
>
> *The potential for deflation is heightened in current economic circumstances by virtue of the zero lower bound constraint on orthodox monetary policy. This occurs when monetary policy rates are close to zero such that there is no room left for the RBA to materially cut those rates further.*
>
> *…*
>
> *However, alongside the fears of prolonged deflation, some economists are also worried about inflation increasing once the COVID-19 threat abates (e.g., post vaccine). The theoretical channel via which this may occur is if fiscal and monetary stimulus, in an attempt to reduce unemployment, pushes against supply chains that have been fractured by the epidemic.*
>
> *In summary, it is theoretically possible that inflation will rebound once the COVID 19 threat abates and it is possible that this abatement will occur within the next four years. Thus, while the weight of economic threats is for low or negative inflation, there is a potential for higher inflation outcomes – even outcomes that are within the RBA range of 2-3% pa. (There would appear to be little prospect of consistent above target inflation, given that the RBA has unlimited potential to raise interest rates in response to an inflationary outbreak).* [53]

In this regard, it is critical to keep in mind that market based measures of expected inflation over the next four years are less than 0.5% p.a. (see Figure 3 above). While these measures may not be perfectly accurate, they have materially better predicted actual inflation than an assumption of 2.5% over the last ten years. At a minimum, the extreme difference between market estimates at the mid-point of the RAB target band suggests an extreme level of uncertainty about the accuracy of any inflation forecast.

Financeability

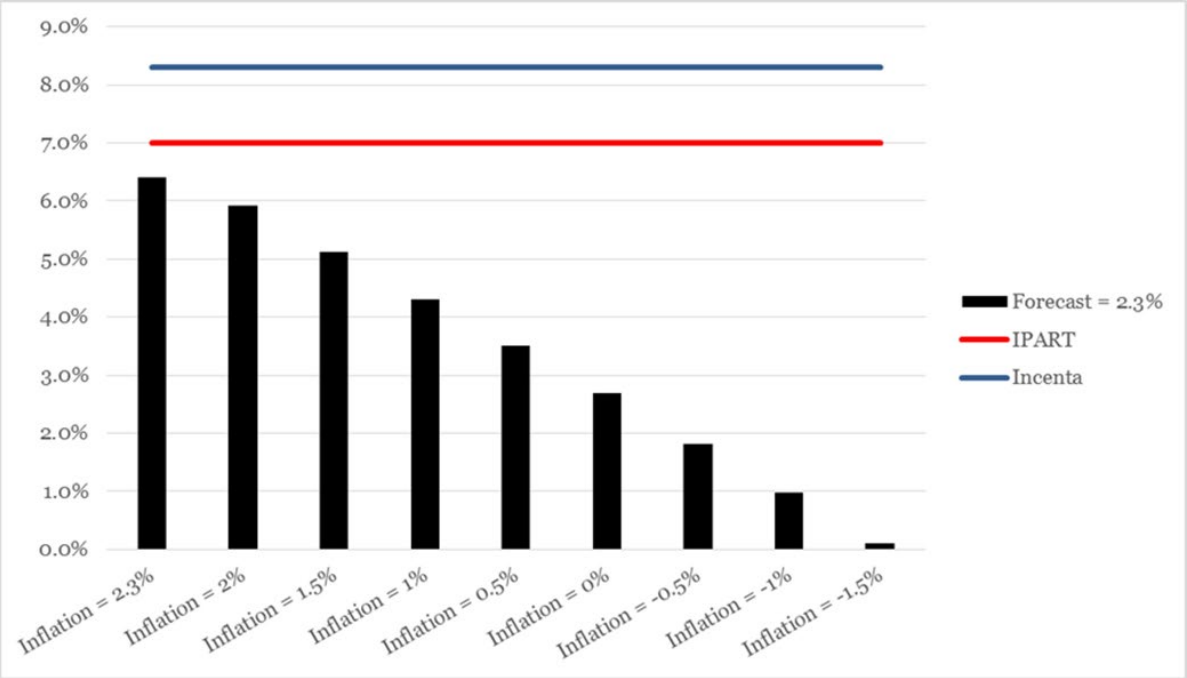
The heightened uncertainty about inflation outcomes has important implications for the financeability of WaterNSW. In IPART's draft report, WaterNSW was projected to achieve lower than the IPART BBB threshold for real free funds from operations (FFO) over debt (albeit with above threshold real interest cover ratio (ICR)).

However, these forecasts of financeability metrics are predicated on IPART's inflation forecast of 2.3% actually occurring. Specifically, the metrics forecast by IPART are real (inflation adjusted) metrics that explicitly rely on WaterNSW being able to raise new debt each year (a source of funds) backed by a RAB that is assumed to be rising at 2.3% p.a.

[53] See CEG report titled "WACC, inflation compensation and financeability" provided as Attachment 1. Page 8.

Given the evidence surveyed above, there is a material probability that actual inflation will be lower than this. Figure 6 below shows the average FFO to debt over the four-year regulatory period under different assumptions about what actual inflation turns out to be. In each case it is assumed that IPART's forecast of inflation is 2.3%. The lower actual inflation is, the lower the outturn real FFO to RAB will be – this is because growth in the RAB is lower and, therefore, there is less funding available from new debt backed by the growing RAB.

Figure 6 - Real FFO to Debt for different actual inflation outcomes



*Source: CEG analysis, IPART draft report financial model for WaterNSW; *These scenarios assume a current debt margin of 2.55% (including 16 bp for debt raising costs and annualisation factor adjustment) as estimated in an accompanying CEG report for March 2020.*

As illustrated above, if actual inflation is in line with market-based forecasts (between 0.0% and 0.5%) then real FFO to debt would be less than half of the IPART BBB threshold of 7.0%.

As discussed in detail in Attachment 1 and discussed above, there are two potential, mutually compatible, mechanisms by which IPART could mitigate the risk to measured financeability metrics over the 2020-24 regulatory period:

1. Eliminate windfall gains and/or losses from inflation forecast error by having a mechanism to "true up" any inflation forecast error
2. Increase revenues in the 2020-24 period by, for example:
    - Adopting a lower inflation forecast than 2.3% during the 2020-24 period, or introducing a new building block in the model that captures the cost difference between an inflation forecast of 2.3% and 1.7%; and or
    - Accelerating depreciation over the 2020-24 regulatory period.

Uncertainty and the cost of equity

The current levels of market wide uncertainty can be expected to raise the required return for equity investors across the economy including for investors in WaterNSW. We consider that the most effective way that IPART can deal with this uncertainty is to implement the solutions set out above and as discussed in the CEG report (Attachment 1) relating to inflation estimates.

However, even if these solutions are put into effect, it is reasonable to implement a modest increase in the risk adjusted return. This could be achieved, for example, by giving lesser weight to the current WACC and greater weight to the long-term WACC.

This increase recognises that IPART's WACC regime already responds to heightened uncertainty by virtue of raising the current market risk premium estimate well above the long term estimate (9.7% vs 6.0%).

However, if IPART chose not to implement the policies set out above relating to the inflation "true up") and NPV neutral revenue increases in 2020-24, then the uplift to the WACC for heightened uncertainty should be much greater. Indeed, should IPART not commit to an inflation 'true up' then, arguably, equity in WaterNSW will be regarded as higher risk than the market as a whole over the next four years.

Should IPART decide not to implement a 'true up' mechanism for inflation forecast error and not increase cash flows in the 2020 Determination period, then as a minimum we consider that an uplift to the equity beta of at least 0.2 should be applied.

A 0.2 uplift to the equity beta raises the post-tax WACC **by around 0.6%**. This same uplift can be achieved by giving zero weight to the current WACC estimates and 100% weight to the long-term WACC estimates.

2.5.1 Annual updates to the costs of debt

In its Draft Determination, IPART did not accept WaterNSW's proposal to update the cost of debt on an annual basis and instead decided to use a regulatory 'true-up' approach. In the Draft Report, IPART stated:

> *Our draft decision is to use a regulatory true-up approach. In its proposal Sydney Water stated that a regulatory true-up provides price stability that is preferable to its customers. We agree with that position. In its proposal, Water NSW stated that annual updates are better for customers, however it was referring to the end use customers. That is, Sydney Water's customers. We consider that Sydney Water is better placed to understand its customers than Water NSW is.*
>
> *There are also benefits to alignment of the annual update/true-up approach between Sydney Water and Water NSW as these two entities are part of the same integrated system. These include a lower administrative burden and less shifting of risk from one entity onto the other.*[54]

WaterNSW maintains its support for annually updating the cost of debt. Our reasoning is outlined in Appendix 4.

2.6 Customer number and sales forecasts

2.6.1 Customer number forecasts

WaterNSW supports the IPART Draft Determination findings with respect to customer numbers, that aligns to the numbers contained in our original proposal.

[54] See IPART Draft Report, page 129.

2.6.2 Sales forecasts for Sydney Water

Section 10.2 of our Pricing Proposal outlined the reasons why WaterNSW does not develop its own water demand forecast for Sydney Water's end use customers for pricing purposes in the determination. WaterNSW does not have access to Sydney Water's detailed usage, billing, and other data for their customers which are key components in forming an accurate demand forecast. On this basis, we adopted the latest demand forecast provided by Sydney Water for operational planning and financial modelling purposes.

WaterNSW supports the idea that sales volumes to Sydney Water should be based on Sydney Water's forecast sales to end use customers with several adjustments. WaterNSW notes that Atkins-Cardno in their Final Report have suggested some minor adjustments to account for 'process losses'. WaterNSW agrees that additional volumes required by Sydney Water to account for losses in their network should be included in the forecast of sales for WaterNSW.

If this water is purchased from WaterNSW and required to meet customers' water needs, it should form a component of Sydney Water's total demand for price setting purposes. In calculating the adjustment for process losses, Atkins has applied a process loss factor to the capacity of all Water Filtration Plants except Prospect. WaterNSW considers that this factor should instead be applied to the total demand at these filtration plants, noting that the filtration plants would not always operate at maximum capacity. This yields a figure for process losses of approximately 0.9 GL p.a. compared to the 2.2 GL p.a. applied by Atkins.

In addition, we consider that any further adjustments made to Sydney Water's forecast sales by IPART should also be reflected in WaterNSW's sales volumes to Sydney Water.

2.6.3 Sales forecasts for Councils

WaterNSW notes that there appears to be a transposition error in IPART's table 7.1 where the recommended forecasts for Goulburn Mulwaree Council and Shoalhaven City Council in the 'unrestricted' scenario appear to be reversed in the 'drought' scenario as follows.

2.7 Pricing and pricing structures

WaterNSW considers that anchoring current prices and applying the average price change across all customers is the most practical and equitable approach to price setting for the 2020 determination. This approach implicitly builds on the cost allocation between customers from the 2016 determination, which WaterNSW considers remains appropriate for the 2020 determination.

This approach minimises the potentially significant price shocks that could otherwise occur for raw water and unfiltered water customers if prices were recalculated based on a 'bottom-up' approach at each review.

2.7.1 Fixed / Variable charges for Sydney Water

IPART's draft finding is to maintain its current price structure (i.e. 80:20 fixed to usage ratio).

WaterNSW's original proposal sought to maintain an 80% fixed and 20% variable structure to our Sydney Water tariffs that also included introducing a demand volatility adjustment mechanism (DVAM), maintaining the current approach to SDP pricing and maintaining the current approach to Shoalhaven transfers (subject to the amendments to the formula as outlined in our original proposal and as discussed in our response to Question 23 of the Issues Paper).

WaterNSW considers that the above regulatory instruments are integral features of the regulatory framework for any price structure with a variable charge.

In its Issues Paper, IPART suggested that a simpler and potentially more effective approach may be to change the price structure to Sydney Water to a fully fixed charge (i.e. 100% fixed and 0% variable). WaterNSW did not support a 100% fixed charge as the approach does not reflect the principles of efficient pricing where at least some of WaterNSW's costs are variable and should be reflected in variable charges to Sydney Water in order to send efficient usage signals.

Consistent with our response to the Issues Paper, we suggested that a higher fixed charge of 90% fixed with a 10% variable structure is introduced if IPART may address some of IPART's concerns and better align our cost and pricing structures. We noted, however, that increasing the fixed charge to 90% would not eliminate the need for a demand volatility adjustment, the current approach to SDP pricing and a pass through of the costs of Shoalhaven transfers.

We note that IPART has accepted our proposals to maintain pricing arrangements for Shoalhaven transfers (as adjusted to update the formula) and SDP pricing. IPART has not, however accepted our recommendation for the introduction of a DVAM. WaterNSW therefore proposes that:

- **If IPART accepts our recommendation for a DVAM then we accept IPART's draft finding to maintain an 80:20 fixed to usage ratio;**
- **If IPART rejects our recommendation for a DVAM, we propose modifying the pricing structure to a 90:10 fixed to usage ratio.**

Managing volume risk is an important element of the regulatory framework and, as discussed in Section 2.1.9, IPART's rejection of our proposal to introduce a DVAM results in WaterNSW carrying an unacceptable level of volume risk. While our preference is for IPART to incorporate a DVAM into the Final Determination, a second best option to manage our residual volume risk would be to modify the fixed to variable usage ratio to 90:10.

2.7.2 SDP volume adjustment

WaterNSW support's IPART's approach to maintain the current approach of tying WaterNSW's volumetric charge to Sydney Water to SDP's operating regime as recommended in our Pricing Proposal. As indicated by IPART, this approach reduces revenue risk to WaterNSW (which therefore assists in ensuring WaterNSW is able to recover its efficient costs) and is a move towards bulk water prices that better reflect the scarcity value of dam water.

WaterNSW suggests that the same mechanism should apply to any other bulk water supply (e.g. a new or expanded desalination plant) that may arise during the 2020 determination period.

On 19 December 2019, IPART received a request from the Minister outlining the terms of reference for IPART to undertake a review of the pricing arrangements for the expanded SDP (review of 'Expansion Services').

Under the Draft Determination, IPART proposes to broaden the scope of the SDP price adjustment mechanism. Under the revised mechanism, the Sydney Water usage charge is re-set using either the actual or maximum volumes that would be displaced from WaterNSW' sales under an expanded SDP.

We note that the nameplate capacity of the expanded plant has been used as an upper limit forecast. The additional volumes used to reset the Sydney Water usage charge are calculated as the lesser of:

- The actual volumes supplied to Large Customers (e.g. Sydney Water) by the SDP; and
- The greater of:
    - 7,980ML per month; or

- If the SDP plant is expanded, the monthly nameplate capacity of the expanded plant in ML.

WaterNSW supports IPART's draft decision to expand the operation the SDP price adjustment mechanism. WaterNSW agrees that the improvements to the formula provide enough flexibility to ensure WaterNSW can recover its efficient costs under a scenario where the SDP is expanded.

WaterNSW suggests that IPART define the SDP nameplate capacity in its determination of SDP 'Expansion Services'. The nameplate capacity should equal the sum of the current and additional capacity installed at the Plant and should also align with the total maximum capacity at the Plant after expansion.

2.7.3 IPART's dynamic water usage price

IPART in its Draft Determination proposes to introduce dynamic pricing to adjust the usage price for the impact of drought.

The drought usage price is triggered under a *Drought Response Quarter* as per Schedule 6 of the IPART Draft Determination. The *Drought Response Quarter* is defined as *the last Weekly Verified Storage Report of the previous Quarter, Available Storage:*

> *(a) is less than 60%; or*
>
> *(b) is equal to or greater than 60% but less than 70%, in circumstances where Available Storage has not equalled or exceeded 70% since Available Storage last fell below 60%.*

While WaterNSW is generally supportive of IPART's dynamic pricing for the impact of drought, we are concerned that the definition of 'Drought Response Quarter' is not flexible enough to adapt to the policy changes that are likely to be implemented by Government with respect to drought.

For example, WaterNSW considers that the trigger point for the drought usage price may not align with the timing of water restrictions. If the drought usage price is not activated based on the introduction of water restrictions (e.g. if dam levels are above 60%), then the mechanism would not address the revenue risk faced by both WaterNSW and Sydney Water in periods of drought. This is inconsistent with the purpose of the drought usage price, which is to give WaterNSW a reasonable opportunity to recover its efficient costs in times of drought or water restrictions when demand is suppressed.

The Minister has the authority to bring forward any measures restricting water usage under clause 24 of the *Sydney Water Regulation 2017*. For example, this occurred in 10 December 2019 when the Minister brought forward level 2 water restrictions in a manner that, while necessary, was inconsistent with the 2017 metropolitan water plan.[55] Level 1 water restrictions were also brought forward on 1 June 2019 under similar circumstances.[56]

As of April 2020, level 1 water restrictions are still in effect across Sydney while dam levels exceed 80 percent. Under current circumstances, the drought usage price will not be triggered yet demand continues to be suppressed through level 1 water restrictions which are enforced through civil penalties.

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[55] http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mja4/~edisp/dd_208110.pdf

[56] See Page 1663 of the 31 May 2019 Gazette https://gazette.legislation.nsw.gov.au/so/download.w3p?id=Gazette_2019_2019-55.pdf

WaterNSW recommends that IPART refer to the Government's decision to either introduce or revoke water restrictions as the trigger for the drought/non-drought usage price. This could be achieved by amending the Drought Response Quarter definition as follows (inserted text bolded):

> *(a) is less than 60%; or*
>
> *(b) is equal to or greater than 60% but less than 70%, in circumstances where Available Storage has not equalled or exceeded 70% since Available Storage last fell below 60%;*
> ***or***
> ***(c) water restrictions are in place in Sydney.***

WaterNSW considers that the above adjustment to the Drought Response Quarter definition better captures the intent of the dynamic pricing and reflects that the introduction of water restrictions is an event that is outside the control of WaterNSW and Sydney Water.

2.7.4 Pricing structure for Councils

WaterNSW supports IPART's draft decision to decrease prices to councils by the same percentage reduction as Sydney Water's prices.

2.7.5 Pricing structure for raw and unfiltered customers

WaterNSW supports IPART's draft decision to decrease prices to raw and unfiltered water customers by the same percentage reduction as Sydney Water's prices.

3. Other matters

3.1 IPART criticism of approach to drought planning

WaterNSW notes IPART's comments regarding the importance of drought planning. We strongly reject any assertion that coordinated planning is not being undertaken within WaterNSW and or between WaterNSW, Sydney Water and the NSW Government.

Our concerns arise due to the following comments in the Draft Report.

- Atkins-Cardno noted (in Box 4.1 of the Draft Report) that:

  … the current drought options study did not incorporate sophisticated economic optimisation or set out a clear process of options identification and evaluation.

  WaterNSW strongly rejects this assessment and considers it unfounded. We have undertaken a range of traditional cost / benefit analyses, employed sophisticated econometric modelling and have sought the advice of external experts to inform our analysis of the complex suite of drought options to meet the Greater Sydney's water supply needs.

- IPART also noted (in Box 5.2 of the Draft Report) that:

  A key theme of our review is the importance of co-ordinated, long-term planning across Greater Sydney between Water NSW, Sydney Water and the NSW Government. In relation to drought response projects, this is to ensure they are efficient and include consideration of the organisation best placed to undertake any future works. These planning activities should align to long-term integrated planning across Greater Sydney in response to weather variability.

WaterNSW wishes to clarify and confirm that effective co-ordinated long-term planning across Greater Sydney between WaterNSW, Sydney Water and the NSW Government is enshrined in our planning processes to ensure long-term water supply needs of Greater Sydney are met. While we agree with IPART on the critical need for such coordinated planning, we urge IPART to amend its wording in the Final Report to ensure that it is not misconstrued and that unfairly suggests that such coordinated planning is not currently being undertaken to a high standard. Failing this, we ask IPART to provide evidence to support their conclusion.

3.2 IPART's sharing for unregulated costs

IPART's standard approach for sharing unregulated revenues which are generated from regulated assets is to apportion the revenue in equal shares between the regulated entity and its customer (50:50 revenue sharing rule).

The primary concern for WaterNSW is whether the 50% revenue sharing ratio provides the right incentives to encourage water utilities to pursue asset solutions which offer customers and shareholders the best value from the assets.

WaterNSW understands that Sydney Water has raised concerns that the 50:50 revenue sharing ratio is not an appropriate split, particularly where

- the incremental cost for the asset is greater than the incremental revenue; and
- the regulated entity is disincentivised from pursuing non-regulated revenue streams despite it being financially efficient to do so.

WaterNSW's supports these comments.

3.3 Incentive payment mechanisms with Sydney Water

During the 2020 Greater Sydney Price Review, WaterNSW advised that both WaterNSW and Sydney Water were negotiating a revised Raw Water Supply Agreement (RWSA) that would replace the existing RWSA, including the Water Quality Incentive Payment Scheme (AWQIP). The revised RWSA is expected to introduce a performance payment incentive scheme focused on promoting efficient asset availability and configuration activities.

In its Draft Determination, IPART decided to defer price regulating the incentive scheme under the revised RWSA. This would allow WaterNSW and Sydney Water to agree to the terms of the scheme and to administer and implement the incentive payments outside the IPART determination. WaterNSW supports IPART's position.

To ensure that the Final Determination is consistent with IPART's rationale to permit unregulated pricing arrangements over the 2020-24 determination period for the RWSA incentive scheme, WaterNSW suggests that IPART insert the following provision in its Final Determination:

> *Any charge payable under an incentive payment mechanism pursuant to the RAWA is wholly consistent with and is expressly authorised under the IPART 2020-24 Final Determination. The IPART 2020-24 Final Determination does not preclude WaterNSW or Sydney Water from reaching agreement on or making payment for any charge which is payable under an incentive payment scheme pursuant to the RWSA.*

3.4 Costs sharing for recreational areas

Do you agree with our draft decision to share the efficient cost of recreational services between Water NSW's water customers and the direct users of recreational services (or

the NSW Government on behalf of broader community)? Or do you consider there is merit in the direct users of recreational services (or the NSW Government on behalf of broader community) funding 100% of the efficient costs of recreational services?

The IPART Draft Decision proposes to share the cost of recreational services in equal shares between the water user and either Government or recreational users (through fee for service arrangements).

The relevant sections of the Draft Decision are outlined below from page 17-18.

> *For context, Water NSW incurs $1.5 million of operating expenditure for recreational facilities over the 2020 determination period (or less than 1% of NRR over the determination period)*
> …
> *We consider it reasonable that Water NSW provides access to recreational areas on the basis that the benefits (from reduced risks and costs of unauthorised entry to other parts of the catchment area) exceed the costs (from providing and maintaining recreational areas).*
> …
> *However, in providing these recreational areas, we note that Water NSW appears to go above and beyond what is required for catchment management. It appears that Water NSW promotes its recreational areas as attractions. This includes offering overnight camping and school excursion programs at certain locations free of charge. These activities appear to go beyond the general scope of catchment management. We are not suggesting Water NSW should not provide these additional services. Rather, we are assessing who is causing the need for these costs to be incurred and therefore who should pay for these costs.*
> …
> *On balance, we consider a 50/50 sharing of efficient costs is reasonable between water customers and direct users (or the NSW Government on behalf of the broader community), instead of fully recovering these costs through regulated water prices*
> …
> *In Appendix H, we discuss the adjustments we make in operating expenditure to ensure that water customers only pay for 50% of costs associated with recreational facilities. Of the $1.5 million of operating expenditure that Water NSW's incurs for recreational facilities over the 2020 determination period, we have made a draft decision to include $750,000 (50% of Water NSW's proposed expenditure for recreational areas) as part of their operating allowance. This represents about 0.1% of the total NRR over the 2020 determination period.*

In response to the IPART Issues Paper and during the Public Hearing, Water NSW stated that providing and maintaining recreational areas is part of its catchment management activities and is a more cost effective option than the alternative (i.e., attempting to restrict access and managing the risks of unauthorised access into catchment areas). We maintain this position.

WaterNSW has not been approached by the community to change the current approach to funding the costs of recreational areas. Combined with our view that these functions are or relate to monopoly services, we maintain our preferred approach as outlined throughout the consultation process that the operating expenditures for recreational areas should continue to be funded through water prices.

3.5 WAMC licensing fees

Using the charges in the WAMC Determination, WaterNSW has included approximately $3.5 million per annum ($2019-20) in WAMC licensing opex over the upcoming 2020-24

Determination period. The WAMC licensing fees represent an uncontrollable cost for WaterNSW under the Greater Sydney Determination.

We note that several structural changes have occurred in the water industry over the current determination period. These include:

- WAMC functions that were previously undertaken by DPI Water in 2016 are now carried out by WaterNSW DPIE and NRAR.

- In 2016, a range of functions previously undertaken by DOI were transferred to WaterNSW, such as customer transactions, compliance investigations, licensing administration and billing, water quality monitoring, hydrometric assessment and metering operations.
- Subsequent to this transfer, the independent Natural Resources Access Regulator (NRAR) was established by legislation with total responsibility for compliance and enforcement of water laws in NSW formerly carried out by WaterNSW since 2016.

Because of these changes, WaterNSW believes that the 2016-2020 WAMC Determination charges may not be appropriate basis to forecast the future expected cost of WAMC licensing fees over the 2020-24 Determination period

WaterNSW had submitted that it would be prudent for IPART to permit a pass through of actual WAMC licensing costs, instead of a fixed cost allowance, for the upcoming 2020-24 Determination.

However, this proposal has not addressed by IPART as part of its draft decision.

Preliminary analysis suggests that the establishment of NRAR will result in substantial uplift in WAMC licensing fees over 2020-24 determination period under a scenario of cost reflective pricing.

NRAR/DOI and WaterNSW intends to submit a Cabinet proposal to Government supporting a 5% p.a. uplift in WAMC prices over the 2021-25 WAMC determination period. This scenario would result in an under recovery of licensing fees of approximately 1.0M over the 2020-24 determination period.

Should IPART disagree with WaterNSW's proposal to establish pass through arrangements for WAMC licensing fees, WaterNSW recommends that IPART apply a 5% p.a. uplift to WAMC licensing opex (commencing 2021)[57] to address the potential funding gap.

Should the funding shortfall be material, WaterNSW argues that IPART should allow the shortfall amount to be recovered in the subsequent determination period.

[57] The first year of the upcoming WAMC determination period.

4. Response to Specific Questions

This section provides WaterNSW's responses to the six questions specifically asked of stakeholders in the Draft Determination.

4.1 Question 1

Do you agree with our draft decision to share the efficient cost of recreational services between Water NSW's water customers and the direct users of recreational services (or the NSW Government on behalf of broader community)? Or do you consider there is merit in the direct users of recreational services (or the NSW Government on behalf of broader community) funding 100% of the efficient costs of recreational services?

Response

WaterNSW's response is provided in section 3.4.

4.2 Question 2

Do you agree with our draft decision to not introduce the option for Water NSW to enter into UPAs with Sydney Water and the three councils?

Response

IPART's current form of regulation involves setting maximum prices for regulated services that apply to all customers for each year of the determination period.

In its 2016 reviews, IPART decided to allow Hunter Water and Sydney Water to enter into unregulated pricing agreements (UPAs) with large non-residential customers. IPART notes that neither utility entered into a UPA during the 2016 determination period; notwithstanding, IPART maintained the option to enter into UPAs in the IPART draft reports for the 2020 Hunter Water and Sydney Water reviews.

IPART's draft finding for WaterNSW is to not provide the option of WaterNSW entering unregulated pricing agreements with large customers (i.e. Sydney Water and councils).

WaterNSW considers that, even though no UPA is imminent, having the ability to enter into a UPA would appear to a 'no regrets' inclusion in the determination that could benefit all parties. With the backstop of a regulatory determination and the application of the determination in operation at the time, it is not surprising that UPAs have not been more widespread. However, there may be instances that arise over the next four years where having a UPA may result in timely investments that otherwise may not proceed until the next determination, a delay that may not be in customers' interests.

As noted by IPART, UPAs are optional and are only entered into voluntarily if the agreement is mutually beneficial to the water supply business and the large customer. If the foreseen benefits do not outweigh the costs, then parties should not enter the agreement. The additional administrative burden to negotiate, manage and ring-fence the agreement should be factored in when considering whether to enter into an agreement, which would not be taken lightly by the parties and which would ensure frivolous ventures are not be pursued.

WaterNSW suggests that IPART reconsider its approach to UPAs so as to not preclude the potential for unregulated arrangements that would incentivise the water business and its customers to work more closely together, even though the likelihood of a UPA occurring may not be high.

4.3 Question 3

Do you agree with Water NSW's proposal to allocate corporate capital expenditure across its business segments using total expenditure (totex) as the allocator? Or do you think the current allocation (which uses direct salaries as the allocator) continues to be appropriate?

Response

WaterNSW's response is provided in section 2.4.4.

4.4 Question 4

Do you think we should consider excluding any voluntary supply (from SDP to Sydney Water) out of the SDP exclusion factor, if such an agreement is possible, in future price reviews?

Response

No. WaterNSW considers that any voluntary supply from SDP to Sydney Water should operate in the same manner as SDP's existing volumes. That is, as noted by IPART, by increasing WaterNSW's usage price to Sydney Water when SDP is supplying to Sydney Water, the SDP exclusion factor protects WaterNSW's revenue from the effects of lower bulk water sales to Sydney Water when the SDP is in operation, and allows WaterNSW to recover its efficient costs.

IPART considers there may be merit in not including this voluntary supply in the SDP exclusion factor. Limiting the scope of the SDP exclusion factor in this way means that Water NSW would be exposed to the risk of SDP and Sydney Water entering into a voluntary agreement (if such an agreement is possible in the future). IPART indicates it considers that this is reasonable as customers should be able to benefit from this competition for bulk water supply.

WaterNSW does support this approach for the following reasons:

- Excluding the volumes from a voluntary supply agreement between SDP and Sydney Water is not consistent with the operation of the current exclusion formula in protecting WaterNSW's revenue from the effects of lower bulk water sales in order to allow WaterNSW to recover its efficient costs;
- Customers may be made worse off by the voluntary supply arrangement if the cost impacts imposed on, or costs not recovered by, WaterNSW are not made transparent and passed through; and
- While we support introducing more competition into the water supply sector, this should not take place in a piecemeal fashion, such as adjusting the SDP exclusion factor, and instead should only be contemplated following a holistic review that assesses the impacts on all stakeholders and the community from any proposed regulatory and market reforms.

4.5 Question 5

Do you agree with our draft decisions to introduce unrestricted and drought usage prices for all customers? What are the benefit, risks and/or constraints that could result in having dynamic water usage pricing?

Response
WaterNSW's response is provided in section 2.7.3.

4.6 Question 6

Do you agree with the asset categories and asset lives contained in Water NSW's March 2020 proposal? Or do you think the asset categories and asset lives we have used in the Draft Report continue to be appropriate?

Response

WaterNSW's response is provided in section 2.4.2 and section 2.4.3.

Appendix 1 - Contingent projects – design and worked example

The design of a contingent project mechanism

The application of a contingent project regime to manage investment uncertainties is a common feature of many well-functioning regulatory frameworks.

In our response to the Issues Paper and in our original proposal, WaterNSW provided detailed analysis of how uncertain projects are addressed in other jurisdictions and industries (primarily water) in Australia and overseas and cited examples of effective contingent projects regimes (e.g. in Section 4.1 of Appendix B of our Pricing Proposal). This analysis illustrates that addressing the uncertainty of large capital projects through the introduction of a contingent project (or comparable) mechanism with *intra period* adjustments to allowances and prices has been adopted by many regulators in Australia and overseas, including:

- The AER for electricity network businesses through explicit contingent projects provisions in the NER;
- The ACCC for water utilities through contingent projects provisions in the new Water Charge Rules;
- The ESCV for water utilities through the 'uncertain and unforeseen events mechanism';
- ESCOSA for SA Water through the introduction of the new 'intra-period review mechanism'; and
- Ofgem for UK gas and electricity networks through an intra-period reopener mechanism.

An aspect of our preferred approach to contingent projects is that allowances and prices are subject to review during the determination period. To illustrate how this mechanism would affect prices during the regulatory period, we provide a working example below of a suggested price adjustment mechanism for contingent projects underpinned by IPART endorsement issued via a Letter of Approval. We also provide a case study of how this mechanism could have been applied to a recent project.

We have developed a working example of a price adjustment mechanism that could be activated within a determination period in circumstances where a contingent project is endorsed by IPART via a Letter of Approval. This demonstrates, in a practical manner, the way in which contingent projects would affect the fixed and variable charges applied to Sydney Water. This worked example is appended to Appendix 1.

The Broken Hill Pipeline provides an example of a large drought-related project impacting WaterNSW and IPART which arose during the 2016-20 determination period. A project of similar scale and scope had it occurred in Greater Sydney could have been managed as a contingent project if such a mechanism formed part of IPART's approach to managing uncertainty in its determinations. This illustrates the benefits of a contingent project mechanism, applied to the management of projects initiated mid-period under Government direction in response to drought.

This case study is provided in Box 1 below.

Box 1: Case Study Example: Broken Hill Pipeline

The project
In 2018, the Broken Hill to Wentworth Pipeline was constructed to supply raw water from the River Murray near Wentworth to Broken Hill. The NSW Government appointed WaterNSW to deliver the project, under the SOC Act. The technical scope of the project was specified in detail through the SOC Act Direction. Following the SOC Act Direction, IPART was issued with a section 16A Direction under the IPART Act to assess the efficiency of the project costs, but not to test the prudency of the project.

The cost impact
The project added $390 million to the RAB and approximately $3.5 million per year in operating expenditure over a 3-year period.

The trigger mechanism
The proposed contingent project mechanism includes the requirement for WaterNSW to identify proposed triggers events for contingent project.

The Broken Hill Pipeline 'trigger event' would have been a SOC Act Direction. Under the SOC Act, WaterNSW was directed to deliver the project and IPART assessed the efficient costs of complying with this direction. Government direction would constitute a trigger event as the Minister ultimately has the responsibility to issue directions to WaterNSW, regardless of the results of consultations with the WaterNSW board.

The use of Government direction as a trigger to manage uncontrollable costs was accepted by IPART in Sydney Water's 2020 pricing proposal. Sydney Water's November pricing included a drought cost pass-through mechanism for a range of investments, including water restrictions implementation and advertising costs.[3] The trigger for this cost element was 'Government implements restrictions', and this was accepted by IPART.[4]

Implications
This example highlights the potential for a contingent project mechanism to provide benefits such as:

- Reduced administrative burden for IPART – in avoiding IPART undertaking a separate determination or a reopener for every project issued under Minister direction
- Advance price transparency for Sydney Water and prices reflective of efficient costs
- Timely recovery of prudent and efficient costs by WaterNSW.

Worked example of the price adjustment mechanism for contingent projects

We have developed a working example of a price adjustment mechanism that could be activated within a determination period in circumstances where a contingent project is endorsed by IPART via a Letter of Approval. This demonstrates, in a practical manner, the way in which contingent projects would affect the fixed and variable charges applied to Sydney Water. This worked example is appended to Appendix 1.

Under this mechanism:

- An IPART Letter of Approval would endorse the prudency of WaterNSW undertaking a contingent project, in response to the occurrence of a defined trigger event (e.g. the Minister issuing a SOC Act Direction to WaterNSW and or IPART)
- A schedule of rates would be applied (pre-determined for transparency), reflecting the revenue impact (an uplift factor) of total capital expenditure of projects, as shown in Table A1. For the avoidance of doubt, projects that do not fall within any of bands specified in Table 1 are not eligible for the price adjustment mechanism

- The Sydney Water fixed charge would be increased by the monthly fixed revenue impact of a project (Table A2)
- The Sydney Water variable charge would be increased by the monthly revenue impact of a project (Table A3)
- Recovery in accordance with the schedule of rates would commence upon IPART issuing the Letter of Approval to support the efficient recovery of costs. Adjustments would be made as required following IPART's assessment of actual or forecast expenditure efficiency.

The following is suggested for triggering IPART to issue a Letter of Approval in respect of a contingent project:

1. WaterNSW is issued a Direction in pursuance of section 20P or section 20N of the *State Owned Corporations Act 1989* in respect of a contingent project (SOC Act Direction)[58]
2. IPART is issued a Direction in pursuance of section 16A of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act) in respect of including an amount representing the efficient cost incurred by WaterNSW in complying with the SOC Act Direction[59]
3. The SOC Act Direction specifies the expected cost of complying with the direction for the purposes of the IPART Greater Sydney Determination price adjustment mechanism for contingent projects. [60]

As part of the design of the mechanism, we consider that WaterNSW has little or no ability to influence the likelihood of an event being triggered and is incentivised to reduce the costs of the event (due to the primary objectives under the SOC Act and the IPART efficiency review). This is discussed in detail in section 2.1.4 – Cost pass through arrangements.

Table A1.1 – Example schedule of rates for contingent projects endorsed under an IPART Letter of Approval

Total Capital Expenditure on Contingent Project (A)	Total Annual Revenue ($M) (B)	Total Monthly Revenue ($M) (C)	Total Monthly Fixed Revenue ($M) (D)
Between $50,000,000 - $74,999,999	$ 1,600,000	$ 133,333	$ 106,667
Between $75,000,000 - $99,999,999	$ 2,400,000	$ 200,000	$ 160,000
Between $100,000,000 - $124,999,999	$ 3,200,000	$ 266,667	$ 213,333
Between $125,000,000 - $149,999,999	$ 4,000,000	$ 333,333	$ 266,667
Between $150,000,000 - $174,999,999	$ 4,800,000	$ 400,000	$ 320,000
Between $175,000,000 - $199,999,999	$ 5,600,000	$ 466,667	$ 373,333
Between $200,000,000 - $224,999,999	$ 6,400,000	$ 533,333	$ 426,667
Between $225,000,000 - $249,999,999	$ 7,200,000	$ 600,000	$ 480,000
Between $250,000,000 - $274,999,999	$ 8,000,000	$ 666,667	$ 533,333
Between $275,000,000 - $300,000,000	$ 8,800,000	$ 733,333	$ 586,667

[58] Section 20P of the SOC Act allows the Minister to give a written direction to the board of WaterNSW if the Minister is satisfied that, because of exceptional circumstances, it is necessary to give the direction in the public interest. The board is required to ensure that the direction is carried out in relation to WaterNSW

[59] To support WaterNSW to have the costs of complying with the direction recovered from its customers through an Independent Pricing and Regulatory Tribunal (IPART) determination, a direction may be required under section 16A of the IPART Act. Under section 16A the Minister may direct IPART to include an amount representing the efficient cost incurred by WaterNSW in complying with the section 20P direction. Before such a direction can be given the Minister must consult with IPART on the proposed direction

[60] IPART will be required to assess the efficient costs incurred by WaterNSW in complying with a SOC Act direction at any subsequent price review at which point IPART will be required to consider WaterNSW's actual cost of complying with the SOC Act Direction

Table A1.2 – Example adjustment to the Sydney Water Variable Charge

Period	$ per month
1 July 2020 to 30 June 2021	16,150,624 + C
1 July 2021 to 30 June 2022	(16,187,365 + C) x (1 + ΔCPI_1)
1 July 2022 to 30 June 2023	(16,223,658 + C) x (1 + ΔCPI_2)
1 July 2023 to 30 June 2024	(16,269,030 + C) x (1 + ΔCPI_3)

Note: C refers to the amount set out in Column C in Table X as endorsed under an IPART Letter of Approval[61]

Table A1.3 – Example adjustment to the Sydney Water Fixed Charge

Period	$ per month
1 July 2020 to 30 June 2021	12,965,893 + D
1 July 2021 to 30 June 2022	(12,965,893 + D) x (1 + ΔCPI_1)
1 July 2022 to 30 June 2023	(12,965,893 + D) x (1 + ΔCPI_2)
1 July 2023 to 30 June 2024	(12,965,893 + D) x (1 + ΔCPI_3)

Note: D refers to the amount set out in Column D in Table X as endorsed under an IPART Letter of Approval[62]

[61] https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-metro-water-review-of-prices-for-waternsw-greater-sydney-from-1-july-2020/legislative-requirements-review-of-prices-for-waternsw-greater-sydney-from-1-july-2020/draft-determination-maximum-prices-for-water-nsw-greater-sydney-services-from-1-july-2020-march-2020.pdf

[62] https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/pricing-reviews-water-services-metro-water-review-of-prices-for-waternsw-greater-sydney-from-1-july-2020/legislative-requirements-review-of-prices-for-waternsw-greater-sydney-from-1-july-2020/draft-determination-maximum-prices-for-water-nsw-greater-sydney-services-from-1-july-2020-march-2020.pdf

Appendix 2 – 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 2020 Determination period. The sections relating to wider macro-economic and industry implications have been prepared in collaboration with Sydney Water.

1. Introduction

In the midst of a global pandemic, Australia has not faced a crisis of the magnitude of COVID-19 for generations. Governments locally and around the world are scrambling. Policy responses are sometimes confused and contradictory, and leaders are under huge pressure. A broadly consistent policy response to reducing the spread has been the enforcement of a degree of lockdown of the population. There measures have created challenges for the global economy. Although the outlook is subject to spectacularly wide bounds, this looks set to be the sharpest recession Australia has seen since the Great Depression of the 1930s.[63]

Currently, the degree and extent to which the measures to restrict the spread of virus will continue are unknown. Despite global efforts, a vaccine is likely to take more than a year to develop, noting that historically a human vaccine has never been successfully developed against a coronavirus.[64] Without a vaccine in sight and herd immunity considered an unacceptable pathway, there uncertainty surrounding both how long current lockdown protocols will be in place in Australia and how agile the Australian and world economy will be in returning to business as usual once restrictions are lifted. This means there is significant uncertainty as to how long a full recovery will take, with projections varying from a couple years up to a decade.[65]

Utilities, which includes the water sector, are not immune to such wide-scale disruptions. Preliminary analysis at the start of lockdown protocols being put in place, suggests the short-term impact on the utilities sector will not be as harsh as in other sectors of the economy. However, the severity of impact on utilities may be delayed. For example, Deloitte Access Economics estimates utilities sector output will begin to decline in FY2021 and continue through FY2022. This compares to other industries, such as accommodation and food services, which are likely to see a sharp drop in FY2020 and start to recover by FY2022.

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 2020 calendar year) and medium term (within the next five years), and the implications for WaterNSW.

[63] Deloitte Access Economics, March 2020, *Business Outlook*.

[64] NY Times, 20 April 2020, *The Coronavirus in America: The Year Ahead* <https://www.nytimes.com/2020/04/18/health/coronavirus-america-future.html>; Australian Financial Review, 3 April 2020, *Why a coronavirus vaccine may never be found.*

[65] Deloitte Access Economics, March 2020, *Business Outlook*; ABC, 6 April 2020, *Coronavirus fallout could take Australian economy decade to recover from, KPMG says.*

1. Macroeconomic impacts – key indicators and trends

Supplies of goods and services are being constrained as more and more nations are implementing lock downs. There have been notable disruptions in manufacturing, affecting cars, high tech goods, pharma, through to transport, retail and tourism sectors. But the even bigger problem is the lack of demand as citizens and businesses are hunkering down.

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

- In late March, Deloitte Access Economics forecast Gross Domestic Product (GDP) would fall 6.7% in FY2021. A 5.8% recovery is expected in the following year; however this growth is forecast to decline in succeeding years.[66] More recent information suggests the economic downturn could be significantly worse.[67]
- 17% of small to medium enterprises (SMEs) have stopped trading.[68]
- 6% of construction businesses and 8% of manufacturing businesses have stopped trading.[69]
- In April, the number of people who were currently working paid hours decreased by 8% from the month before.[70] The unemployment rate is forecast to be 9.7% in FY2021, a significant increase from 5.1% in FY2019. This is expected to slowly recede to 5.6% by FY2024.[71]
- Australia's population growth has fallen as a result of migrant workers returning overseas. The number of temporary visa holders has already decreased by 260,000 (10%) and may reduce another 16% by end of 2020.[72]

Australian prices and financial markets are responding:

- Inflation is expected to continue to plateau at record lows, with headline CPI forecast to drop to 0.9% in FY2021 and only a meagre recovery in following years. [73]
- The Reserve Bank of Australia (RBA) has cut its cash interest rate to its lowest level in three decades (0.25%), and it's begun anchoring longer term interest rates at low levels too.12 This is in line with central banks across the globe.
- The Australian dollar has fallen to an 18 year low, with the US exchange rate at US$0.57 per AUD$1 on 16 March – falling further than it did during the global financial crisis. The Australian dollar is expected to recover to pre-COVID-19 levels over the next five years. [74]

Global conditions are similar, if not worse, with two key trading partners impacted:

- China's economy contracted 6.8% in the first quarter compared to a year earlier[75]
- In the US, GDP is forecast to shrink 34% in the second quarter of this year, with unemployment expected to reach 15%.[76]

It is uncertain how long the current economic downturn will persist, with optimistic forecasts suggesting recovery in 2021 and pessimistic forecasts pushing recovery back another half a decade. [77]

[66] Deloitte Access Economics, March 2020, *Business Outlook*.
[67] Grattan Institute, 19 April 2020, *Shutdown: estimating the COVID-19 employment shock*
[68] ABS, 7 April 2020, *Business Impacts of COVID-19*.
[69] ABS, 7 April 2020, *Business Impacts of COVID-19*.
[70] Note that proportion of people 'currently working paid hours' is not compared to the employment rate as it includes those that may have left the labour force or may still be employed but not have hours resourced. Source: ABS, 20 April 2020, Household Impacts of COVID-19.
[71] Deloitte Access Economics, March 2020, *Business Outlook*.
[72] Adam Creighton from Australian Financial Review, 15 April 2020, *COVID-19: Nation's great exodus revealed.*
[73] Deloitte Access Economics, March 2020, *Business Outlook*.
[74] Deloitte Access Economics, March 2020, *Business Outlook.*
[75] BBC, 17 April 2020, *China's virus-hit economy shrinks for the first time in decades.*
[76] Bloomberg, 31 March 2020, *Goldman Sachs Sees 34% Plunge in U.S. GDP and 15% Unemployment*; Business Insider, 6 April 2020, *Credit Suisse says the US economy will shrink 33.5% next quarter, the biggest drop in history.*
[77] Deloitte Access Economics, March 2020, *Business Outlook.*

2. Implications for IPART's regulatory framework

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
- 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 in estimating the real rate of return for utilities, currently applies an expected inflation rate of 2.3%. This is much higher than what the prevailing inflation rate over recent times. For example, in FY2018 headline CPI was 1.7%.[78]

As discussed in the CEG report on WACC, inflation and financeability (provided as Attachment 1), 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.

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 2.3% estimate.

3.2 Achieving efficiency improvements in an economic downturn

The 'frontier company' approach that IPART's consultant, Atkins-Cardno, has 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 severe economic slowdown being experienced, with at least a 6.7% contraction expected in FY2021, brings into question whether the frontier company approach is a valid or applicable in the current environment. The 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.

[78] Deloitte Access Economics, March 2020, *Business Outlook.*
[79] IPART, March 2020, *Draft Report: Review of prices for WaterNSW Greater Sydney*, p.84

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 working from home and adjust to home distractions (particularly parents dealing with closed schools).

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.

3. 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 in lockdown and growth in new water connections in the future; and
- New operational requirements on businesses, which may be moderated by downwards pressure on labour and electricity costs

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 electricity[80]. This may be slightly moderated by migrants returning to their overseas home.

Small and medium enterprise (SME) water demand is likely to decline as trading is halted, 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 businesses are closed while others ramp-up in response to bulk buying.

In the electricity sector, non-residential demand decreased 8% after lock-down measures were introduced.[81] However, unlike electricity, the increased frequency and rigour of cleaning may also increase water usage for those businesses that continue to operate.

[80] 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.*
[81] Energy Networks Australia, 16 April 2020, *Commercial down v residential up: COVID-19's electricity impact.*

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 long current lock down protocols and isolation behaviours will last, it is possible that the short-term impacts on water usage will continue well into the medium term.

The 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.

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.[82]

In the medium term we may see a phased return of SMEs if lockdown measures are lifted, although this will likely be dampened by the extent of economic downturn and cautiousness of people returning to normal routines. Potentially C&I businesses will recover from short-term impacts in a year's time, but will then see production decline in following years as the economic downturn sets in.[83]

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.

In addition to sharp increase in unemployment, with the number of people with work already falling by 8%, a number of large employers have announced short-term wage reduction measures. Payment difficulties experienced by customers of Sydney Water, may also create issues for on-payment to WaterNSW.

Supply of resources

High unemployment rates and short-term wage reduction measures may put downward pressure on wages, particularly for low-skilled jobs with quick turnover. However, upward pressure on wages may occur if a major disruption to labour supply occurs. This may be a result of widespread virus infections and/or mass emmigration as foreign workers return home.

Despite increasing unemployment, there are certain supply chain risks that may arise.

The wide-spread demand for particular services, including cleaning and IT, is likely to put upwards pressure on prices for these services.

The constraints on IT costs and on resources in the utilities sector, has been highlighted in energy by the market bodies recently announcing a one year delay in implementing the fundamental five minute settlement market rule change scheduled for 1 July 2021. This has been

[82] Dominic Perrotet, NSW Government Treasurer, *Letter to the construction and engineering sectors of NSW*.
[83] Deloitte Access Economics, March 2020, *Business Outlook*

driven in part by concerns about businesses' ability to absorb large costs and scale up IT capability in the current environment.[84]

Other local businesses are likely to experience reduced demand from the private sector. This could lead to lower prices as businesses compete for fewer clients. However, prices may potentially increase as a result of greater market concentration following business closures.

4.2.2 Medium term

New operational requirements

It is likely that the short-term disruptions considered above will continue well into the medium term. Even if 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.[85]

Supply of resources

It is likely that some proportion of businesses will never recover after the shutdown period ends, 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,[86] putting downwards pressure on labour costs as employment contracts are refreshed in the coming years.

As 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[87] and demand continues to be subdued.[88]

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 Aerotropolis development region.

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[84] AEMC, *COVID-19 power plan launched to support energy sector through pandemic,* media release 9 April < https://www.aemc.gov.au/news-centre/media-releases/covid-19-power-plan-launched-support-energy-sector-through-pandemic?utm_medium=email&utm_campaign=New+AEMC+Update+-+9+April+2020&utm_content=aemc.gov.au%2Fnews-centre%2Fmedia-releases%2Fcovid-19-power-plan-launched-support-energy-sector-through-pandemic&utm_source=www.vision6.com.au>

[85] Foez Dewan from McCabe Curwood, 17 March 2020, *Will my Business Insurance cover me for the impact of COVID-19?*

[86] Deloitte Access Economics, March 2020, *Business Outlook.*

[87] 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.

[88] 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.

While a lower exchange rate will increase our international competitiveness, it will make imported inputs more expensive and reduce the competitiveness of local businesses relying on overseas materials or equipment. In addition, greater restrictions and regulatory oversight of international trade and shipping, including the cancellation of most air flights, will likely constrain international logistics and may impose further higher prices for imported goods. As such, imported equipment and assets are expected to increase in costs.

4. Summary of Covid-19 impacts

The rapid changes in macroeconomic indicators that the world is currently experiencing are already impacting water utilities and posing unique challenges for the regulatory framework that IPART operates. In particular, the duration of any lockdown and the related impact this will have on the economy and the water sector is still unclear.

We already face significant risk to our financeability. over the regulatory period as a result of the disconnect between IPART's assumed 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. 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. Further, we believe this provides further support or our proposal for IPART to introduce additional mechanisms to deal with uncertainty in the regulatory framework, particularly DVAM and introducing a Contingent Projects Mechanism.

Appendix 3 – Updated [redacted] planning costs - Confidential

This appendix provides our confidential response to IPART's questions from 22 April 2020 regarding updated planning costs for WaterNSW's Greater Sydney [redacted] Program.

[redacted]

		[redacted]

		[redacted]
[redacted]	[redacted]	[redacted]

Appendix 4 – Annual updates to the cost of debt

This appendix reiterates WaterNSW's support for annual updates to the cost of debt rather than a true up at the subsequent determination.

Under IPART's new trailing average approaches for estimating the historic and current costs of debt, IPART needs to update its decision on the cost of debt each year. Regarding the choice of whether prices should update each year to reflect the updated cost of debt, or the regulated business should store the price changes until the start of the next regulatory period, when IPART would implement them through an NPV-neutral true-up to the regulatory revenue requirement, IPART stated in its 2018 WACC Review, that:

> *"…we will decide whether to apply annual price adjustments or a true-up on a case-by-case basis, as part of our review process. In making this decision, we will have regard to any evidence the regulated firm or its customers put forward to support one approach or the other. Neither option would be a default."* [89]

Our Pricing Proposal and this response provide WaterNSW's evidence of its support and the previous support of our major customer for annually updating the cost of debt. We encourage IPART to consider our circumstances and preferred approach rather than adopting a 'one size fits all' approach based on a true-up.

In Section 8.5.2 of our Pricing Proposal, we outlined several benefits in favour of the annual adjustments mechanism, including customer benefits (i.e. minimise price variability), debt management benefits (i.e. better alignment with actual debt costs), and the ability to pass on the efficiencies from the cost of debt allowances in the following year (i.e. customers receive the benefit of any cost of debt reductions as soon as possible). WaterNSW maintains that annually updating the cost of debt is preferable to trueing-up the cost of debt up at the next determination.

We also highlight that Sydney Water previously indicated its support for WaterNSW and SDP to apply annual updates as set out in Sydney Water's response to the IPART WACC 2018 Review:

> *"Therefore, in principle, Sydney Water is not, in the long-run, averse to annually updated prices particularly when combined with a benchmark CoD based on a 10-year trailing average, which we have always supported. To this end, and acknowledging that the single NPV-neutral true-up approach in principle is less flexible than an annual price update approach, we encourage IPART to consider applying a flexible hybrid approach to this issue. A hybrid approach could include allowing:*
>
> *1. Sydney Water to apply a single NPV-neutral true-up for its own CoD changes.*
>
> *2.* ***Bulk water suppliers apply an annual update of CoD changes and pass-through to Sydney Water these costs annually*** (emphasis added)*".* [90]

WaterNSW requests that IPART reconsider its approach and adopt annual updates for the cost of debt for the 2020 determination period, on the following basis:

- **Customer interests** – Annual updates provide smaller, incremental price changes to customers and reduce the risk of large price-shocks between regulatory periods.

  Applying annual updates to reflect changes in the cost of debt is more likely to mitigate against larger price shocks for customers, as the alternative approach of aggregating and trueing-up the annual changes at the subsequent determination may build in greater price

[89] See *IPART Review of our WACC method, Final Report- February 2018.* Page 38.
[90] See *Sydney Water's submission to IPART's WACC review draft report 2017-18, 8 December 2017.* Page 11.

volatility, particularly if interest rates movements do not offset and 'cancel out' within the regulatory period.

- **Cashflow timing impacts** – Without annual updates, the cashflow impact of differences between the cost of debt allowance and actual interest costs are borne by the firm – and may impact on cashflow coverage ratios and credit ratings – particularly at higher leverage, where a firm is close to debt covenants or has a weak credit rating outlook.

  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.

- **Incentive to incur efficient debt raising costs** – A desirable feature of a regulatory framework is to provide a return on debt that aligns to the debt management practices of an efficient benchmark firm.

  This includes the firm having the ability to manage its interest rate risk with various debt instruments (e.g. swaps and hedges) within the regulatory period. Businesses are not able to fully hedge their debt portfolios under a true-up mechanism. Annual adjustments to reflect the annual cost of debt would provide better matching of the annual debt costs and the regulatory allowances, which would assist the debt management process.

- **Administratively simple** – Annual updates are a core feature of most well-functioning regulatory frameworks and determinations, including IPART's determinations, where the application of inflation plus other price adjustments is commonplace. A mechanical adjustment to prices each year to reflect the updated cost of debt would be a straightforward and administratively simple addition to the annual price setting process.

  Sydney Water also acknowledged the simplicity of the annual update process in its submission to the IPART 2018 WACC Review as stated below:

  "*Administering the cost pass-through to Sydney Water's customers of SDP and WaterNSW's updated CoD allowances would be relatively simple to implement…*"[91].

IPART's draft decision position is to not pass through the annually updated cost of debt and instead apply an NPV-neutral true-up at the next determination. IPART previously stated that (Page 48 of the Issues Paper):

> *"We prefer the option of applying a regulatory true-up at the subsequent determination period because it provides certainty to customers about their prices over the upcoming determination period. In contrast, if we applied an annual update, a large change in the cost of debt would flow through to customer prices in the following year of the determination period, unless additional side constraints were imposed in the determination.*
>
> *It is also our position to not make assumptions about the direction of change in the cost of debt over the determination period. The revenue adjustment for the change in the cost of debt is based on a 10-year rolling average which makes forecasting the direction of the adjustment highly unreliable over a 4-year period. We therefore do not let expectations of future changes in interest rates influence the decision as to whether a true-up or annual update is best".*

We do not agree that providing a regulatory true-up provides certainty to customers about their prices and consider that annual changes are superior based on the following:

- Earlier debt tranches will necessarily roll off the historic trailing average calculation for the cost of debt each year of the 2020 determination period, noting that earlier tranches had

[91] See *Sydney Water's submission to IPART's WACC review draft report 2017-18, 8 December 2017*. Page 13.

contained costs of debt higher than prevailing rates. *A priori*, this is likely to reduce the cost of debt over the upcoming regulatory period unless the prevailing rate for new debt tranches rises to the post-Global Financial Crisis (GFC) levels. Given the current low-interest rate environment, the probability of this occurring appears low. In this circumstance, and under a 'true-up', there would be a delay in the time in which customers would benefit from the lower cost of debt through lower prices.

- IPART suggests that it is not its position to make assumptions about the direction of the change in the cost of debt over the determination period and that the revenue adjustment for the change in the cost of debt is based on a 10-year rolling average which makes forecasting the direction of the adjustment highly unreliable over a four-year period. While as a general proposition we agree that forecasting interest rate movements is speculative, we note that the operation of the 10-year trailing average is mechanical and to some extent predictable, as we know the higher post-GFC debt tranches are removed from the trailing average and are replaced with contemporaneously (and historically) low interest rates. This would suggest downward movement is not purely random.

Under the regulatory true up mechanism, and as explained in WaterNSW's Pricing Proposal, customers may experience price shocks as the cost of debt allowances are updated from one determination period into the next. Furthermore, customers may incur additional costs in excess of the debt allowances they would have paid under the annual adjustments mechanism. For example, any shortfalls in the cost of debt allowance incurred in one year in a regulatory period would be inflated by a discount rate to ensure an NPV neutral outcome for WaterNSW. If the customer's discount rate is lower than the regulatory WACC, customers would be worse off under a true-up if the cost of debt is falling and would, presumably, rather take the savings sooner rather than later. The situation would work in reverse if the cost of debt is rising or if the customers' discount rate is higher than the regulatory WACC.

We note that not passing through cost savings to customers in a timely manner has received considerable attention recently in other sectors. For example, the Federal Government has directed the ACCC to immediately commence an inquiry into home loan pricing. The ACCC is to investigate a wide range of issues ranging from the rates paid by new vs existing customers, how the cost of financing for banks has affected bank decisions on interest rates and why RBA cuts aren't always passed on in full[92].

We acknowledge that a true-up is administratively simpler than annual adjustments to the cost of debt, and that by not changing prices as a result of changes in the cost of debt minimises pricing volatility within a regulatory period. This, in our view, should not be the primary consideration. Instead, the risk of more significant price shocks between regulatory periods under a true-up, combined with the ability to align the regulatory cost of debt allowance with efficient debt management practices and delays for customers receiving the benefits of a lower cost of debt suggests that IPART should reassess their stance on annual adjustments for WaterNSW.

[92] See https://www.accc.gov.au/topics/banking-finance