Sydney Desalination Plant Price Review 2022-23

Response to IPART Issues Paper

31 January 2023

Sydney WATER

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Executive summary

Sydney Water Corporation (Sydney Water) welcomes the opportunity to respond to the Independent Pricing and Regulatory Tribunal's (IPART) *Review of prices for Sydney Desalination Plant Pty Ltd from 1 July 2023 Issues Paper* (Issues Paper), published in November 2022[1].

The NSW Government's *Greater Sydney Water Strategy* (GSWS), released in August 2022, has changed how the Sydney Desalination Plant (SDP) can contribute to the water supply needs of Greater Sydney. SDP will operate more flexibly in future depending on the needs of the wider water supply system, and not only during times of drought. This IPART review must design a new pricing framework that aligns to SDP's changed role under the GSWS.

IPART has noted that a key objective of price regulation is to ensure there are appropriate incentives for SDPPL (Sydney Desalination Plant Pty Limited) to manage risk prudently and efficiently while protecting the long-term interests of customers[2]. We agree. We have some concerns that SDPPL's proposals are seeking to transfer risks to end-use water customers that would ordinarily sit with asset owners.

Importantly, however, the move to flexible, full-time operation under the GSWS also creates space for Sydney Water and SDPPL to work collaboratively to identify opportunities to generate better value for end-use customers. Some of these opportunities may only be identified as all parties gain experience with the new operating regime. As a result, we consider the updated pricing framework for SDPPL should also aim for a high degree of flexibility, to avoid closing-off opportunities that could otherwise enhance customer value.

The role of SDP continues to evolve

It is nearly two decades since Sydney Water was first asked by the NSW Government to investigate the feasibility of using desalinated water as part of the water supply for Greater Sydney. SDP has faced many challenges in the intervening years but has more than proven its value in enhancing the security and reliability of the water supply system.

Although the original decision to build SDP occurred in the context of severe drought, operational flexibility was an important requirement in the original procurement process. Indeed, many of the potential operating scenarios described to bidders who tendered for the original build closely align with the new operating framework adopted in the 2022 GSWS (see Section 1). We therefore consider SDP is well-placed to adapt to the new, flexible operating regime envisaged under the GSWS, despite operating as a drought-response asset for much of its life.

The shift to a more flexible operating regime provides an opportunity to explore how SDP can provide additional value to end-use water customers. While the past few years have yielded some valuable insights, further experience with the new regime will reveal information about the costs

[1] In this submission, we make a distinction between the Sydney Desalination Plant assets (SDP), including the plant and distribution pipeline, and the entity that is licenced to operate and maintain those assets, Sydney Desalination Plant Pty Ltd (SDPPL).
[2] IPART (2022) *Review of prices for Sydney Desalination Plant Pty Ltd from 1 July 2023 Issues Paper*, p. 2.

and benefits of operating SDP differently. In many respects, the regulated prices set in the 2017-2022 SDPPL determination provide limited insight into the efficient costs needed under the new operating framework.

Section 1 of this submission provides further information on Sydney Water's current expectations for the new operating regime for SDP, which we hope will be of assistance to the Tribunal as this review progresses.

Regulation must continue to protect end-use customers

SDPPL's price proposal is a package of measures that builds on recent experience and responds to the new flexible operating philosophy outlined in the GSWS, the Decision Framework[3] and the greater potential for emergency response requests made in line with Sydney Water's Drinking Water Quality Management System.

As set out later in our submission, we support many of SDPPL's proposals, including:

- The rationale for some additional operational activities and capacity tests to improve confidence that SDP can respond to production requests;
- Simplifying the pricing structure into a two-part tariff, with a single usage charge at all production levels;
- Setting prices to allow recovery of the contract costs of energy; and
- Some modest capital investments that will enhance the ability of SDP to respond to the challenges of the new regime.

As detailed information about costs has generally been redacted from SDPPL's price proposal, our support for these (and other) items is necessarily more conceptual in nature. Sydney Water and its customers are very reliant on IPART and their advisors to assess the reasonableness of the underlying costs and to set prices at an efficient level.

While we support many parts of SDPPL's proposal, we do have concerns that some changes proposed (or offered) by SDPPL may be an inappropriate transfer of risk to end-use water customers. Many of these risks would normally be retained by asset owners in the normal course of business.

For example, SDPPL has proposed several cost pass-through mechanisms to deal with movements in 'uncontrollable' costs. The combined effect of these mechanisms is to transfer the risk of cost variances almost entirely to end-use water customers for a large proportion of SDP's operational costs. As noted by IPART in their draft regulatory pricing handbook[4]:

> "*Cost pass-throughs generally go against our principle of providing an envelope for expenditure for businesses. The aim of setting prices based on a forecast revenue*

[3] Sydney Water (2022) Decision Framework for SDP Operation.
[4] IPART (2022) *Draft Handbook Water Regulation*, p. 52.

requirement is to encourage businesses to reprioritise their spending through the period as circumstances change."

More fundamentally, economic regulation of monopolies is typically tasked with the objective of broadly mimicking the incentives and outcomes that would usually occur in a competitive market. Very few companies operating in competitive markets could expect to automatically and fully pass-on changes in their underlying costs in the manner proposed by SDPPL.

Another area of concern that we do not support is the option to link the level of cover for business interruption (BI) insurance to the financial penalties that apply under the Service Level Incentive Scheme (SLIS). While this proposal offers a reduction in annual insurance costs, the effect is to leave end-use customers exposed to the risk of paying substantial daily fixed charges for several years in a situation where:

1. The underlying assets are not capable of providing normal levels of service, and
2. Insurance companies have offered commercially acceptable prices to insure SDPPL against the potential loss of revenue.

This outcome could even occur in situations where SDPPL was responsible for the underlying event or damage. We discuss this issue in more detail in Section 3.

Structure of this submission

We have structured our submission to generally follow the order of issues in IPART's Issues Paper. Accordingly, the rest of this submission is structured as follows:

- **Section 1** provides an overview of the new Decision Framework for SDP Operation and a summary of our responses to IPART's questions from the Issues Paper,
- **Section 2** covers SDPPL's proposed service levels, costs and risks,
- **Section 3** covers SDPPL's proposed costs of providing services,
- **Section 4** covers SDPPL's proposed incentive and risk mechanisms,
- **Section 5** covers SDPPL's proposed prices,
- **Section 6** covers other issues not included in IPART's Issues Paper.

1 Introduction

1.1 The role of SDP in a changing environment

1.1.1 The Greater Sydney Water Strategy

The *Greater Sydney Water Strategy* (GSWS)[5] acknowledged that we need new approaches to the significant challenges facing Greater Sydney, including servicing a growing population and building resilience to drought and a changing climate. The GSWS drew on recent drought, and subsequent post-drought events, to recommend a more adaptive and flexible approach to water supply and water supply planning.

The key principles of GSWS to improve the resilience of Greater Sydney's water supply are to:

- use what we have better;
- increase integration and interconnection;
- diversify supply sources;
- plan ahead; and
- review and adapt.

In relation to SDP, the GSWS focussed on assessing the role SDP can play in mitigating risks both in and out of drought. The 2017-2020 drought confirmed that SDP plays a critical role as a rainfall-independent supply that can be used to slow dam depletion. Events since the drought have also provided the first practical demonstration that SDP can play a critical supporting role during outside drought, increasing the resilience of the whole water supply network.

In combination, these events have led to a major change in operating regime for the SDP from 'drought-response' to flexible, full-time operation. This is reflected in SDPPL's price proposal.

Action 2.2(a) of the GSWS Implementation Plan assigned primary responsibility to Sydney Water (and DPE Water) to "Amend the Desalination Plant operating rules to provide flexible operation and optimise its contribution to water security and drought management." This action is due for completion by July 2023. A Decision Framework was developed by Sydney Water to satisfy this action and provide direction on how the new operating rules would work.

1.1.2 New set of operating rules

Under the old system SDP had three operating modes:

- Water security (shut-down) mode, when dam levels were high.
- Restart mode, triggered when dam levels dropped below certain pre-agreed levels.

[5] NSW Department of Planning and Environment, *Greater Sydney Water Strategy*, August 2022.

- Plant fully operational, producing 250 ML/d on average over a year following the restart period and until dam levels reached pre-agreed levels for it to once again shut down.

While SDP was theoretically capable of responding to emergency response requests outside these dam level triggers, the lead-time needed to transition out of shutdown meant the use of SDP in emergencies was unrealistic. The operators of the plant therefore have limited experience operating SDP in a more flexible and dynamic way. Similarly, Sydney Water has relatively limited experience calling on SDP to provide support during emergency conditions.

The shift to a more flexible operating regime provides an opportunity to explore how SDP can provide additional value to end-use water customers. While the past few years have yielded some valuable insights, further experience with the new regime will reveal information about the costs and benefits of operating SDP differently. In many respects, the regulated prices set in the 2017-2022 SDPPL determination provide limited insight into the efficient costs needed under the new operating framework.

The new operating rules include three operating phases that are broadly related to dam levels and the risk of drought (see Figure 1), as per the Decision Framework.

- Ready for flood response at dam levels above 90%: SDP supplies a minimum standby production (50 ML/d) enabling it to remain available (ie, not shutdown) at all times.
- Flexible operation at dam levels between 75 and 90%: SDP supplies up to 250 ML/d in line with Decision Framework.
- Sustain water production when dam levels drop below 75%: SDP to maximise production by supplying 250 ML/d on average.

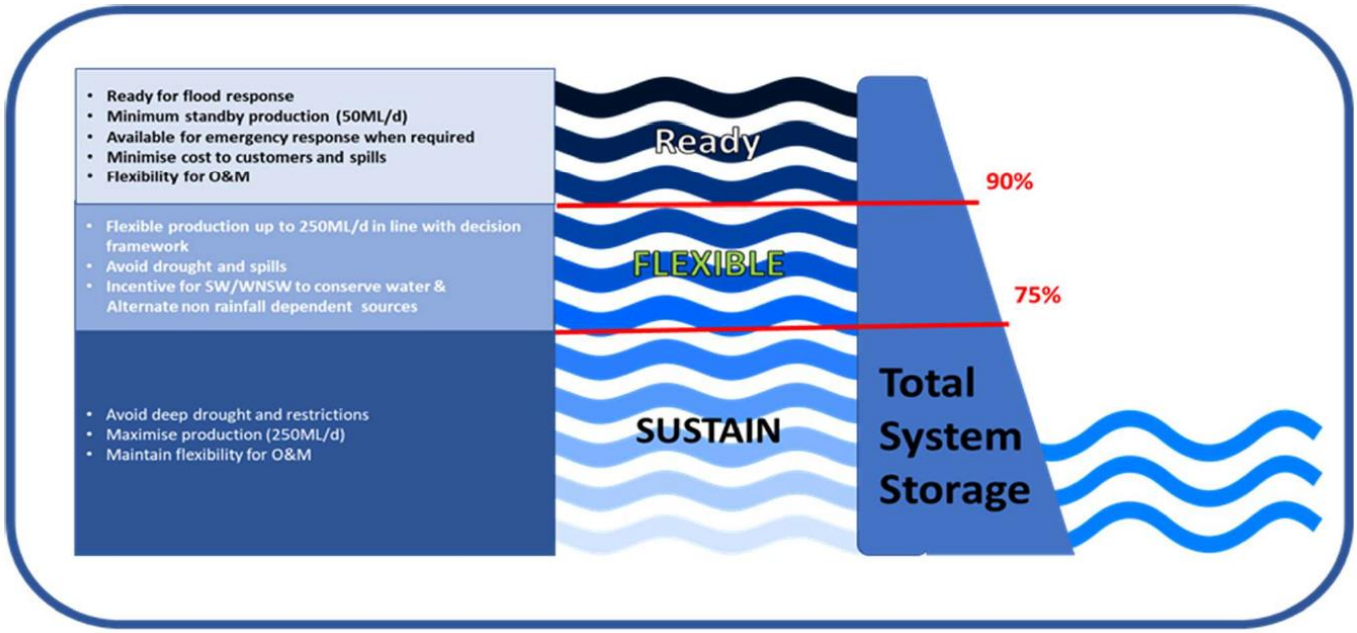


Figure 1. Operation of SDP under new operating rules (as per Sydney Water's Decision Framework for SDP Operation, June 2022).

While multi-year shutdowns are no longer likely, there may still be periods where the SDP is required to be offline for maintenance and repair as well as upgrades of assets across the bulk water systems (SDP, Sydney Water, and/or WaterNSW). This will now be programmed in accordance with the new operating protocols.

The more flexible approach set out in the Decision Framework has been reflected in a revised Network Operators Licence[6] (NOL) for SDDPL, issued by the Minister for Water under the WIC Act and monitored by IPART.

Under the NOL SDPPL must comply with any Annual Production Request (APR) made by Sydney Water in accordance with the Decision Framework. SDPLP will not breach this obligation so long as it produces an amount of water that is between 90% and 110% of the APR.

Under the Decision Framework, the APR can vary between a minimum baseline level of supply, up to the long-term, sustainable maximum production rate of the SDP (91.25 GL a year). Further detail is provided in section 1.1.3 below.

We note that the SDP's new role is not inconsistent with the performance outcomes set in the original tender process. For example, the initial procurement documents advised potential bidders that the plant had to be provided with sufficient flexibility to cater for a range of operating scenarios, including:

- Full capacity operation and then shut down for length periods when dams were full;
- Continuous part load operation when dams are approaching full capacity;
- Running at very low production when dams are full so as to prevent shutting down the plant[7].

However, Sydney Water acknowledges that some of the investments put forward in SDPPL's proposal to manage risk under this new operating regime are necessary and prudent to more readily enable SDP to respond, particularly under emergency conditions.

1.1.3 SDP Decision Framework

Sydney Water will make production requests of SDP in accordance with:

- Sydney Water's agreed Decision Framework for SDP Operation (June 2022) developed with DPE in response to Action 2.2a of the GSWS implementation plan,[8] and
- the Operating Protocol with SDP under the Sydney Water-SDP Water Supply Agreement.

The Decision Framework sets out the considerations that will go into making and reviewing Annual Production Requests, as well as translating and breaking these down into monthly requests. This includes modelling scenarios with WaterNSW, reviewing Bureau of Meteorology forecasts to understand drought onset or likelihood of extreme rainfall events, and assessing asset repair and

[6] Sydney Desalination Plant Network Operator's Licence, September 2022.

[7] Sydney Water (2006) *Sydney's Desalination Project Request for Expressions of Interest, Design, Construct, Operate and Maintain a Desalination Plant, Seawater Intake and Outlet and Associated Infrastructure*, p. 15.

[8] note that this includes requirements to minimise dam spills, consider water security across multiple supply options as a whole, and to balance risks and costs to customers, and is therefore inconsistent with an assumption of full production rate for the full five-year period, see Figure 1

maintenance requirements for the water supply system. Despite this, there will always be two key drivers of uncertainty in relation to production volume forecasts:

1. **Timing of next drought:**

   The likelihood of requiring SDP at full production for long periods of time (>1 year) is highly dependent on when the broader region transitions into the next drought, and how severe the drought is (both intensity and duration). This is not readily predictable, even with modern forecasting methods.

   The 2017-20 drought demonstrated the risk associated with relying on historical experience and dam levels to trigger key decisions and drought response measures. Storages can deplete rapidly in a severe drought, leaving less time than initially anticipated to plan and deliver time-critical actions (Figure 2). Additionally, a growing population and changing climate could lead to significantly higher drought impacts and escalate water shortage risks in the future.

   Drought is incredibly hard to predict and its onset can be gradual and subtle. Therefore, regular monitoring and evaluation of conditions and water supply risks are essential to provide early warning, and to support transparent and robust decision-making around drought response measures and associated investments.

   There are measures in place in the Decision Framework to track and update drought onset predictions and adapt production requests as needed.

Figure 2. Greater Sydney storage level profile 2000-2020. Source: Greater Sydney Water Strategy, p. 36.

2. **Inherently unpredictable nature of emergency response requirements:**

   Until drought conditions return, SDP will play a critical role in supporting the wider supply network to supply high quality drinking water to customers during emergencies. The operation of SDP over the 2020-2022 period has provided the first practical evidence that SDP can make a material contribution to improving the resilience of the water supply system.

   SDP will also play a major role in reducing risk during the implementation of WaterNSW and Sydney Water's Joint Asset Management plan and capital infrastructure upgrades. Major maintenance, repairs or upgrades on critical assets within the bulk water and drinking water supply networks need to be carefully managed to ensure continuity of supply. Our understanding of the role SDP can play to support the network during these periods has only just begun.

   While this means SDP will be required to supply at the full production rate for some periods of higher risk for weeks or months in duration, it is unlikely that it will be required at the full rate over the full five-year period. This reflects the varied emergency response notices over the March 2020 to August 2022 period, with daily average for water production requests varying from 50 ML/d to 250 ML/d (as per Table 3.2 of SDPPL's price proposal).

   The speed of recovery of water quality in the dams will influence how much water Sydney Water will need from SDP in the initial years of the price period. The rate at which this improvement may occur is not predictable.

For circumstances outside the Decision Framework, including in relation to emergency circumstances as with flooding events in 2020-22, water supply required under an emergency response notification will be established following a water supply risk assessment with an expert panel (including Sydney Water, NSW Health, WaterNSW, Suez and independent expert/s in some circumstances) to determine whether water production from SDP is a cost-effective risk mitigation option. This may include a decision not to take water from SDP if there are circumstances that mean they are unable to support a request at that time, or an issue in the network where risk is exacerbated by SDP supply. Sydney Water will communicate with SDP as per the Operating Protocol under the Sydney Water-SDP Water Supply Agreement.

In the context of this uncertainty, a regulatory approach is desirable that allows SDPPL to appropriately cover costs through true-up and review processes but that also protects end customers from paying too much. As discussed in Section 5 in relation to Unregulated Agreements, Sydney Water preferences that IPART regulate prices for foreseeable scenarios as much as is feasible.

1.1.4 The Decision Framework does not preclude third party customers

The underlying intent of the Decision Framework is to achieve flexible, full-time operation of SDP, including ensuring that SDPPL has sufficient production orders that the plant would not be placed into shutdown. As discussed in Section 5, Sydney Water is supportive of IPART setting regulated prices for third party customers. The new operating conditions and framework in place do not preclude third party customers from being supplied by the SDP.

1.2 Summary of our responses to IPART's questions

1. Are the operating assumptions that underpin SDP's pricing proposal (i.e. a minimum production level of 23 GL per year with an ability to adjust production levels at short notice both inside and outside of drought) in line with SDP's role identified through the Greater Sydney Water Strategy?

Sydney Water understands and supports the rationale for proposing a minimum annual baseline volume and agrees this is consistent with SDP's role in the GSWS. However, given that the 23 GL baseline volume includes activities that may not be needed in all years, Sydney Water considers that the determination should maintain flexibility on this issue to avoid undue costs for end-use customers.

2. Does SDP's pricing proposal represent a reasonable and efficient balance of service levels and costs?

Sydney Water has responded to direct questions in areas relating to reasonable and efficient balance of service levels and costs (e.g., response on capex and operating costs, SLIS proposal, energy adjustment mechanism). However, due to the detailed nature of SDPPL's proposal will defer to IPART's review process to determine its answer to this question overall.

3. Does SDP's pricing proposal represent a fair and efficient allocation of risk between SDP, Sydney Water and end-use water customers?

While SDP's role has evolved and the plant must operate more flexibly in future, we are concerned that SDPPL has sought to transfer too many risks to Sydney Water and end-use water customers. Some of the proposed changes appear unrelated to the move to flexible operation, and simply seek to transfer risk to end use water customers.

4. Is the scope and level of insurance coverage proposed by SDP reasonable and efficient? Should all of SDP's insurance related costs be reflected in prices?

Sydney Water supports the principle of the scope and level of insurance being determined by a prudent service provider acting efficiently in line with Good Industry Practice – as required under SDPPL's NOL. We note SDPPL has not publicly provided a detailed breakdown of all proposed insurance coverage and certain proposed insurance cover has been redacted under Package 1.

In relation to business interruption insurance (BI) cover, we note SDPPL's position where they consider coverage for 48 months of the plant being unable to operate rather than the 36 months provided for under IPART's allowance in the 2017-23 regulatory period. We support this longer level of coverage based upon the potential longer timeframe for rectification of a larger, catastrophic event.

We do not support SDPPL's proposal to set the level of BI insurance cover to equal the cap on financial penalties under the proposed SLIS (referred to as 'Package 2'). Under this proposal, end use water customers would essentially take on the role of an insurer for

SDPPL, even though insurance could be obtained at commercially acceptable rates. It is also unclear whether this arrangement would meet the intent of the insurance requirements that apply to entities licenced under the WIC Act.

5. Should SDP's energy allowance continue to reflect a market-based benchmark unit cost, or should it be based on SDP's existing energy contracts?

Sydney Water supports regulated prices being set for this determination period based on SDPPL's existing energy contracts, compared to the alternative of a market-based benchmark price. The energy contracts were an efficient response to the conditions of approval for SDP, uncertainty about future production and therefore energy use, and a highly uncertain policy and regulatory environment for matters such as climate change and carbon pricing.

In the current circumstances, with elevated and highly volatile energy prices due to the confluence of several disruptive global events, a market-based approach would likely require end-use water customers to pay substantially above SDPPL's actual contracted costs of energy. It is not clear whether there are any clear economic efficiency arguments that might support this outcome, particularly as SDP performs a supplementary role in the wider supply system and operation is most strongly influenced by broad-scale weather patterns.

6. The Terms of Reference require IPART to consider SDP's ability to recover all costs it incurs in complying with the Greenhouse Gas Reduction Plan (GGRP) and the GGRP Contracts other than costs related to surplus energy. What factors should IPART take into account as part of this consideration?

Other than surplus energy, SDPPL's costs under the GGRP include the purchase cost of energy itself (see our comments for Question 5 above), any mandatory fees payable by participants (and their authorised representatives) in the National Electricity Market (NEM), and the need to comply with auditing, reporting and energy efficiency obligations that apply to large energy users under State and Commonwealth legislation.

IPART should consider the approval conditions that continue to apply to the SDP project, including the broader context that not only shaped these conditions but also served to guide the procurement strategy for meeting the energy needs of SDP.

7. Many of the costs in SDP's proposal assume it will be operating at full production for the next 5 years. Is this a reasonable expectation?

Sydney Water does not agree that 'many' of the costs in the price proposal are predicated on operating at full production in the next 4-5 years. Given the move to flexible, full-time operation, there is a corresponding need to consider the range of potential production scenarios when setting regulated prices.

The main cost that is strongly influenced by the assumed operating scenario is the program for membrane replacement. We understand the program has been designed with a view to moving to a steady-state condition with an average age of 4.5 years across the fleet. However, SDPPL also indicate that age will not be the only factor that drives a replacement decision, with actual performance (and various other factors) also playing a role. As

membrane replacement is a capital expense, differences in planned vs actual replacement rates will be captured in the RAB roll-forward.

As outlined in Section 1, operation of SDP will be largely determined by the Decision Framework and the need, if any, for SDP to support the needs of the wider water supply network during emergencies or major outages.

8. Do you support SDP's proposal to reduce the asset lives for its pipeline, membranes and proposed periodic maintenance asset categories?

Yes, we support the proposal to reduce the assumed asset life for the distribution pipeline.

We do not support the proposed asset lives for membrane replacement. As noted in IPART's commentary, the average age of the membrane fleet (which reflects a balance of some old, some new) is not the same thing as the economic life of a membrane for the purposes of cost recovery.

9. Should we make an adjustment in response to the one-year deferral? If so, should the adjustment be restricted to just the EAM or should it include all building block components as well as the EAM?

Sydney Water supports IPART making adjustments to account for the one-year deferral of SDPPL's price determination.

At this stage we support an adjustment that accounts for all building block components. However, there is no clarity about how IPART intends to make these adjustments, and we do not know what position IPART will take on key issues such as the assumed price of energy. We will consider IPART's proposed approach when the Draft Determination is released for stakeholder comment.

10. Is there a need for an explicit abatement mechanism, given the financial penalties for underproduction and overproduction under SDP's new Network Operator's Licence?

Sydney Water supports SDPPL's proposition that the abatement mechanism in the 2017 determination is not suited to the new operating conditions that will apply from the commencement of the 2023 SDPPL determination.

SDPPL's proposed SLIS has many features that are similar to the Outcome Delivery Incentive (ODI) scheme in IPART's new regulatory framework for water utilities. However, we had understood that ODI's were intended for outcomes over-and-above compliance obligations. While the new ODI framework does not yet apply to SDPPL, Sydney Water considers that:

- Incentives are not needed for:
    - volumes within +/- 10% of an APR, as the specific volume of water delivered within that band has limited significance
    - non-APR requests, as SDPPL is only required to use best endeavours to meet these requests
    - volumes more than 10% above an APR, as *ex ante*, the additional water generally has limited value for the water supply system and there are contractual incentives to avoid over-production

- Financial incentives can be appropriate for volumes more than 10% below an APR, however any incentives need to be of sufficient size and likelihood to drive behaviour, given the importance of SDP to Sydney's water supply.

We note that the current abatement mechanism in the 2017 determination covered 100% of abateable charges (broadly equivalent to fixed daily service charges). We support IPART determining an appropriate mechanism, which considers the performance outcomes of both the SDP Operating Licence and the existing commercial performance measures in the Water Supply Agreement (WSA).

11. If the proposed SLIS is adopted, should it apply to emergency response notices (ERNs) as well as annual production requests? That is, should performance under ERNs be subject to penalties and rewards?

The SLIS proposed by SDPPL is based on the volume of water supplied compared to the quantity ordered. In contrast, the timeliness of SDP's response is of primary importance during emergency events. As such, the SLIS as proposed is not suited to emergency requests.

In addition, SDPPL is only required under its licence to exercise best endeavours to meet emergency volume requests.

As SDPPL and Sydney Water gain more experience in operating under the new framework, we can consider the merits of alternative financial incentives for ERNs.

12. If the proposed SLIS is adopted, do you think it should provide financial rewards for overproduction? If so, do you think the 10% band is an appropriate bound?

We do not think the SLIS should provide financial rewards for overproduction, as water production more than 10% above the amount ordered generally has limited incremental value to Sydney Water for the current plant. This has been reflected in the WSA with SDPPL, which allows us to accept water volumes above the amount ordered but does not oblige payment for volumes more than 10% above the amount ordered.

The 10% band proposed by SDPPL for the SLIS is consistent with their licence, which includes a symmetrical tolerance band of +/- 10% around annual production requests.

13. Is the ECM, with SDP's proposed changes, appropriate for the new operating regime? Are there any other changes that should be made to the ECM?

We consider SDPPL's proposed changes to the ECM, including to remove the mode distinction and to set efficiencies based on actual levels of supply, sufficiently considers and accounts for SDP's new operating regime.

14. Are there any other issues we should consider when reviewing the ECM methodology?

We understand SDPPL is adopting an ECM as part of transitionary arrangements towards the new regulatory framework.

While some concerns have been expressed with the ECM throughout IPART's recent regulatory framework review, it may not be necessary to account for all these concerns, if we expect that SDP will eventually replace the ECM with an operating expenditure benefits sharing scheme (EBSS) at a future point in time.

15. Is there a case for the financial incentives cap to be set higher than the default cap of 1% of revenues set in the new Water Regulatory Framework?

We understand the level of risk across the incentive schemes in the new regulatory framework is a choice made by the regulated entity, including the choice of outcomes to be monitored and the amount of revenue at risk due to variances in performance and costs.

The default cap of 1% was set by IPART, partly reflecting stakeholder comments that utilities may need a period of transition to understand the full effects of the new incentive mechanisms. Given the large difference in costs and revenue between SDPPL and Sydney Water, a cap set at 2.5% of SDPPL's revenue strengthens the incentives for SDPPL to achieve superior performance without materially changing the impact on Sydney Water customers.

16. If the abatement mechanism is removed from the package of SDP's incentives, should we set a cap that only applies to the ECM? If so, what is the appropriate size of such a cap?

Yes, if SDPPL were willing to include the ECM, then the cap should apply. It is a matter for SDPPL to nominate a revised figure if the SLIS excludes amounts that relate to volumetric performance.

17. Should we include 2020-21 in the application period when calculating the EAM gains of losses over the 2017 determination period?

We agree with IPART's interpretation of how the EAM should be applied in the current circumstances. The clear intent of the methodology is to capture the most recent set of known annual trading outcomes and to distribute those outcomes in regulated prices at the earliest opportunity.

SDPPL's proposal appears to not only exclude 2020-21 from the next application period (2023-2027), but also from the following application period. We trust this was simply a drafting error by SDPPL.

18. Should the scope of the EAM be expanded to include all of SDP's surplus energy?

IPART should consider the totality of assumptions being made in relation to energy (both volume and cost), so that the package of measures provides sufficiently strong incentives for SDPPL to continuously improve energy efficiency.

19. SDP has proposed changing the core band and sharing ratio of its EAM. Specifically, it proposed to reduce the core band from 5% to 2.5% and increase customers' share of gains and losses outside the core band from 80% to 95%. For these changes, SDP claims the new operating environment limits its ability to actively manage its surplus energy and therefore its share of gains and losses should be reduced. Do you agree with SDP's

proposal to reduce the core band and SDP's share of gains and losses outside the core band?

Given energy use accounts for a large proportion of operating costs, it is critical that SDPPL be provided with strong incentives to minimize energy use.

Sydney Water considers that proposed changes to the EAM, when viewed alongside the other proposed changes to energy-related items, will dilute incentives for SDPPL to continuously improve energy efficiency. Sydney Water therefore supports retention of the existing core band and sharing ratio.

As SDPPL and Sydney Water gain more experience in operating under the new framework, changes to the core band and sharing ratio of SDP's EAM may be considered in future regulatory determinations.

20. What other issues should we consider when reviewing the EAM methodology?

IPART must consider the totality of assumptions being made in relation to energy (both volume and cost), so that the package of measures provides sufficiently strong incentives for SDPPL to continuously improve energy efficiency.

21. Are SDP's proposed end-of-period true-ups reasonable and efficient?

SDPPL has proposed a range of true-up mechanisms, which effectively shift a greater share of the risk of doing business from SDPPL to our customers. We question whether SDPPL's proposed level of risk sharing is appropriate and support IPART assessing the reasonableness of SDPPL's proposed true-ups and considering how they will affect the overall balance of SDPPL's service levels, costs and risk.

To the extent that IPART accepts one or more of SDPPL's proposed true-ups, we would prefer they be calculated at end-of-period, as this better reflects the outcome that would apply in a competitive market (i.e., as opposed to an annual adjustment). Holding costs (i.e., adjustment for time value-of-money) should not apply.

22. Should we accept SDP's proposal to introduce a materiality threshold to determine when we will re-open the determination? Or should we maintain our current approach of using discretion when considering whether to re-open the determination?

We support IPART applying an approach of using its own discretion when considering whether to re-open a determination.

A pre-defined materiality threshold may be of benefit if it can assist SDPPL in achieving more favourable terms from their financiers. However, this is only a benefit to SDPPL, and there does not appear to be any way for this to be shared with end-use customers. Sydney Water also reflects that a threshold of only 1% of SDPPL's annual regulated revenues may not be material in consideration of IPART's guidance on the purpose of re-openers that IPART "*consider re-opening a determination to be a last resort solution reserved for those*

cases where unforeseen cost changes result in material impacts to a business's capacity to carry out its services"[9].

23. If we do introduce a materiality threshold, what should the materiality threshold be based on and at what level should it be set?

IPART's new regulatory framework anticipates that re-opening a determination is an option where the underlying change in circumstances is of sufficient magnitude to materially affect the financial viability of the regulated utility[10]. In other words, if SDPPL had to absorb impacts until the next determination, it would face severe financial consequences even if IPART subsequently compensated them for the full cost impact of the variance.

Unexpected variations in cost can always occur during a determination period. Sydney Water would not support an automatic reopener to deal with these situations, however, a defined materiality threshold may provide a useful trigger for further assessment of the implications of any variance(s).

24. Should we accept SDP's proposal for a single 2-part tariff to cover all levels of production? If costs are not perfectly correlated with production, should we consider setting multiple service and/or usage charges to better reflect costs at different levels of production?

The new operating framework for SDP provides an opportunity to further simplify the tariff structure. A two-part tariff would simplify the task of administering our payments to SDPPL and increase the clarity of the determination for other stakeholders, and Sydney Water supports this change.

We note that SDPPL has proposed unregulated agreements to deal with certain kinds of service requests. Given the limited experience with a more flexible approach to operating SDP, we do not support unregulated agreements for the coming determination period.

25. SDP proposed to set prices for services outside its level of service by negotiating directly with Sydney Water. This means IPART will not be involved in setting these prices. Do you think this is appropriate?

We do not support unregulated agreements for this determination period. As SDPPL and Sydney Water gain more experience in operating under the new framework, we can consider the merits of unregulated agreements for a future determination.

Disallowing unregulated agreements might require IPART to set regulated prices for prolonged shutdown and restart events for maintenance, given these are still possible under the new Decision Framework. Alternatively, an *ex-post* true-up may be appropriate.

[9] IPART (2022). *Water Regulation. Draft Handbook*, https://www.ipart.nsw.gov.au/sites/default/files/cm9_documents/Draft-handbook-Water-regulation-December-2022.PDF, p. 56.
[10] IPART (2022) *Delivering customer value – Our Water regulatory framework: Technical paper*, November 2022, https://www.ipart.nsw.gov.au/sites/default/files/cm9_documents/Final-technical-paper-Our-water-regulatory-framework-November-2022.PDF, p. 59.

26. Should unregulated agreements between SDP and Sydney Water be allowed under the determination?

We consider that agreements of the kind proposed by SDPPL would not conflict with the financial indifference principle in the Terms of Reference for the determination, as the intent is to deal with actual costs (and savings) with no allowance for SDPPL's profit margin.

While we consider these agreements are therefore permissible, we do not support allowing for them in the coming determination period. As SDPPL and Sydney Water gain more experience in operating under the new framework, we can consider the merits of unregulated agreements for a future determination.

27. If allowed, should unregulated agreements between SDP and Sydney Water impact prices paid by end-use water customers?

To the extent unregulated agreements generate a net cost saving (and/or a reduction in risk), this should be shared with end-use water customers. Please refer to our response to Question 28 below, should the cost of an unregulated agreement have the potential to increase prices paid by end-use water customers.

28. If we accept SDP's proposal for unregulated agreements, how can we ensure these agreements deliver good outcomes for end-use water customers?

Sydney Water would only contemplate an unregulated agreement where this could achieve a net reduction in cost and/or a reduction in risks to the water supply system. This may justify a light-handed approach by IPART, such as a framework for reporting on the benefits of agreements between SDPPL and Sydney Water.

29. Are there specific events or services which would be more suitable for unregulated agreements?

This will become more evident as we gain more experience managing the water supply system with a full-time, flexible contribution from SDP.

Based on recent experience, unregulated agreements could have value in situations with unusual or novel operational scenarios that require actions (or a combination of actions) that are not standard practice.

30. In 2017, we structured prices to enable third-party customers (in the event they emerged) to pay their fair share of SDP's costs. For this review, SDP proposed to set prices for only one customer (i.e., Sydney Water). Should we continue to facilitate third-party customer pricing through the determination?

We support IPART continuing to facilitate third-party customer pricing through SDPPL's determination. Our preference is having the 'ground rules' in place to provide certainty and clarity for all parties, should the market evolve, and third-party customers do emerge.

31. Should we consider applying a materiality threshold when allowing for prices to be adjusted each year? If so, what are the factors we should consider when setting the appropriate threshold?

We would be open to IPART implementing a single materiality threshold across all potential adjustments.

32. For the cost of debt, our framework allows for costs to either be adjusted each year or at the end of period. Is there a case to do annual adjustments as proposed by SDP or should we instead apply an end of period adjustment?

We are open to IPART applying annual adjustments throughout the 2023 determination period, with respect to changes in SDPPL's cost of debt. We ask that IPART engage with Sydney Water on potential financial impacts on our business and our customers, where it decides to adopt annual adjustments instead of an end-of-period cost of debt true-up.

Other issues we would like to raise

Aside from IPART's questions in the Issues Paper, we have also made some comments regarding expansion cost recovery principles and SDPPL's proposed capital projects. These are outlined in Section 6.

2 SDPPL's proposed service levels, costs and risks

2.1 SDPPL's proposal may represent a reasonable and efficient balance of service levels and costs

1. Are the operating assumptions that underpin SDP's pricing proposal (i.e. a minimum production level of 23 GL per year with an ability to adjust production levels at short notice both inside and outside of drought) in line with SDP's role identified through the Greater Sydney Water Strategy?

Sydney Water notes that the initial procurement documents tendering for the build of the SDP advised potential bidders that the plant had to be provided with sufficient flexibility to cater for a range of operating scenarios, including:

- Full capacity operation and then shut down for length periods when dams were full;
- Continuous part load operation when dams are approaching full capacity;
- Running at very low production when dams are full so as to prevent shutting down the plant.

While long shutdowns are now far less likely, these scenarios closely align with the new operating framework adopted in the 2022 GSWS. We therefore consider SDP is well-placed to adapt to the new, flexible operating regime envisaged under the GSWS, despite operating as a drought-response asset for much of its life.

Sydney Water understands and **supports** the rationale for proposing a minimum annual baseline volume and agrees this is consistent with SDP's revised role in the GSWS. However, given that the baseline volume includes activities that may not be needed in all years, Sydney Water considers that the determination should maintain flexibility on this issue. For example, as per SDPPL's proposal, the 23 GL annual baseline minimum consists of:

- A baseline daily production rate of 50 ML/d to maintain availability of the plant and meet operational requirements.
- An allowance for up to four 'ramp-ups' to full production per year (for a total of 12 days) to reduce the risk that SDP may be unable to meet Sydney Water's needs in an emergency.
- An allowance for running at higher production rates for very short periods to provide assurance about the success of repairs and maintenance on critical assets.

As the latter two components may not be needed in all periods, and/or the volume of water could vary materially, we do not think it would be appropriate to include the cost of those activities in a fixed charge as this could lead to a form of 'take-or-pay' arrangement.

Assuming the incremental cost of the additional volume is mostly related to water production, it would therefore be open to IPART to simply set a water usage price that reflects efficient water production costs without locking-in a specific minimum baseline volume.

However, if the SDP determination is silent on whether the baseline volume is prudent or efficient, the burden of demonstrating prudency and efficiency essentially transfers to Sydney Water. In our view, SDPPL holds the licence to operate and maintain the infrastructure and should be required to demonstrate the need for these additional activities. While we do not favour specifying a minimum volume in the SDPPL determination, it would be beneficial for IPART (or their advisors) to express a view as to whether activities such as capacity tests are a service that can be provided under SDPPL's determination, and/or the principles that could be applied to assess the reasonableness of these production requests.

SDPPL should seek to optimise its operational and testing arrangements over the coming price path, with a view to reducing the annual volume (if feasible). As SDPPL and Veolia mature under the new framework, they will develop a better understanding of operational and maintenance requirements and risks. In turn, this will provide opportunities to deliver efficiencies that reduce overall baseline production, commensurate with a better understanding of the risks associated with low flow operations.

A minimum baseline volume is a prudent and efficient response to risk

Sydney Water supports the proposition that continual operation at a baseline flow is preferred to a stop-start method, particularly as frequent stop-start operation is likely to lead to increased fatigue and damage to the RO membranes. Further, Sydney Water accepts SDPPL's and Ontoit's assertions that:

- the production supply requirements are consistent with its role in the GSWS;
- the low baseline daily production rate required for the SDP to meet its new Network Operator's Licence is less efficient than operating at higher flow rates;
- frequent starting and stopping of RO membranes is not good operating practice and would reduce membrane life; and
- some modifications are necessary to provide surety of supply under the new framework (see also response to opex and capex expenditure in Section 3).

Please refer to Confidential Appendix 1 for further information.

2. Does SDP's pricing proposal represent a reasonable and efficient balance of service levels and costs?

Sydney Water has responded to direct questions in areas relating to reasonable and efficient balance of service levels and costs (e.g., response on capex and operating costs, SLIS proposal, energy adjustment mechanism). However, due to the detailed nature of SDPPL's proposal will defer to IPART's review process to determine its answer to this question overall.

As noted earlier in this submission, the shift to a more flexible operating regime provides an opportunity to explore how SDP can provide additional value to end-use water customers. While the past few years have yielded some valuable insights, further experience with the new regime

will reveal information about the costs and benefits of operating SDP differently. In many respects, the regulated prices set in the 2017-2022 SDPPL determination provide limited insight into the efficient costs needed under the new operating framework.

2.2 SDPPL's proposed allocation of risk between it and its customers

3. Does SDP's pricing proposal represent a fair and efficient allocation of risk between SDP, Sydney Water and end-use water customers?

Sydney Water has responded to direct questions in areas relating to allocation of risk (e.g. insurance, production assumptions).

On balance, while we recognise SDP's role has changed, we think they have sought to transfer too many risks to Sydney Water and its customers particularly in the area of its approach to insurance (see response to Question 4).

3 SDPPL's proposed costs of providing services

3.1 SDPPL's proposed operating expenditure

In general, we support IPART's approach of assessing the efficient costs of utilities providing services to ensure that utilities have sufficient funds to maintain their assets in good condition, while delivering reliable services and long-term customer value.

With respect to operating expenditure, we address IPART's specific questions relating to insurance costs and energy costs below.

4. Is the scope and level of insurance coverage proposed by SDP reasonable and efficient? Should all of SDP's insurance related costs be reflected in prices?

Sydney Water supports the principle of the scope and level of insurance being determined by a prudent service provider acting efficiently in line with Good Industry Practice – as required under SDPPL's Network Operator's Licence. We note SDPPL has not publicly provided a detailed breakdown of all proposed insurance coverage and certain proposed insurance cover has been redacted under Package 1.

In relation to business interruption (BI) insurance cover, we note SDPPL's position where they consider coverage for 48 months of the plant being unable to operate rather than the 36 months provided for under IPART's allowance in the 2017-23 regulatory period based upon their experience following the December 2015 storm event. We support this longer level of coverage based upon the potential longer timeframe for rectification of a larger, catastrophic event.

SDPPL has also proposed a new service level incentive scheme (SLIS) linked to its proposed BI insurance coverage, as an alternative to the current abatement mechanism. This proposed SLIS (along with SDPPL's proposed Efficiency Carryover Mechanism (ECM)) contains a financial rewards and penalties cap of ±2.5% of SDP's annual fixed Plant service charges, which would allow SDPPL to significantly reduce its BI insurance coverage and costs relative to the BI insurance package it would have to take out with the current abatement mechanism.

While we agree there is a need for an updated incentive framework that responds to the new operating framework for SDP and accept that this may necessitate changes in SDPPL's scope and level of insurance coverage, we do not believe SDPPL's proposed SLIS and linked BI insurance coverage to be an appropriate alternative mechanism[11]. Relative to the current abatement mechanism (with no caps on financial penalties), SDPPL's proposed SLIS cap and reduced BI insurance coverage purports to shift a significant proportion of risk from SDPPL to our customers in relation to insurable events, which our customers should not be required to accept. As currently

[11] In Section 4.1, we outline other reasons for our opposition to SDPPL's proposed SLIS.

designed, SDPPL's proposed SLIS cap and reduced BI insurance coverage is contrary to the long-term interests of our customers.

To the extent that SDPPL and/or IPART proposes a differently-designed SLIS, we would be open to discussing with SDPPL and/or IPART any necessary changes to SDPPL's scope and level of insurance coverage, as needed.

5. Should SDP's energy allowance continue to reflect a market-based benchmark unit cost, or should it be based on SDP's existing energy contracts?

We support SDPPL's energy allowance being set in line with prices from SDPPL's existing Greenhouse Gas Reduction Plan (GGRP) energy contracts. We consider that this approach sufficiently ensures that SDPPL has the opportunity to recover its efficient energy costs, while taking into account and balancing SDPPL's requirement to purchase energy from 100% renewable sources, with the long-term interests of customers.

In theory, we understand that using market-based benchmark electricity prices may better reflect the outcomes expected in a competitive market and send more efficient price signals to customers about the costs of delivering SDPPL's services. Under the new Decision Framework for SDP Operation, however, the decision to request water from SDP is primarily driven by factors such as dam levels, outages and maintenance, and system shocks. In practice, this often means that prices have a limited role to play in influencing production and may not send as strong of a signal to customers to help manage demand and decisions to request water from SDP.

With the current prices being experienced across the National Electricity Market (NEM), we further consider it would be in the interests of our customers to have SDPPL's energy allowance be set in line with prices from SDPPL's existing energy contracts, on the basis of affordability considerations.

6. The Terms of Reference require IPART to consider SDP's ability to recover all costs it incurs in complying with the Greenhouse Gas Reduction Plan (GGRP) and the GGRP Contracts other than costs related to surplus energy. What factors should IPART take into account as part of this consideration?

Other than surplus energy, SDPPL's costs under the GGRP include the purchase cost of energy itself (see our comments under Question 5 above), any mandatory fees payable by participants (and their authorised representatives) in the National Electricity Market (NEM), and the need to comply with auditing, reporting and energy efficiency obligations that apply to large energy users under State and Commonwealth legislation.

In setting revenue allowances, IPART should consider the approval conditions that apply to the SDP project, including the broader context that not only shaped these conditions but also served to guide the procurement strategy for meeting the energy needs of SDP. For example, the desire to introduce a new source of renewable energy to the grid (the 'additionality' requirement) ultimately favoured a contract that is essentially a long-term Power Purchase Agreement (PPA) to underwrite the development of a specific wind farm asset even though other criteria were broad enough to support almost any source of renewable energy including offsets (excluding burning of wood waste).

7. Many of the costs in SDP's proposal assume it will be operating at full production for the next 5 years. Is this a reasonable expectation?

Subsequent discussion with SDPPL have suggested that most of their costs do not, in fact, assume full production, with the membrane replacement the main project which does so.

For example, IPART describes the example of the membrane replacement program being designed and costed around the assumption that membranes will be operated at full capacity. In reality, the plant will not be operating at full capacity so membrane deterioration may be slower. However, as membrane replacement is a capital expenditure item there is a true-up process to ensure that customers only pay for membranes as and when they are replaced.

SDPPL have also noted that their single variable price component is set assuming full production and appear willing to absorb relatively minor inefficiencies at lower production rates.

Sydney Water thinks it unlikely that the SDP will be required to be at full production each year for the entire five-year period. Long-term production requirements are still largely determined by dam levels, where the outlook is inherently uncertain. We will make decisions based on the Decision Framework and/or emergency response process, which are outlined in Chapter 1.

The task of assessment the appropriate level of costs largely rests with IPART's expenditure review consultants, given their greater access to confidential cost data. The overall balance of what is fair for SDPPL and customers alike is best assessed by IPART.

3.2 SDPPL's proposed capital expenditure

In line with operating expenditure, Sydney Water also supports IPART's approach to assess prudency and efficiency of each of SDP's proposed capital projects. This includes evaluating the appropriateness of assumptions underlying the rate at which membranes would need to be replaced under its proposed Membrane Replacement Program (see also response to 3.3 SDPPL's proposed asset lives).

We provide our views on these projects in more detail in Section 6.2.

3.3 SDPPL's proposed asset lives

8. Do you support SDP's proposal to reduce the asset lives for its pipeline, membranes and proposed periodic maintenance asset categories?

It almost goes with saying that Sydney Water expects that SDPPL would take an appropriate approach to maximise the life of its assets in accordance with an appropriate asset management plan and in full consideration of risks. This includes measures such as monitoring, testing, maintenance programs and condition assessments, to maintain assets in good working order.

In the context of regulatory pricing, however, the appropriate length of the cost recovery period for a long-lived asset is a more nuanced issue. Care is needed to ensure we do not conflate this issue with narrower engineering considerations such as the technical working life of one or more individual asset components.

For the purposes of setting asset lives for the price review period:

- **Pipelines:** Sydney Water supports the change in asset life for the pipeline from 120 years to 100 years. We also support a single asset life for the whole pipeline, inclusive of both above and below-ground sections, as the service potential of SDP is dependent on the whole pipeline being available.
- **Membranes:** Sydney Water does not support SDPPL's proposal to reduce the asset life for membranes to 4.5 years. Sydney Water agrees with IPART's observation that 4.5 years is the average life of the membrane stock over time and does not reflect the economic life of a membrane. Sydney Water would support an adjustment to membrane life in accordance with an outcome generated from IPART's efficiency review and/or SDP supply analysis that demonstrates appropriate life based on cost-benefit analysis.
- **Periodic maintenance asset categories:** Sydney Water supports the concept that certain assets (eg electronics, computing, monitoring equipment) may have significantly shorter design life (and therefore economic life) than that of the main capital infrastructure of the plant. Sydney Water supports an assessment by IPART's expenditure review consultant to verify appropriateness of a weighted average asset life of 7.6 years for assets in this category, in the absence of detail within SDPPL's proposal or appendices on this topic.

3.4 SDPPL's proposed WACC

We support IPART calculating SDPPL's WACC in line with IPART's standard WACC methodology, the long-term interests of customers, as well as the holistic level of risk borne by SDPPL.

3.5 SDPPL has proposed no adjustments for one-year deferral

9. Should we make an adjustment in response to the one-year deferral? If so, should the adjustment be restricted to just the EAM or should it include all building block components as well as the EAM?

We support an adjustment for the one-year deferral of SDPPL's price review from 1 July 2022 to 1 July 2023 and consider that the adjustment should apply to all building block components as well as the EAM.

A one-year deferral introduces a potential gap between actual revenue and what would have been determined as the revenue requirement of a utility, had its price review proceeded according to the usual schedule. As outlined in our submission to IPART requesting a one-year extension to our own 2024 Price Review,[12] we consider that the grant of any one-year deferral should be subject to an adjustment in the next price period for any over- or under-recovery of revenue. This adjustment mechanism should further be based on the objective that financial outcomes for the year of

[12] Sydney Water, Hunter Water and WaterNSW (2021) *Letter to IPART on one-year extension to Sydney Water, Hunter Water and WaterNSW price reviews*, 29 September.

deferral should not be different to those that IPART would have otherwise approved, had the determination occurred a year earlier.

We consider that this approach ensures that all utilities subject to a one-year deferral are able to fairly and reasonably recover their efficient costs of providing services during the year of deferral, without risk to the long-term interests of customers. More generally, this approach also supports the interests of government and stakeholders, as it ensures that utilities' investment plans will not be impacted by a revenue shortfall during the year of deferral.

We note that in the past, IPART has further sought to take a consistent approach across all utilities, where possible, when addressing common regulatory matters. With a number of utilities being granted a one-year deferral for their upcoming price reviews, we ask that IPART carefully consider the impacts of taking other approaches and the precedent it may set for other utilities in the sector.

4 SDPPL's proposed incentive and risk mechanisms

4.1 SDPPL's proposed abatement mechanism

10. Is there a need for an explicit abatement mechanism, given the financial penalties for underproduction and overproduction under SDP's new Network Operator's Licence?

Sydney Water supports SDPPL's proposition that the abatement mechanism in the 2017 determination is not suited to the new operating conditions that will apply from the commencement of the 2023 SDPPL determination.

As outlined in Section 1 of this submission, we are moving from an arrangement where water production was determined by dam levels, with a relatively simple objective of maximising volume, to an arrangement where production is determined mostly by Sydney Water and the objective(s) set for SDPPL can vary depending on a wider range of factors.

The changeable nature of SDPPL's objectives has been reflected in their new Network Operator's Licence (NOL), which provides that SDPPL:

- must comply with any Annual Production Request (APR) issued by Sydney Water under the Decision Framework;
- will not be in breach if the volume delivered is between 90% and 110% of the APR[13]; and
- must use best endeavours to meet any request, other than an APR, issued by Sydney Water under the Decision Framework.

Incentives are not needed for volumes within +/- 10% of an APR, or non-APR requests

Sydney Water considers that abatement should not apply to non-APR requests for this determination, given that:

1. the NOL only requires SDPPL to use best endeavours to meet those requests; and
2. both SDPPL and Sydney Water have relatively limited experience utilising SDP in a more flexible way, notwithstanding the recent periods of emergency operations.

Similarly, given that SDPPL complies with their NOL so long as they are within +/-10% of an APR, financial incentives should not apply if the volume supplied is within that band. The production of water is subject to inherent variability depending on many parameters (eg salinity, temperature), and some tolerance is appropriate when assessing performance.

In both examples, the reputational impact of not meeting a request is likely to provide sufficient incentive for SDPPL to strive for good performance.

[13] which means SDPPL breaches the NOL if the volume produced in a year is >110% or <90% of an APR.

Incentives are not needed for volumes more than 10% above an APR

Given that volumes more than 10% above an APR would be a breach of SDPPL's NOL, it is not clear why we may be considering the need for financial rewards for over-delivery. As discussed by IPART in its issues paper, SDPPL's current SLIS design correctly recognises significant underproduction as undesirable and attracting a penalty. But in trying to design a symmetrical approach, SDPPL appears to have incorrectly recognised significant overproduction as desirable.

We consider there are several reasons why positive financial incentives are not needed as a potential reward for volumes more than 10% above an APR.

At higher dam levels (>90%), the APR issued to SDPPL is intended to keep the plant operational and available for emergency response while minimising the risk of dam spills. As such, and in the absence of an emergency, volumes more than 10% above the APR when dams are more than 90% full have limited value.

As dam levels move into the 75% to 90% range, the APR can be increased depending on the medium-term weather outlook. The true value of delivering more than 10% above the (higher) APR can only be assessed *ex-post*, largely depending on whether we had moved into drought or not. In other words, the adjustment to the APR is a sufficient first step to manage the increased risk of drought, with limited additional value from producing more than 10% above the APR.

Finally, if we have subsequently moved into drought, the design capacity of the plant means that production more than 10% above 91 GL a year is unlikely to be able to be sustained over a 12-month period without increasing the risk of equipment failures and postponing necessary maintenance. The incremental benefit to dam levels of running at such high volumes is unlikely to offset the increased production risks.

Therefore, while Sydney Water would ordinarily support an incentive framework that is symmetrical, for the reasons outlined above we consider that SDPPL should not be provided with financial rewards to deliver more than 10% above an APR. In line with this, we have negotiated amendments to the WSA to ensure that while Sydney Water can accept incidental volumes that are more than 10% above an APR, we are not obliged to pay SDPPL for that water. This also provides a financial incentive for SDPPL to not deliver more than 110% of an APR in a year.

Financial incentives can be appropriate for volumes more than 10% below an APR

IPART's Compliance and Enforcement Policy sets out the options available to IPART in the event a regulated entity does not comply with its requirements. An order for monetary payments is part of the suite of options but, in practice, appears to be reserved for situations where there has been repeated and/or blatant disregard for compliance obligations.

Under the WIC Act, the maximum penalty that could be applied for a breach of licence conditions[14] is $1 million, including a $0.5 million for the first day a breach occurs plus $20,000 a day for each subsequent day of non-compliance (capped at 25 days). Extended periods of non-compliance may lead to additional enforcement actions, including suspension or cancellation of the licence.

[14] Section 16(1) of the *Water Industry Act 2006* (NSW).

Using the variable price proposed by SDPPL, the maximum penalty under the WIC Act is equivalent to around 1.25 GL of water, which is just over 1% of the maximum APR Sydney Water is likely to issue in a year.

Clearly IPART has previously decided the penalties available to the Minister under the WIC Act are not a sufficient financial incentive for SDP to achieve its production goals, given the abatement framework in the 2017 SDPPL determination could have resulted in the loss of 100% of abatable charges – an order of magnitude above the penalties that might apply under the WIC Act. Relative to the abatement mechanism in the 2017 determination which was for 100% of fixed costs, an SLIS of 2.5% of fixed costs appears to provide less incentive to avoid underproduction.

As noted in submissions during the 2017 price review, Sydney Water considers that financial incentives for non-performance are a common and desirable feature of service delivery contracts[15]. The incentives typically place a proportion of service fees 'at risk' if defined performance metrics are not achieved, and the portion at risk is usually be capped in some way – eg profit may be at risk, but underlying fixed costs are not.

We support IPART developing an updated incentive framework that responds to the new operating framework for SDP and considers the performance outcomes of both the SDP Operating Licence and the existing commercial performance measures in the WSA. The incremental benefit of water from SDP is likely to vary depending on the circumstances and, ideally, the incentive framework should reflect these differences.

For example, significant underproduction at high dam levels may not have any material consequences, given the objective of APRs at very high dam levels is to keep the plant available (i.e., not shutdown). In contrast, every drop of water could be critically important in a deep drought scenario (without breaching the technical limitations of the plant).

While this may provide an argument in favour of a 'tiered' SLIS, where the incentives could vary with dam levels, Sydney Water considers that this would introduce unnecessary complexity to the pricing framework.

Given the inherent uncertainty about future weather conditions, it is also the case that the value of water is often only truly revealed *ex-post*. For example, under-delivery of water at high dam levels might coincide with the start of a deep drought cycle, although this may not be evident until some months or years later. The loss of potential production at very high dam levels could have material impacts later in the drought.

Therefore, we consider it is appropriate that the SLIS deals with under-production in a consistent way, regardless of dam levels.

11. If the proposed SLIS is adopted, should it apply to emergency response notices (ERNs) as well as annual production requests? That is, should performance under ERNs be subject to penalties and rewards?

At this point in time, Sydney Water does not support the application of a SLIS to ERNs.

[15] Sydney Water (2017) *Sydney Water's Response to IPART's Draft Determination Paper – IPART's Review of Prices for Sydney Desalination Plant Pty Ltd from 1 July 2017*, p. 15.

The SLIS proposed by SDPPL is based on the volume of water supplied compared to the quantity ordered. In contrast, the timeliness of SDP's response is of primary importance during emergency events. As such, the SLIS as proposed is not suited to emergency requests.

As SDPPL and Sydney Water gain more experience in operating under the new framework, we can consider the merits of additional financial incentives for ERNs. Given that water supplied during these emergency situations is:

- of high value to Sydney Water in maintaining continuity of supply to its customers performance and
- considered as above and beyond the service expected in association with the APR in the NOL

performance against the ERNs could lend itself well to a financial incentive.

12. If the proposed SLIS is adopted, do you think it should provide financial rewards for overproduction? If so, do you think the 10% band is an appropriate bound?

As discussed in our response to Question 10, we do not think there is a need for financial rewards for over-production.

4.2 SDPPL's proposed efficiency carryover mechanism (ECM)

13. Is the ECM, with SDP's proposed changes, appropriate for the new operating regime? Are there any other changes that should be made to the ECM?

We consider that SDPPL's proposed changes to the ECM, including to remove the mode distinction and to set efficiencies based on actual levels of supply, sufficiently considers and accounts for SDP's new operating regime.

14. Are there any other issues we should consider when reviewing the ECM methodology?

We note that IPART has recently replaced the ECM with an operating expenditure benefits sharing scheme (EBSS) in its new regulatory framework. This was based on concerns that:

- Businesses found it too difficult to prove operating expenditure efficiencies were 'permanent' and hence did not apply for the opt-in ECM in practice, and
- There was no equivalent capital expenditure scheme at the time to ensure that businesses did not prioritise operating expenditure efficiencies over other forms of improved service.

IPART could take these concerns into account when considering the design of SDP's proposed ECM.

We understand, however, that SDPPL is adopting an ECM as part of transitionary arrangements towards the new regulatory framework. To this end, it may not be necessary to account for all these concerns, if we expect that SDPPL will eventually replace the ECM with the EBSS at a future point in time.

4.3 SDPPL's proposed financial incentives cap

15. Is there a case for the financial incentives cap to be set higher than the default cap of 1% of revenues set in the new Water Regulatory Framework?

Consistent with the spirit of the new regulatory framework, this is largely a matter for SDPPL to propose. Given the difference between SDPPL and Sydney Water costs and revenues, a slightly higher cap for SDPPL's financial incentives can provide stronger impetus to achieve better levels of service and lower costs without materially changing the outcome for end-use water customers.

16. If the abatement mechanism is removed from the package of SDP's incentives, should we set a cap that only applies to the ECM? If so, what is the appropriate size of such a cap?

We consider that a cap should apply to the incentive regime, regardless of scope.

If abatement / SLIS is removed from the package of incentives, it is likely that SDPPL will want to reconsider the cap it is willing to support. It is inappropriate to speculate further without a specific revised proposal on the table.

4.4 Energy adjustment mechanism

17. Should we include 2020-21 in the application period when calculating the EAM gains of losses over the 2017 determination period?

Yes. Sydney Water agrees with IPART's interpretation of how the EAM should be applied in the current circumstances. The clear intent of the methodology is to capture the most recent set of known annual trading outcomes and to distribute those outcomes in regulated prices at the earliest opportunity.

SDPPL's proposal appears to not only exclude 2020-21 from the next application period (2023-2027), but also from the following application period. We trust this was simply a drafting error by SDPPL.

18. Should the scope of the EAM be expanded to include all of SDP's surplus energy?

Sydney Water supports and considers that the revised Terms-of-Reference requires IPART to expand the scope of the EAM to include all surplus energy, provided SDP complies with the conditions of its NOL for those periods where surplus energy has accrued. An expanded EAM removes a potential disincentive for SDPPL to operate in a more flexible manner under the GSWS.

IPART needs to consider the totality of the arrangements that apply in relation to energy. This includes:

- The level of energy efficiency assumed when forecasting volumes for the water usage price;
- The assumed unit price of energy (ie, benchmark or contract rates); and
- The operating scenarios that are eligible for inclusion in the EAM.

Given energy use accounts for a large proportion of operating costs, it is critical that SDPPL be provided with strong incentives to minimise energy use.

19. SDP has proposed changing the core band and sharing ratio of its EAM. Specifically, it proposed to reduce the core band from 5% to 2.5% and increase customers' share of gains and losses outside the core band from 80% to 95%. For these changes, SDP claims the new operating environment limits its ability to actively manage its surplus energy and therefore its share of gains and losses should be reduced. Do you agree with SDP's proposal to reduce the core band and SDP's share of gains and losses outside the core band?

SDPPL has take-or-pay style contracts for energy (comprising separate supply contracts for electricity and renewable certificates). If SDP operates at less than 91GL a year, this will result in surplus energy that must be sold back to the energy market. The Terms-of-Reference requires IPART to have a method that shares the net gain or loss on trading of surplus energy.

Currently, the first 5% of the net outcome is retained by SDP (the 'core band') and the rest is shared 80:20 (SW:SDPPL). The outcome is 'paid out' in the following price period.

SDP propose reducing their exposure substantially. The core band would be reduced to 2.5%, and the sharing ratio would be 95:5 (SW:SDPPL).

While Sydney Water acknowledges it will have significant control over the quantity of surplus energy under the new operating framework, IPART needs to consider the totality of the arrangements that apply in relation to energy. This includes:

- The level of energy efficiency assumed when forecasting volumes for the water usage price;
- The assumed unit price of energy (i.e., benchmark or contract rates); and
- The operating scenarios that are eligible for inclusion in the EAM.

Given energy use accounts for a large proportion of operating costs, it is critical that SDPPL be provided with strong incentives to minimize energy use. Sydney Water considers that proposed changes to the EAM, when viewed alongside the other proposed changes to energy-related items, will dilute incentives for SDPPL to continuously improve energy efficiency. Sydney Water therefore supports retention of the existing core band and sharing ratio.

As SDPPL and Sydney Water gain more experience in operating under the new framework, changes to the core band and sharing ratio of SDP's EAM may be considered in future regulatory determinations.

20. What other issues should we consider when reviewing the EAM methodology?

IPART must consider the totality of assumptions being made in relation to energy (both volume and cost), so that the package of measures provides sufficiently strong incentives for SDPPL to continuously improve energy efficiency. This includes:

- The level of energy efficiency assumed when forecasting volumes for the water usage price;
- The assumed unit price of energy (ie, benchmark or contract rates); and

- The operating scenarios that are eligible for inclusion in the EAM.

4.5 SDPPL's proposed true-up mechanisms and cost pass-throughs

21. Are SDP's proposed end-of-period true-ups reasonable and efficient?

SDPPL has proposed a range of true-up mechanisms for material movements for most of their cost inputs, including service charges and fees set by energy market regulators, land tax, council rates, chemical costs, and insurance. These true-up mechanisms effectively shift a greater share of the risk of doing business from SDPPL to our customers. We question whether SDPPL's proposed level of risk sharing is appropriate (see response to Question 3) and support IPART assessing the reasonableness of SDPPL's proposed true-ups and considering how they will affect the overall balance of SDPPL's service levels, costs and risk.

As a general principle, economic regulation also seeks to mimic the outcome that would apply in a competitive market. For example, few businesses are able to achieve full and immediate recovery of unexpected cost variances, due to the pressure of competition.

To the extent that IPART accepts one or more of SDPPL's proposed true-ups, we would prefer they be calculated at end-of-period (as opposed to annual adjustments), as this better reflects the outcome that would apply in a competitive market. Holding costs (i.e., adjustment for time value-of-money) should not apply.

4.6 Partial and full re-openers for SDPPL

22. Should we accept SDP's proposal to introduce a materiality threshold to determine when we will re-open the determination? Or should we maintain our current approach of using discretion when considering whether to re-open the determination?

We support IPART applying an approach of using its own discretion when considering whether to re-open a determination. As set out in IPART's new regulatory framework, IPART has stated that it will take into account whether there has been a material impact on a utility's capacity to deliver services, whether prices remain cost-reflective and its legislative constraints when considering whether to re-open a determination[16].

A pre-defined materiality threshold may be of benefit if it can assist SDPPL in achieving more favourable terms from their financiers. However, this is only a benefit to SDPPL, and there does not appear to be any way for this to be shared with end-use customers. We also query how would IPART deal with variances that are favourable to SDPPL.

Sydney Water also reflects that a threshold of only 1% of SDPPL's annual regulated revenues may not be material in consideration of IPART's guidance on the purpose of re-openers that IPART "*consider re-opening a determination to be a last resort solution reserved for those cases where*

[16] IPART (2022) *Delivering customer value – Our Water regulatory framework: Technical paper*, November 2022, https://www.ipart.nsw.gov.au/sites/default/files/cm9_documents/Final-technical-paper-Our-water-regulatory-framework-November-2022.PDF, p. 59.

unforeseen cost changes result in material impacts to a business's capacity to carry out its services"[17].

23. If we do introduce a materiality threshold, what should the materiality threshold be based on and at what level should it be set?

As discussed in our earlier response to Question 22, IPART's new regulatory framework anticipates that re-opening a determination is an option where the underlying change in circumstances is of sufficient magnitude to materially affect the financial viability of the regulated utility[18]. In other words, if SDPPL had to absorb impacts until the next determination, it would face severe financial consequences even if IPART subsequently compensated them for the full cost impact of the variance.

Unexpected variations in cost can always occur during a determination period.

We would not support an automatic reopener to deal with these situations, however, a defined materiality threshold may provide a useful trigger for further assessment of the implications of any variance(s).

[17] IPART (2022). *Water regulation Draft Handbook*, https://www.ipart.nsw.gov.au/sites/default/files/cm9_documents/Draft-handbook-Water-regulation-December-2022.PDF, p. 56.
[18] IPART (2022) *Delivering customer value – Our Water regulatory framework: Technical paper*, November 2022, https://www.ipart.nsw.gov.au/sites/default/files/cm9_documents/Final-technical-paper-Our-water-regulatory-framework-November-2022.PDF, p. 59.

5 SDPPL's proposed prices

5.1 SDPPL's proposed prices

24. Should we accept SDP's proposal for a single 2-part tariff to cover all levels of production? If costs are not perfectly correlated with production, should we consider setting multiple service and/or usage charges to better reflect costs at different levels of production?

The new operating framework for SDP provides an opportunity to further simplify the tariff structure. A two-part tariff would simplify the task of administering our payments to SDPPL and increase the clarity of the determination for other stakeholders, and Sydney Water supports this change.

We note that SDPPL has proposed unregulated agreements to deal with certain kinds of service requests. Given the limited experience with a more flexible approach to operating SDP, we do not support unregulated agreements for the coming determination period. This may require IPART to determine prices for certain services where SDPPL did not propose a price, such as shutdown and restart events, or some form of *ex-post* true-up should these events be required during a determination period.

25. SDP proposed to set prices for services outside its level of service by negotiating directly with Sydney Water. This means IPART will not be involved in setting these prices. Do you think this is appropriate?

We consider issues with unregulated agreements in our response to Questions 26 – 29.

5.2 Unregulated agreements

26. Should unregulated agreements between SDP and Sydney Water be allowed under the determination?

We note that unregulated agreements have been proposed in previous determinations and rejected by the Tribunal, in part because it was considered that any such agreement would likely violate the financial indifference principle in the Terms-of-Reference. That is, it was considered that SDPPL would only enter into such an agreement with the expectation of some benefit to themselves, with the implication that this would be financial in nature (i.e. increased profit).

For this determination, we understand the scope of unregulated agreements proposed by SDPPL is narrower than that previously considered by the Tribunal, since SDPPL does not appear to be seeking to contract with any third-party customers in the coming determination period. Rather, the agreements are limited to recovery of actual costs (or savings) of novel operating scenarios, with no allowance for SDPPL's profit margin.

Given the apparent intent, we consider that agreements of the kind proposed by SDPPL would not conflict with the financial indifference principle. As such, it is open to IPART to allow for them in SDPPL price determinations.

While we consider that unregulated agreements are permissible in the current framework, Sydney Water does not support them for the determination period commencing 1 July 2023.

As noted earlier, the move to flexible operation under the GSWS will provide space for SDPPL and Sydney Water to collaborate to identify ways to optimise the use of SDP as part of the wider supply system. However, given the relatively limited experience operating SDP in a more flexible way, we consider it premature to entertain unregulated agreements for this determination period.

27. If allowed, should unregulated agreements between SDP and Sydney Water impact prices paid by end-use water customers?

Sydney Water does not support unregulated agreements for the upcoming determination period.

As we understand SDPPL's proposal, in most cases an unregulated agreement would result in a net reduction in costs compared to the default service levels that would otherwise apply. For example, a request by Sydney Water to shutdown SDP for several months would likely result in a reduction in certain fixed costs for that period, partially offset by some costs needed to bring the plant back into normal operation. If this were not the case, it seems unlikely Sydney Water would enter into such an agreement. It is conceivable that a net increase in SDP-related costs may facilitate a reduction in Sydney Water costs but, again, the result is either a net reduction in total cost and/or risk for end-use customers.

Given that the cost of 'normal operation' would have already been factored into prices for Sydney Water's end-use water customers, to the extent an unregulated agreement provides for a net reduction in cost then this should be passed through as an adjustment to customer bills.

The existing adjustment mechanism in Sydney Water's price determination works in a similar way, with prices adjusted based on the net deviation in actual SDP-related costs compared to an assumed operating mode. However, the existing pass-through mechanism only applies to regulated services, and would not deal with the outcomes of unregulated agreements without revision in the upcoming June 2025 Sydney Water price determination. The 2025 determination will also see the introduction of an Efficiency Benefit Sharing Scheme, which would provide a means of dealing with variances in Sydney Water-related costs.

To the extent that an unregulated agreement can reduce costs, we consider that this should be passed-on to end-use water customers at the earliest opportunity. We also acknowledge that IPART may want to retain some oversight of those agreements, which logically could occur in the context of a Sydney Water price determination. However, depending on timing differences, this may see cost reductions deferred for as long as seven years.

28. If we accept SDP's proposal for unregulated agreements, how can we ensure these agreements deliver good outcomes for end-use water customers?

If IPART accepts SDPPL's proposal for unregulated agreements, IPART could consider outlining a set of principles to ensure these agreements deliver positive outcomes for end-use water customers.

These principles could, for example, include openness and transparency, where SDPPL would be expected to be open and transparent about its costs for delivering services under a potential unregulated agreement. In addition, both SDPPL and Sydney Water could be expected to report to IPART on any unregulated agreements they enter into.

29. Are there specific events or services which would be more suitable for unregulated agreements?

This will become more evident as we gain more experience managing the water supply system with a full-time, flexible contribution from SDP.

The proposal for unregulated agreements appears targeted at situations where it is difficult to specify *ex ante* the full set of actions or activities needed to deal with a particular scenario. Rather than set a regulated price that can't possibly reflect these potential variations, so the argument goes, costs could be negotiated via an unregulated agreement.

In the context of SDP, the need for different levels of service are likely to occur in scenarios where Sydney Water may not be in a position to accept water from SDP for an extended period– eg, due to prudent maintenance on our network, or an unplanned outage of a major asset.

30. In 2017, we structured prices to enable third-party customers (in the event they emerged) to pay their fair share of SDP's costs. For this review, SDP proposed to set prices for only one customer (i.e., Sydney Water). Should we continue to facilitate third-party customer pricing through the determination?

We support IPART continuing to facilitate third-party customer pricing through SDPPL's determination. Our preference is having the 'ground rules' in place to provide certainty and clarity for all parties, in the event that the market evolves and third-party customers do emerge.

For example, there is no reason the minimum baseline volume couldn't be taken by one or more third parties, and we would not support unregulated agreements for third-party customers.

We note that this issue may become even more relevant in future if expansion is triggered.

31. Should we consider applying a materiality threshold when allowing for prices to be adjusted each year? If so, what are the factors we should consider when setting the appropriate threshold?

We would be open to IPART implementing a single materiality threshold across all potential adjustments.

32. For the cost of debt, our framework allows for costs to either be adjusted each year or at the end of period. Is there a case to do annual adjustments as proposed by SDP or should we instead apply an end of period adjustment?

We are open to IPART applying annual adjustments throughout the 2023 determination period, with respect to changes in SDPPL's cost of debt.

We ask that IPART engage with Sydney Water on potential financial impacts on our business and our customers, where it decides to adopt annual adjustments instead of an-of-period cost of debt true-up.

6 Other issues

6.1 Expansion determination principles

As part of the SDP refinancing in 2012, the NSW Government and SDPPL signed a Security of Water Deed (SoWD). The SoWD sets out the process, timetable and key requirements for how an expansion of SDP can be requested, in addition to the revenue and funding arrangements to support any expansion.

Citing lessons learned from the expansion planning process that was put on hold in May 2020, SDPPL has proposed a set of guiding principles be established to apply to any future expansion determination (noting that the NSW Government has not made a decision on expansion need). As SDP's largest (and currently only) customer, we would welcome the opportunity to work with SDP and/or IPART to establish a set of expansion principles, as needed.

Sydney Water is supportive of principles that improve customer outcomes by:

- Being consistent with the existing governance arrangements contained in the SoWD and assist in achieving the Government's expansion objectives; and
- Enhancing regulatory certainty for SDP whilst ensuring openness and transparency on the costs of an expansion.

Further to the above, we support the establishment of a set of expansion determination principles that ensure:

- The timeframe for making an Expansion Determination reflects the timing imperatives and specific requirements of the expansion aligned with the SoWD;
- Asset lives reflect their economic lives;
- IPART has detailed and transparent Design and Construct (D&C) costs available to it as soon as possible (whilst maintaining confidentiality);
- Provide for prudent and efficient costs to be recovered by SDPPL (and passed through to Sydney Water customers), commencing when the NSW Government issues a formal notification to commence expansion;
- IPART is able to:
    - Determine the structure of charges applicable to any expansion (including but not limited to variable and fixed charges) and to the existing SDP; and
    - Exercise its discretion to either make a new SDP price determination or an amendment to the existing SDP price determination incorporating the costs of expansion;

We are not supportive of other principles, such as:

- The Expansion Determination should be focused on efficient incremental costs associated with the expansion only;

- Where the tender process for the D&C contract is robust and approved by Government, then its resulting costs should be taken as efficient such that agreed efficient costs should not be subject an *ex-post* review by IPART; and
- Principal charge should be a daily fixed charge that represents the efficient incremental cost of expansion.

In general, we consider that any expansion of SDP should be subject to pricing regulation by IPART, with respect to the prudency and efficiency of any costs or the introduction of any pricing charges.

In determining prudent and efficient costs, we believe that there is a need to consider the impact of an expansion on SDP's existing cost structure (including economies of scale) and that IPART should not be limited to focusing only on incremental costs associated with the expansion. While competitive tenders may result in efficient costs compared with other procurement methods, the efficiency of these costs should further not be pre-determined before IPART has had an opportunity to review them.

The introduction of any pricing charges is also a matter for IPART, with these costs determined by how the Expansion (and Existing SDP) is operated.

6.2 SDPPL's specific / major proposed capital projects

SDP's price proposal has outlined a number of capital projects that it states are required to ensure SDP can meet its new operating requirements under GSWS. That is, operating continuously at a minimum baseline production rate with the ability to flexibly ramp up production when required by Sydney Water, and to the maximum production rate when needed.

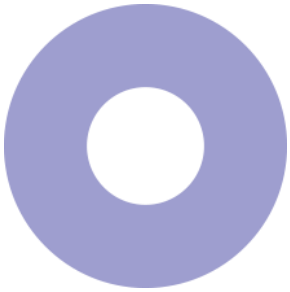
Sydney Water in principle **supports** all proposed additional capital projects as appropriate to enable SDP's continued and increased future role in supporting greater whole of system resilience under the GSWS, including:

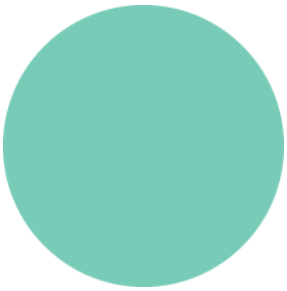
- Additional 132kV feeder to provide dual power supply feeds, noting the original design allowed space for this given potential for expansion. SDP's changed role requires greater power supply resilience given need to supply near continuously and as an emergency supply source.
- Additional stand-by drinking water pumps to give a total of three pumps that will operate in a duty / duty / stand-by arrangement. Currently the pumps operate in a duty / duty arrangement with no stand-by.
- Introduction of RO vessel sampling panels to assist in operations and maintenance of the membranes and reduce OH&S risks in doing so.
- Second drinking water storage tank to provide additional site storage capacity and assist the plant to reliably respond to emergency requests.

Sydney Water considers that these additional capex components will help SDP to be available when necessary and ensure continuity and volume of supply under the terms of the new NOL.

7 Glossary

Acronym	Definition	Acronym	Definition
APR	Annual Production Request	NOL	Network Operator's Licence
BI	Business Interruption	RAB	Regulated Asset Base
BoM	Bureau of Meteorology	SDP	Sydney Desalination Plant
CCC	Central Coast Council	SDPPL	Sydney Desalination Plant Pty Limited
DPE	Department of Planning and Environment	SLIS	Service Level Incentive Scheme
D&C	Design and construct	SoWD	Security of Water Deed
EAM	Energy Adjustment Mechanism	SW	Sydney Water
EBSS	Operating Expenditure Benefits Sharing Scheme	WACC	Weighted Average Cost of Capital
ECM	Efficiency Carryover Mechanism	WIC	Water Industry Competition
ERN	Emergency Response Notification	WSA	Water Supply Agreement
GGRP	Greenhouse Gas Reduction Plan		
GSWS	Greater Sydney Water Strategy		
IPART	Independent Pricing and Regulatory Tribunal		
ODI	Outcome Delivery Incentive		
NEM	National Energy Market		





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