

Ref: 20181102JC:NL

2 November 2018

Dr Peter J Boxall AO
Chairman
Independent Pricing and Regulatory Tribunal
Level 15, 2-24 Rawson Place
SYDNEY NSW 2000

Dear Mr Boxall

Essential Water submission on the IPART Issues Paper – Review of Essential Energy's prices for water and sewerage services in Broken Hill

Essential Water appreciates the opportunity to provide comments in response to IPART's 25 September 2018 Issues Paper for water and sewerage pricing in Broken Hill from 1 July 2019 (Issues Paper).

An overarching theme of the Issues Paper (and indeed Essential Water's initial regulatory proposal) is that the efficient cost of supplying water and sewerage services in Essential Water's area is relatively high, given its arid location and long distance from available water sources, while its customer base is relatively small. As a result, setting prices to reflect the total efficient cost might make services unaffordable for customers in the low socio-economic community of Broken Hill and surrounds.

I note the following comment in the 13 October 2018 newspaper article in the Barrier Daily Truth, Broken Hill by Minister Niall Blair relating to the new pipeline:

"So when IPART hands down its determination for water prices for 2019-2023, this project won't increase water prices in Broken Hill".

We are encouraged by IPART's approach to conducting this review; however, as outlined in this submission, we are concerned that the funding arrangements for the WaterNSW pipeline may constrain our ability to recover our efficient costs.

Essential Water's detailed responses to the issues raised by IPART are provided in Attachment 1. We would like to draw your attention to the following matters, which we believe warrant further consideration by IPART during this review:

- **Allocation of costs and risk** – IPART proposes to include the WaterNSW costs of transporting bulk water via the Broken Hill pipeline and the costs of consequential works in the assessment of our total efficient costs. We consider the IPART approach is less transparent than our proposed 'NUOS' model and transfers an inappropriate and unreasonable level of risk to us.

We also maintain that the inclusion of an effective cost pass through mechanism to deal with unexpected, uncontrollable events provides an appropriate sharing of risks between Essential Water and our customers.

- **Consequential works** – We acknowledge IPART's approach to including the cost of consequential works in its assessment of our efficient costs because Government funding has not been confirmed. We maintain our proposed approach that the costs for consequential works should be funded by Government and separate to the costs of our existing distribution network.

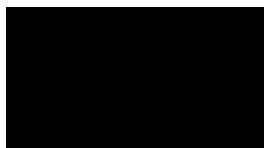
- **Wills Street wastewater treatment plant** – As outlined in our initial submission, the plant is failing, resulting in groundwater contaminations and other adverse environmental impacts. The conditional NSW Environment Protection Authority (EPA) operating licence includes a pollution reduction program. Failure to proceed with the project would almost certainly result in the EPA taking action including fines, prosecution or levying enforceable undertakings.

We believe, based on detailed analysis by external engineering experts, that the plant needs to be replaced and cannot be deferred again. We consider that the most appropriate and least-cost option is for the Wills Street wastewater treatment plant to be replaced during the 2019-23 determination period according to our proposed design solution.

- **Forecast consumption** – We note IPART's observations of the differences in the consumption forecasts between Essential Water and WaterNSW. Attachment 1 discusses the possible sources of these differences and notes that much of the difference can be explained by the use of 'average' daily consumption by Essential Water and 'peak' daily consumption by WaterNSW. These differences are not unreasonable, given that the WaterNSW looks to provide capacity to ensure water supply is available in Broken Hill without ongoing restrictions, while Essential Water forecasts customer consumption as a key input to the setting of water and sewerage distribution prices.
- **Short run or long run marginal costs** – We maintain that pricing for infrastructure usage charges should be based on long run, rather than short run, marginal costs for the reasons set out in our 13 July 2018 submission (initial submission) and as summarised in Attachment 1.
- **Sewerage pricing structures** – We note IPART's preliminary view is to not accept Essential Water's proposed pricing structures for sewerage services. We maintain that our proposed approach, that was formed having regard to customer feedback, more appropriately takes into account customer affordability and the impacts that unwinding cross subsidies may have on customers, is preferable to IPART's suggested changes.
- **Geographically-based prices** – While IPART's suggestion that geographically-based prices has some merit, the limited time to assess and separate the underlying costs for each region and to obtain customer feedback on the customer impacts would make the introduction across the network extremely challenging.
- **Corporate tax rates** – Essential Water is an operating business unit of Essential Energy, which attracts a corporate tax rate of 30%. If IPART provides allowances in its notional revenue requirement for income taxes based on the base rate entity tax rates (i.e. 27.5%), but the tax paying entity is taxed at 30%, there is a shortfall that is funded by the entity's shareholders. Using the lower tax rates would institutionalise a framework where regulated networks are not able to recover their efficient costs, which may have longer term consequences on the incentives to invest.

If you would like to discuss this submission in more detail, please call me on (02) 6588 8333 or, alternatively, contact Ms. Natalie Lindsay, Manager Network Regulation, on 02 6589 8419.

Yours sincerely



John Cleland
Chief Executive Officer

Attachment

Essential Water response to IPART's list of issues for our water business

October 2018



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Framework for efficient costs and affordable prices

1 Do you agree with our proposed framework for establishing total efficient costs and setting affordable prices? If not, what framework should we apply?

IPART's overarching three-step framework of establishing efficient costs, applying a cost sharing framework and setting affordable prices appears reasonable. The more detailed application of this framework is discussed as relevant in our responses below.

Unlike Essential Water's proposal, IPART has proposed to include the costs of transporting bulk water via the Broken Hill pipeline and consequential works in the assessment of Essential Water's total efficient costs. IPART suggests this approach is more transparent and provides stronger incentives for Essential Water to improve the efficiency of expenditure on its existing network. While it may be simpler at the time of the determination to include the WaterNSW costs in the Essential Water determination, we do not consider it to be the most transparent approach and may also lead to administrative complexities during each year of the determination period.

We consider the IPART approach is less (not more) transparent than the Essential Water model – a model that mirrors the electricity distribution and transmission pricing framework in the National Electricity Market (NEM) – and (unreasonably) passes a high level risk to Essential Water.

In the well-established 'NUOS' framework applied in the NEM, the costs of transmission services (a direct comparison to the WaterNSW bulk water transportation costs) are separately determined by the regulator and are not included in the revenue determination for the distribution business.

A model that mirrors the regulatory treatment of electricity network pricing arrangements between transmission and distribution networks in the NEM recognises (appropriately in our view) that the efficiency of the costs for transmission services cannot be materially affected by the distribution network (i.e. we are not the 'impactor' of these costs). As such, it is more appropriate to combine the prices from the two determinations (i.e. transmission and distribution) into final customer (network) prices as part of the annual price change process, rather than combining transmission charges into the distribution review.

IPART's approach implies that Essential Water has some material way of improving the efficiency of the WaterNSW bulk water transportation costs. This is not the case. We consider the WaterNSW costs are largely outside of our control and should be passed through to customers at the annual price change process and not as a component cost in our determination.

Adding the pipeline costs as an input to the Essential Water review is less transparent and introduces complexity into the ongoing administration of our determination, including annual adjustments to the WaterNSW costs (including any approved pass through events, such as the electricity cost pass through as proposed by WaterNSW). These annual adjustments are more transparently addressed through the annual pricing process.

We note the importance of ensuring transparency should the NSW Government be required to contribute to the cost of the pipeline. Transparency of the costs borne by each party and any required government funding arrangements will ensure the efficient costs of the pipeline are visible (thereby promoting efficiency) and that the costs are recovered in the least distortionary manner. Tracking any Government funding and applying it to the appropriate network service (and organisation) is less transparent and may become convoluted under IPART's approach.

We note that our proposed approach in no way diminishes the establishment of efficient costs in the first instance, before turning to how these costs should be funded and by whom.

In fact, our approach provides a more transparent approach to achieving these outcomes in that it clearly establishes:

- The party that has 'caused' (or 'impacted') the costs;
- The wider policy, including environmental, considerations and 'who pays' such as in the case of a reduction in the evaporative loss of water from the Mendiindee Lakes system and whether those reduced losses could generate water supply for other parts of the Murray Darling Basin). Trying to establish this via the Essential Water determination and not the WaterNSW determination would be impractical if not impossible; and

- The level of Government funding linked to the respective network services provided by WaterNSW or Essential Water.

2 Are Essential Water's current and proposed service standards appropriate?

We maintain that our current and proposed service standards, as outlined in Chapter 3 of our initial submission, are appropriate. As an input to our initial submission, Essential Water engaged with customers to assess, amongst other things, whether our service standards are appropriate (see Chapter 4 of our initial submission). As summarised by IPART in its Issues Paper, Essential Water's customer engagement activities suggest that a high proportion of customers view current and proposed service levels as 'about right'.

3 Should we assess the price residential, non-residential and mining customers can afford separately? What quantitative or qualitative analysis should we consider when assessing what each group can afford?

As noted in our response to Issue No. 1, we support IPART's overarching three-step framework of establishing efficient costs, applying a cost sharing framework and then setting affordable prices. We agree with IPART that assessment of what the community can afford should not influence the level of efficient costs, but rather the party that is best place to fund these costs (i.e. customers or Government).

We note IPART's bill benchmarking analysis in Figure 3.3 and 3.4 in the Issues Paper highlighting that Essential Water's current bills are lower than 27 (out of 36) water utilities (i.e., we rank 8th best out 36 water utilities). This places us in the lowest quartile of relevant comparison utilities.

IPART has undertaken a sensitivity to assess how our bills would compare if our initial pricing proposal was accepted in full. In this circumstance, Essential Water's bills would still be lower than 22 out of 35 water utilities (i.e. we would rank 13th best out of 36 water utilities). While these results still show Essential Water's bills are relatively low, it is unclear whether IPART has assumed any 'real' cost increases for the other utilities in the survey (we would expect other water utilities to also be facing cost increases moving forward). Therefore, we consider that IPART's adjustments to the bill benchmarking, while still showing relatively low bills for Essential Water, understate the relative ranking (i.e. once adjustments to other water utilities is made, we would expect our ranking to be approximately where it is today - in the lower quartile of bills for relevant comparison utilities).

In assessing affordability, we support IPART assessing residential, commercial and mining customers separately by looking at the data provided by Essential Water and other relevant socio-economic analysis as outlined by IPART.

4 What is a reasonable ceiling for annual bill increases, for residential, non-residential and mining customer groups, to protect customers from bill shock?

In arriving at the proposed water and sewerage prices in our initial submission, we undertook, and had regard to, an assessment of affordability in Broken Hill, including through surveying a sample of our residential and commercial customers.

As a starting point for any consideration of affordability, we maintain that our proposed prices are not unreasonable for the costs associated with providing customers with water and sewerage services, on the basis that separate funding is obtained for the costs of the WaterNSW pipeline and consequential works.

If IPART assesses a 'reasonable ceiling' for annual bill increases is one that is below the level required to recover Essential Water's efficient costs, we would expect that this shortfall would be met through separate Government funding. This is on the basis that a regulated network should be provided with a reasonable opportunity to recover its efficient costs.

As outlined in our response to Issue No. 1, we maintain that any reduction to the efficient costs determined by IPART to address affordability concerns arising from the WaterNSW pipeline and Consequential Works should not be borne by Essential Water or our customers, but should be funded by WaterNSW or Government as relevant in a transparent manner.

We also caution against introducing a regulatory regime based on pricing 'side constraints' without specific Government funding attached to it, as this can depart from the assessment of efficient costs and place unreasonable financial risk on Essential Water.

Decisions we will make before setting prices

5 How long should we set prices for in the 2019 determination?

Essential Water supports the adoption of a four-year determination period starting on 1 July 2019. A four-year determination period provides a reasonable balance between providing greater stability and predictability (and reduced regulatory burden) associated with a longer period with reducing forecasting risk and the timeliness of customers benefitting from any efficiency gains associated with a shorter period.

6 Do you support a price cap as an appropriate form of regulation for Essential Water?

Essential Water supports the continued use of price caps as the appropriate form of control for our water and sewerage business.

7 Should we apply an efficiency carryover mechanism (ECM) to Essential Water's operating expenditure?

Regulators in a number of jurisdictions, including IPART, have introduced efficiency mechanisms to address a shortcoming in incentive frameworks, whereby the financial reward for achieving savings deteriorates over the length of a regulatory period. That is, in a four-year regulatory period, a saving (or efficiency gain) made in year one of the regulatory period results in four-years of additional profit, whereas an efficiency gain made in year three of the regulatory period results in just two years of additional profits.

The consequence is that there is an incentive to delay savings from the latter years of one regulatory period to the beginning of the next regulatory period. The delay in the incentive to seek efficiency savings results in potentially higher profits for businesses and a delay in the time in which cost savings are translated into lower prices for customers, both of which are undesirable for regulators and the community alike.

An efficiency carryover mechanism, such as IPART's ECM, allows efficiency gains (or losses) to be held for a specified period of time (e.g. the length of the determination period), regardless of when the gains or losses are experienced.

There is additional administration required when reporting on ECM outcomes and the financial impact of the ECM needs to be incorporated into the investment governance process, adding additional complexity.

On balance, adopting an ECM does not appear to be a proportional response to achieve greater efficiency gains for Essential Water given the small size of our business, as the additional administrative costs to the community and complexities are likely to outweigh the potential benefits for the business and its customers.

Essential Water therefore supports IPART's preliminary view to not include an efficiency carryover mechanism as part of the 2019 determination and that IPART should instead continue to rely on the inherent incentive properties of the 'CPI- X' framework.

8 Are Essential Water's proposed cost pass-through events reasonable?

Essential Water maintains that a well functioning regulatory framework needs to ensure a reasonable sharing of risks and that a business has the opportunity to recover its efficient costs.

A cost pass through mechanism to deal with unexpected, uncontrollable events provides an appropriate balance in the allocation of risks between Essential Water (to recover costs to attract sufficient investment in its network) and customers (to ensure that prices are no more than necessary to provide an appropriate level of service).

The inclusion of an effective cost pass through framework will improve the ability of water networks to invest in and operate their networks, while providing an appropriate allocation of risks between the business and its customers.

We consider that if an infrastructure business is not provided with the opportunity to recover its efficient costs, as would be the case if there was a positive change event but that the efficient costs were not able to be recovered, there would be a diminishing of the incentive to invest in the network, which is not in the long term interests of our customers.

As outlined in our initial submission, there is a stark contrast between IPART's approach to cost pass through events, where Essential Water currently has no pass through events in the current IPART 2014 determination, and the Australian Energy Regulator's (AER) approach for the Essential Energy electricity distribution business where there are currently eight pass through events in the current AER 2014-19 determination.

We accept that there are some differences between electricity distribution networks and water and sewerage networks. However, the majority of the events included in the AER's determination would appear to be equally appropriate for inclusion in a cost pass through framework for a water and sewerage network.

Essential Water therefore maintains that the following cost pass through mechanism is appropriate for the 2019-23 determination:

- Four pass through events: a regulatory change event, a drought relief event, a Wentworth to Broken Hill Pipeline event and a consequential works event;
- A symmetric framework that applies for both positive and negative cost events; and
- A materiality threshold of 2.5 per cent of the annual revenue requirement.

We consider that each of the proposed pass through events identified above would meet the requirements in the IPART Act and represents a reasonable allocation of risks between Essential Water and its customers.

As highlighted in our initial submission, there was some contention in the IPART 2016 determination for Sydney Water as to whether there are constraints in the IPART Act that limit IPART's ability to implement cost recovery mechanisms. The statement by IPART in its Issues Paper that "the IPART Act limits our discretion to apply cost pass-throughs within a regulatory period to particular events that can be specified in advance" is therefore most concerning.

We suggest that If IPART considers that this is not the case, and that there is a legislative constraint that limits it from determining an appropriate cost pass through framework (such as applies in the NEM), IPART should highlight its concerns in its draft and final determinations.

9 Should we introduce a demand volatility adjustment for Essential Water in the 2019 determination? If so, is $\pm 5\%$ a reasonable threshold?

Essential Water agrees that a demand volatility adjustment mechanism is a useful and important feature of IPART's regulatory framework. However, we consider that IPART's application of the mechanism in Essential Water's 2014 determination with no specified threshold contains an unreasonably high level of discretion that does not provide an appropriate level of certainty to Essential Water or its customers on how future revenues and prices will be set.

We consider a more appropriate approach would be for IPART to adopt the mechanism that it applies to Sydney Water and other businesses, whereby a specified materiality threshold of $\pm 5\%$ of sales is applied.

Under our proposed mechanism, Essential Water would bear volume risk up to the ± 5 per cent threshold (or 'deadband'), and customers would bear volume risk beyond the deadband.

We consider that it is reasonable for water businesses to bear and manage the revenue risk associated with normal deviations from average weather conditions and demand (i.e. within the deadband) and for customers to be exposed to some volume risk (i.e. volumes outside of the deadband). This is consistent with the findings by IPART in the recent Sydney Water determination as outlined in our initial submission.

The proposed approach as outlined in our initial submission provides clarity and transparency on how the mechanism would be triggered (i.e. based on whether actual revenues are outside of the deadband) and how any adjustment amount would be calculated. This should provide greater clarity to our business and our customers on how future revenues and prices may be adjusted.

10 If separate Government funding is not provided for exempt customers, should the foregone revenue be paid by Essential Water's other water customers?

Under the NSW Water Management Act 2000 (the Act), certain customers, such as some schools, hospitals, churches, and charitable organisations are exempt from paying access charges. This means we cannot charge these customers an access charge.

As IPART includes exempt customer numbers when calculating our availability charges, and we are not able to charge exempt customers the availability charge, we are currently unable to recover our efficient costs while complying with the Act without seeking separate Government funding or setting separate cost-reflective tariffs for exempt customers.

The amounts are not trivial. We estimate that the foregone revenue as a result of IPART's approach to price setting for exempt customers is in the order of \$0.7 million annually.

We do not think that the Act contemplates Essential Water bearing the costs of complying with the requirements for exempt customers. Nor do we consider that separate NSW Government funding for these costs is appropriate, when a pricing mechanism is available to ensure we are able to recover our efficient costs while complying with our legal obligations.

Therefore, we consider that it is incumbent on IPART to allow the foregone revenue to be recovered through the existing pricing arrangements or through the introduction of cost-reflective tariffs for exempt customers.

Notional Revenue Requirement

11 Is Essential Water's proposed expenditure (including consequential works) for the 2019 determination period reasonable?

Based on the detailed build-up of costs outlined in our initial submission, we maintain that our proposed expenditure is reasonable.

As outlined in our response to Issue No. 1, we consider that the focus of this determination should be on the efficient costs of Essential Water's water and sewerage business, with the efficient costs of the WaterNSW pipeline addressed through the concurrent IPART WaterNSW review.

As outlined by IPART in its Issues Paper, our proposal (in our view appropriately) also does not include the costs of the WaterNSW pipeline, consequential works, capital costs for the final 21km of the pipeline (not 40km as referred to by IPART on page 56 of the Issues Paper) (the SP2 works) or the costs associated with electricity infrastructure that will be 'gifted' to Essential Energy (the SP3 works).

We note the IPART analysis suggests, indicatively, if all proposed costs of supplying water to Essential Water's Broken Hill customers were included in prices (that is, including full costs of the Broken Hill pipeline and consequential works), the notional revenue requirement would be approximately \$59 million a year, on average, over the next four years, compared with approximately \$25 million a year, on average, proposed by Essential Water.

Clearly, funding for the WaterNSW pipeline and the Consequential Works (which are required to accommodate the new pipeline) is a critical issue for this determination.

As outlined in our initial submission, and supported by external engineering experts, we maintain that the proposed costs for our consequential works program are reasonable.

Allowance for operating expenditure

12 Are Essential Water's proposed operating costs over the 2019 determination period efficient, taking into account the drivers of this expenditure and the impact of the Broken Hill pipeline?

As outlined in initial submission, we have proposed operating costs over the 2019 determination that we consider are efficient. We note that IPART has appointed external technical experts to assist in the review of the efficiency of our proposed expenditures and that a detailed investigation is currently underway to assess the reasonableness of these costs.

Regarding other matters raised by IPART in the Issues Paper relating to operating expenditures, we provide the following comments:

- We consider the appropriate regulatory treatment of the WaterNSW pipeline costs is via the separate IPART WaterNSW determination and that bulk water transportation costs are combined with our distribution costs as part of the annual pricing proposal process. On this basis, the level of WaterNSW costs and any associated Government funding would not (appropriately in our view) impact on the costs of the Essential Water distribution determination;
- IPART suggests that there is “unexplained volatility” in our energy costs, which are purported to increase significantly in 2018 and 2019 but then decrease in 2020, and then grow after 2020 “even though demand for water is forecast to decline”.

We do not share the view that our proposed energy costs are unexplained. Our initial submission presented a detailed example of how electricity costs have increased significantly in 2017-18 and 2018-19 due to a combination of price and volume variations. These costs are expected to decrease once the new pipeline becomes operational in 2019-20 (the first year of the new determination) as illustrated in IPART's Table 6.3, which shows energy costs decreasing from \$3.9m to \$1.4m.

Pumping costs from the Darling River via the Menindee pipeline pumping stations have not been included in the bulk water transfer electricity costs. The reduction in electricity costs is forecast on pumping from either WaterNSW's bulk water storage at the commencement of SP2, or from Stephens Creek emergency storage into Broken Hill. The step reduction in energy costs is shown in 2019-20 and then increase with energy cost increases each following year.

- IPART has referred to Essential Water's “plan to re-allocate corporate overheads between its water and power business under the Australian Energy Regulator's (AER) approved cost allocation methodology”.

For context, the full application of the AER's cost allocation methodology resulted in costs being allocated to Essential Water, which did not appropriately reflect the scale and scope of our water business. On this basis, Essential Energy reduced the corporate overhead allocation to the water and sewerage business, which thereby reduced our proposed efficient costs and prices accordingly. This reduction to overheads is likely to result in stranded (unfunded) costs. This decision was made in light of the likely outcome that those costs (while reasonable) are unlikely to be able to be re-allocated to the electricity business due to the timing of the two determination processes.

13 What scope is there for Essential Water to achieve efficiency gains over the 2019 determination period?

The IPART Issues Paper highlights Essential Water's proposals to achieve operating expenditure savings over the 2019-23 regulatory period by:

- Decommissioning the Menindee Lakes pipeline and associated pumping stations;
- Closing the Sunset Strip water filtration plant and supplying the town with water from a new, larger plant in Menindee;
- Decommissioning the Broken Hill reverse osmosis desalination plant;
- Reducing fleet and labour costs across the business, and
- Re-allocating corporate overheads between Essential Energy's water and energy businesses.

In addition to the above sources of potential cost savings, the efficiency initiatives that Essential Energy and Essential Water have undertaken since 2012 have led to a reduction in overhead costs in the current period. These initiatives include a reduction in staff numbers through a hiring freeze and natural attrition, and reductions in fleet and travel costs.

Essential Water has incorporated the ongoing impacts of these efficiency initiatives, together with a number of additional efficiency programs and initiatives, into its forecast operating expenditures in order to ensure customers receive value for money in their water and sewerage services.

These efficiency initiatives include:

- Staff reductions - the planned capital expenditure in the next regulatory period will improve system reliability and reduce long term operating expenditure through a reduction in field staff requirements. Reductions will be achieved through natural attrition. The loss of these staff will also be reflected in a reduction in associated plant and materials costs;

- Continued push to reduce overtime;
- Minimising the number of agency staff;
- Wage increases to be offset through efficiency gains;
- Efficiencies in fleet management; and
- Corporate strategy initiatives, such as 'make every dollar count'.

Prudent and efficient capital expenditure

14 Is Essential Water's capital expenditure over the 2014 determination period prudent?

Based on the detailed build-up of costs outlined in our initial submission, we maintain that our proposed capital expenditure is prudent and efficient. We are also confident in our ability to deliver the proposed program, noting that much of the proposed expenditure (in particular the proposed construction of the Wills Street wastewater treatment plant) is expected to be provided by competitively-sourced external suppliers.

15 Is Essential Water's forecast capital expenditure efficient, including expenditure for consequential works?

Essential Water's proposed capital expenditure program has been developed through the application of a robust asset management and governance framework as outlined in our initial submission. Issues identification, options analysis, costing, solution identification and project delivery has been undertaken drawing on the expertise of internal and external engineering and operational expertise.

Through the application of this framework, we have confidence that the proposed capital expenditure is prudent and efficient.

Our initial submission includes a proposal to construct pipelines and pumping stations to maintain operations at the Stephens Creek reservoir, as well as construct a new off-line storage facility near Stephens Creek.

IPART in its Issues Paper (Page 69) states that the "objective of these works is to increase reliability for Broken Hill water customers. However, according to customer survey results, 67% of customers think that Essential Water is performing very well on providing a reliable water supply" (emphasis added). We wish to clarify that the investment relating to Stephen's Creek is designed to maintain, rather than increase reliability following the operation of the Wentworth to Broken Hill Pipeline.

Essential Water currently maintains two sources of water supply. When one fails the backup supply is brought online in order to maintain supply. When the Wentworth to Broken Hill pipeline is commissioned, Essential Water will decommission Imperial Lake emergency backup supply and Stephens Creek becomes the critical backup supply for Broken Hill.

The 200ML of off-stream storage at Stephens Creek, which would have provided six days of backup emergency supply was removed in part of the review process of the government funded Consequential Works business case submission. This occurred following the lodgment of our initial water pricing submission to IPART on 13 July 2018. Utilising the existing 100ML on-stream storage to maintain the existing three days of emergency storage was found to be more prudent and efficient. However, if in the future the Murray-sourced supply via the pipeline is found to be less reliable than expected, the 200ML off stream storage project will be reviewed.

As such, we consider that the proposed Stephen's Creek investment is a critical element in maintaining (rather than increasing) current reliability, which the overwhelming proportion of our customers support.

We note that IPART has appointed external technical experts to assist in the review of the efficiency of our proposed capital expenditures and that a detailed investigation is currently underway to assess the reasonableness of our proposals. We are actively participating in IPART's investigation, including responding to a large number of detailed requests for information by IPART's technical consultants.

16 Is constructing a new pipeline from Stephen's Creek reservoir the most efficient method of providing water to the 11 graziers?

After a detailed engineering options review, the only option suitable to supply all 11 graziers was the new pipeline from the Stephen's Creek reservoir, due to the flat terrain and minimal rainfall and the unavailability (and unreliability) of bore water supply in a number of cases.

Based on a detailed analysis of the options available to ensure ongoing supply to the graziers as a result of the introduction of the WaterNSW pipeline (which has been provided to IPART and its consultants), Essential Water considers that the proposed new pipeline can be delivered at lowest cost.

17 Is replacing the Wills Street sewerage treatment plant in the 2019 determination period efficient?

This section provides relevant background material for stakeholders to consider when forming their views on whether replacing the Wills Street wastewater treatment plant during the 2019 determination is efficient. This information has previously been provided to IPART and its technical consultants in Attachment 4 to our initial submission.

- **Project Description – What do we want to do?**

This project is to design and construct a new Waste Water Treatment Plant (WWTP) at Wills Street in order to replace the existing WWTP, which is approaching the end of its useful life.

Planning and design is scheduled to be finalised in 2018/19, with construction commencing in the upcoming regulatory period.

- **Why do we want to do it?**

Wills Street WWTP was constructed in 1939 and augmented in subsequent years. The plant has an operational capacity of 3ML/day incorporating a system of primary sedimentation, sludge digesters, separating filters and UV treatment.

In 2009, GHD consultants conducted a condition assessment and found that the plant was in poor condition and required extensive rehabilitation. Following that study a sewer strategy study was undertaken that assessed both refurbishing and replacing the WWTP. Essential Water subsequently engaged consultants to undertake a structural assessment of the Wills Street WWTP.

- **What options have been considered?**

Due to the significant investment requirement to replace the asset, a number of reports have been commissioned with the focus on refurbishment versus total replacement. Also, the consideration of later retiring the South WWTP and delivering sewerage to the Wills St WWTP has been included. Section 3.13 of the Department of Public Works (DPW) report obtained by Essential Water (and provided to IPART) provides a full discussion on the viable options, which recommends plant replacement.

Essential Water engaged Public Works Advisory (PWA) to provide a high-level concept design to assist with a funding application to the NSW Safe and Secure Water Program. Investigations identified a more modern technology plant with a smaller footprint, lower capital and operational costs, which will be considered during the tender phase.

- **What would be the consequences if this project did not proceed as planned?**

The plant is already failing, resulting in groundwater contaminations and other adverse environmental impacts. The conditional NSW Environment Protection Authority (EPA) operating licence includes a pollution reduction program. Failure to proceed with the project would almost certainly result in the EPA taking action against EW, including fines, prosecution or levying enforceable undertakings.

Doing nothing would not be consistent with Essential Water's commitment to providing a safe and reliable sewerage service and would only delay the now urgent need to replace the aged plant. This investment is critical to ensure Essential Water is able to meet its legal and regulatory obligations.

As part of its pricing proposal for the 2014 determination, Essential Water proposed replacing the Wills Street sewerage treatment plant from 2017-18. However, IPART decided not to include an allowance for

this proposed expenditure in its determination as IPART considered that Essential Water could, at the time, defer this expenditure. Deferring the replacement of this plant is not a viable option for the 2019 determination.

- **How have the projected capex costs been arrived at and what do they include?**

The original cost estimates are based on the original GHD report, endorsed as reasonable by the DPW. These cost estimates have been subsequently updated from a more recent PWA assessment of costs.

Essential Water, based on detailed analysis by external engineering experts, believes that the replacement of the Wills Street WWTP cannot be deferred again due to legal environmental concerns. We consider that the most appropriate and least-cost solution is for the plant to be replaced during the 2019 determination period according to our proposed design solution.

Allowances for return on assets, regulatory depreciation and tax liabilities

18 Should we maintain a straight-line depreciation method for calculating the allowance for regulatory depreciation?

We propose to depreciate our water and sewerage assets using a straight-line methodology, consistent with IPART's 2014 determination and IPART's usual approach across the water utilities it regulates. This means that the total value of an asset is recovered evenly over the asset's assumed life.

Essential Water supports IPART's preliminary view to accept our proposal to continue to use the straight-line depreciation method.

19 Are Essential Water's proposed asset lives for existing and new assets appropriate?

Essential Water maintains that applying the regulatory asset lives for water and sewerage assets set by IPART in the 2010 determination and maintained in the 2014 determination remains appropriate.

We have proposed a new asset category for corporate assets, – which includes 'non system' assets such as IT, buildings, plant and equipment, and motor vehicles – with regulatory asset lives of around 25 years for these assets. Essential Water notes that the relatively long lives for assets such as IT and motor vehicles might appear long. However, we arrived at a uniform life of 25 years for these non system assets due to the relatively significant pricing implication associated with depreciating these assets over a shorter (e.g. 5-10 year window).

We will be guided by IPART and its technical consultants as to whether our proposed asset lives for corporate assets are appropriate and whether shortening lives for non system assets may be more appropriate.

We are unclear as to the basis on which IPART and its consultant may consider changes to the lives of water and sewerage assets, given the proposed decommissioning of the Menindee pipeline, as suggested by IPART in the Issues Paper. We look forward to gaining a better understanding of any proposed adjustments by IPART or its consultant in the lead-up to the draft determination.

20 Is Essential Water's proposed rate of return appropriate?

Essential Water has applied IPART's current methodology and process for calculating the rate of return as outlined in IPART's February 2018 'Review of our WACC method'.

As such, we consider the application of IPART's current (standard) framework for calculating the rate of return is reasonable for the purposes of this determination.

21 Do you agree that we should account for annual changes in the cost of debt over the 2019 determination period through a regulatory true-up in the following period?

No. Essential Water maintains that applying annual adjustments to the cost of debt through the annual price change process is more appropriate than a true-up in the following period.

Annual updates to the cost of debt (and resulting WACC) can either be passed through as part of the annual pricing changes to customers or can be true-up in the next regulatory period, ensuring that both options are equivalent in present value terms (discounted by the WACC rate).

IPART has indicated that its preliminary position is to not adopt an annual update for the cost of debt, and instead apply a net present value (NPV) neutral true-up at the next determination, on the basis that it provides certainty to customers about their prices over the upcoming determination period.

In forming its preliminary view, IPART notes that, for Essential Water, a regulatory true-up is 'slightly' more complex than an annual update of prices. However, for this review, IPART considers that this higher cost is outweighed by the benefit of certainty to customers about their prices. Essential Water does not support this view.

In contrast, IPART suggests that if it applied an annual update, a large change in the cost of debt would flow through to customer prices in the following year of the determination period, unless additional side constraints were imposed in the determination (which we would not support).

Essential Water's preference is to apply the annual updates to the cost of debt as part of the annual price change process rather than an NPV-neutral true-up at the next determination, on the basis that:

- Applying annual updates to reflect changes in the cost debt is more likely to mitigate against price shocks for customers, as the alternative approach of aggregating the annual changes and applying the balance at the subsequent reset may institutionalise greater price volatility at the commencement of each determination period. The 2018 WACC methodology change to a trailing average cost of debt will also mute the impact of annual changes to customers; and
- Annual updates are already required to the annual price change process to give effect to actual measures of inflation, and an additional annual update for the cost of debt is a straightforward exercise (we note that the Essential Energy electricity business already applies annual updates to the cost of debt as part of its annual pricing process as part of implementing the AER's electricity determination, with the process being mechanistic and administratively simple).

We note that either approach should deliver the same revenue outcome in NPV terms, with the pricing outcomes dependent on actual movements in the cost of debt. Predicting future movements in the cost of debt is speculative and in theory the cost of debt could move in a number of ways, including remaining flat, increasing or decreasing in a consistent profile or increasing and decreasing in a 'random walk'. If the cost of debt were to move in the same direction (increase or decrease) over one or more years during a regulatory period, the application of annual updates would minimise price shocks at the next determination relative to the NPV-neutral true-up.

Conversely, if the cost of debt were to move in a random manner (e.g. a combination of increases and decreases), then a true-up at the next determination would allow the annual changes in the cost of debt to potentially 'cancel out' over the regulatory period. In this scenario a regulatory true-up would minimise price volatility relative to annual updates.

The choice of applying an annual update or an NPV-neutral true-up to the cost of debt is therefore a decision between:

- Applying small annual price adjustments within a regulatory determination with the risk of moderate price shocks between regulatory periods; or
- Applying no annual adjustments within a regulatory determination period with the risk of potentially large price shocks between regulatory periods.

It is our view that, on balance, applying annual updates to the cost of debt is preferable to applying an NPV-neutral true-up at the next determination as it is more likely to mitigate against the risk of large price shocks for customers between regulatory periods.

22 What comparable industries should we consider in establishing the proxy companies we use to re-estimate the equity beta in this review?

As noted by IPART, for a listed firm it is possible to measure the equity beta directly, by calculating the historic correlation (or covariance) between the firm's returns and the returns to the stock market overall. However, the businesses IPART regulates, including Essential Water, this is not the case as these companies are not listed.

Therefore, to estimate the equity beta, IPART selects a group of listed companies that face similar risks to the regulated firm (or industry) as proxies. For each company in this group, IPART estimates the equity beta using market model regression and derives an asset beta (i.e., de-levered beta) using its gearing ratio.

We support the continued use of IPART's current methodology and process for calculating the WACC as outlined in IPART's February 2018 'Review of our WACC method'. Specifically, with respect to the equity beta, we support IPART's standard approach to:

- Use a broad selection of proxy companies, excluding thinly traded stocks;
- Amend its proxy selection process to make it more transparent, predictable and replicable for stakeholders;
- Publish its criteria for proxy selection, and its list of comparator companies that meet its criteria at the start of the relevant review; and
- Give stakeholders the opportunity to propose additional comparable industries that meet IPART's criteria, but not individual stocks.

In order to maximise the statistical significance and stability of the beta estimate, applying the largest sample of firms where robust data is available is desirable.

However, Essential Water considers that IPART should only change its approach to deriving the equity beta if there is compelling evidence suggesting that the new data is likely to result in statistically superior results. The calculation of equity betas is not stable over time, and therefore caution should be applied when moving away from established practices.

23 Do you agree, that if a government funding contribution is appropriate, the structure of this contribution should be considered when re-estimating the gearing ratio?

No. In its 2014 determination, IPART applied a gearing level of 55% for Essential Water for the current regulatory period. This accounted for the higher relative risk compared to metropolitan water utilities due to the characteristics of the market that Essential Water operates in.

In 2014, Essential Water faced falling water demand due to a declining population in a geographically isolated region. In addition, there was a high degree of customer concentration risk from a few large customers (mines) and little opportunity for substitution if Essential Water's services and supply were no longer required. These factors were identified by IPART as reasons for the higher relative level of risk Essential Water faced when compared to other metropolitan water utilities. IPART's decision to alter the gearing level from the typical 60% mid-point to 55% recognised this higher risk.

We believe that the underlying risks of our distribution network have not changed.

Essential Water continues to operate in a market with similar characteristics that existed in 2014 – that is, declining population with a high degree of customer concentration and little opportunity for substitution – and these characteristics are not expected to change over the next four years. Essential Water therefore proposes that a mid-point gearing level of 55% remains appropriate for the higher relative risk that Essential Water will continue to face in the 2019-23 regulatory period.

We do not accept IPART's proposition that should the Government provide funding for the WaterNSW pipeline - the construction and operation of which are outside of our control and the subject of a separate IPART determination - that this should somehow provide a lower operating risk to Essential Water. We maintain that the costs of the pipeline are in addition to, and separate to, the costs of the Essential Water distribution business. Any Government funding relating to the pipeline should have no bearing on the proposed gearing for Essential Water as this does not change the underlying risk of customer concentration as discussed above.

We note our preference to separate the regulatory treatment of Essential Water's distribution network and the WaterNSW pipeline as highlighted throughout this submission and the impacts this has on the transparency of the regulatory framework.

It is for matters such as this (where IPART is contemplating increasing our gearing and thereby reducing our regulated revenues – on the basis of Government funding for the WaterNSW pipeline) that highlights the importance of separating the effects of the WaterNSW and Essential Water determinations.

24 Should we take the variable corporate tax rates into consideration in our review of Essential Water's tax allowance?

Essential Water considers that it is appropriate to use the corporate tax rate of 30% when calculating the tax allowance.

According to the Australian Taxation Office (ATO):

On 1 September 2016, the Government introduced Treasury Laws Amendment (Enterprise Tax Plan) Bill 2016 that proposed to reduce the corporate tax rate for corporate entities that are carrying on a business and have an aggregated turnover of less than \$25 million for the 2017–18 income year and less than \$50 million for the 2018–19 income year – known as base rate entities. This Bill received Royal Assent on 19 May 2017.

...

On 18 October 2017, the Government introduced the Treasury Laws Amendment (Enterprise Tax Plan Base Rate Entities) Bill 2017. Under this Bill, only corporate entities who meet the aggregated turnover threshold and have no more than 80% base rate entity passive income will be eligible for the lower corporate tax rate. The date of effect will be from the 2017–18 income year. This Bill received Royal Assent on 31 August 2018.

It is clear from the above ATO communication that from 31 August 2018 the proposed corporate tax rates for corporate entities became law. The following table outlines the 'base rate entity' changes and timeframes:

Table 1: Corporate tax rates – base rate entities changes and timeframes

Year	Aggregate turnover threshold	Base rate entity tax rate under the aggregate turnover threshold	All other corporate entities
2017-18	\$25m	27.5%	30.0%
2018-19 to 2023-24	\$50m	27.5%	30.0%
2024-25	\$50m	27.0%	30.0%
2025-26	\$50m	26.0%	30.0%
2026-27	\$50m	25.0%	30.0%

The relevant question therefore is whether Essential Water is a 'base rate entity' and whether the new lower corporate tax rates apply?

For context, government-owned businesses are not subject to Federal income tax. However, in order to comply with National Competition Policy, government-owned businesses must pay Commonwealth tax equivalents.

Essential Energy is a State Owned Corporation that is subject to the national Tax Equivalent Regime (TER), whereby taxes are paid to the NSW Government according to the same rules applying to other corporations.

The tax rate that Essential Energy (as the tax paying entity) pays is the rate applicable to all other corporate entities as outlined in Table 1 above (i.e. 30%). Essential Water itself is not a tax paying entity, as it is an operating business unit of Essential Energy.

If IPART provides allowances in its notional revenue requirement for income taxes based on the base rate entity (BRE) tax rates as outlined in Table 1 (i.e. 27.5% in each year of the regulatory period), but the tax paying entity (Essential Energy) is taxed at 30%, there is a shortfall created that represents an unfunded stranded cost. Our shareholders would be required to fund this shortfall.

On this basis we consider that the tax rate that applies to the tax paying entity should be applied. Providing a tax allowance that is below the tax payable from the tax paying entity would institutionalise an approach whereby the regulated network would not be able to recover its efficient costs. This may have longer term impacts on the incentives for network businesses to invest in infrastructure assets.

It may also create a (perverse) incentive to adopt a business or legal structure to target revenues less than \$50 million per year in order to minimise the tax loss created (between the tax allowance provided for in regulated revenues and the tax payable by the tax paying entity) rather than to pursue an efficient business structure targeting efficient economies of scale and scope that would put downward pressure on water prices over time.

Notwithstanding that Essential Energy as the tax paying entity is subject to a corporate tax rate of 30% (and our view that the Essential Water and WaterNSW costs should be treated separately), IPART's preferred approach to calculating regulatory revenues including the WaterNSW costs and consequential works would result in revenues greater than the \$50 million tax threshold in any case, which attract a 30% corporate tax rate in any case.

This would seem to reinforce that the appropriate corporate tax rate for the purposes of the Essential Water determination is 30% as it would be peculiar to apply a different tax rate to Essential Water based on IPART's assessment of whether the WaterNSW costs are included or excluded from the assessment of Essential Water's efficient costs.

25 Should we use the same business unit level for determining the tax rate for Essential Water, as we do for determining the WACC, or are there reasons to move away from applying this approach?

We suggest that IPART should not use the same business unit level for determining the tax rate as for determining the WACC. The tax rate used for Essential Water should be the legislated rate for the tax paying entity (Essential Energy), whereas WACC can be determined at the Essential Water level. See response to Issue No. 24.

26 Should we use 30% as the default tax rate and, if Essential Water's average Notional Revenue Requirement over the determination period is below the threshold, then use 27.5% to recalculate the tax allowance for the whole determination period?

See response to Issue No. 24, where we support the use of the 30% tax rate on the basis that Essential Energy, rather than Essential Water, is the tax paying entity where the higher (i.e. 30%) corporate tax rate would apply.

As outlined in our response to Issue No. 25, assuming IPART's approach to including the costs of the WaterNSW pipeline and consequential works in the determination of Essential Water's efficient costs (an approach we do not support), our notional revenue requirement would be above the \$50 million base line entity threshold and the 30% corporate tax rate would apply in any case. This step would therefore appear to be superfluous.

Forecast water sales and customer numbers

27 Why are the demand forecasts prepared by WaterNSW and Essential Water different? Are these differences reasonable?

We note IPART's concerns over the apparent differences in forecast consumption in the WaterNSW and Essential Water forecasts. Some of the difference can be explained through the use of the 'bottom-up' forecasts applied by Essential Water and the 'top-down' forecasts applied by WaterNSW.

However, the majority of the volume difference may be explained by the approach to forecasting demand and consumption (appropriately) taken by each organisation.

Essential Water's consumption forecasts are based on 'average' daily consumption, which is an appropriate basis for forecasting volumes for pricing purposes for a water reticulation network. Our annual consumption forecasts equate to average usage of approximately 14 ML per day (consistent with our 2017-18 volumes, noting that

previously reported daily demands in the AIR / SIR are multi-year averages), with forecast volumes roughly in line with historic volumes (see Figure 8.2 in the IPART Issues Paper). We maintain that the forecasts by Essential Water for setting water prices are appropriate.

However, we also note that over the twelve month period to 30 June 2018, which was an extremely dry year, the volume pumped by Essential Water excluding Mendindee and Sunset Strip was 6.7 gegalitres (GL), which was considerably higher than the annual amount consumed by our customers. The volumes pumped include the following:

- Consumption by customers; and
- Losses.

Given that the primary water supply over the determination period transfers from the Menindee Lakes Scheme to the Wentworth to Broken Hill pipeline, we would expect that WaterNSW would forecast the water to be supplied by the pipeline to be higher than the 'average' daily usage forecast by Essential Water for its customers and represent forecasts that are closer to the 'peak' daily usage.

It is critical that WaterNSW ensures sufficient water supply is available for Broken Hill customers. If less than peak season demand for the pipeline is assumed, then there is risk that WaterNSW will seek to connect other customers and townships, which could result in Broken Hill facing ongoing water restrictions moving forward.

28 Are Essential Water's forecast sales volumes and customer numbers reasonable?

See response to Issue No. 27 above. We maintain that, in light of reducing population forecasts in the Broken Hill region, the Essential Water forecasts of consumption are reasonable.

29 What factors should we consider in determining Broken Hill's future water demand?

Consistent with past practices, we consider that IPART should have regard to a number of factors when considering Broken Hill's future water demand, including the following:

- Population;
- Rainfall;
- Temperature, including climate change with four major droughts in fifteen years;
- Customer usage patterns;
- Price elasticity;
- Existing mines stating good prospects at least until stated 2030 and possibly beyond and new mines looking at development beyond this IPART period;
- New mineral markets with battery technology; and
- Security of supply able to increase confidence for industry investment.

It is possible that consumption could increase as water quality improves with the new pipeline. However, we caution against IPART placing too much emphasis on the impact of the new pipeline on our customers' potential usage that would have the effect of increasing Essential Water's forecasts (and thereby lowering prices), particularly given that affordability concerns (rather than security of supply concerns) are likely the main driver of our customers' current consumption levels.

As noted in our response to Issue No. 27, there are a number of reasons why the forecasts of WaterNSW and Essential Energy may differ, such as between volumes pumped into the system and volumes consumed by customers in a given year.

It is important to ensure that volume assumptions adopted by IPART for WaterNSW are based on a reasonable expectation of the need to provide sufficient capacity to meet the Broken Hill water needs (i.e. the 'demand' on the system). It is also reasonable for Essential Water to base its forecast sales on reasonable expectations of customer

actual usage when setting distribution water prices (noting these volumes will be lower and are expected to reduce over time).

Price structures and prices

30 Should we set maximum prices in line with the principles of cost-reflective pricing?

In defining 'cost-reflective' pricing, IPART suggests the following:

- Prices only recover sufficient revenue to cover the prudent and efficient costs of delivering the monopoly services;
- Price structures match cost structures, whereby:
 - Usage charges reference an appropriate estimate of marginal cost; and
 - Fixed service charges recover the remaining costs; and
- Customers imposing similar costs on the system pay similar prices.

Essential Water supports the components underpinning IPART's approach to cost reflectivity as outlined above, and in particular we draw attention to the principle of 'efficient pricing' (referred to as 'marginal cost' pricing above). The principle of efficient pricing is important to ensure prices do not provide an incentive to over- or under-consume based on whether the variable charges are below or above marginal cost. Therefore, setting variable prices below marginal cost may incentivise higher consumption and would by default make fixed charges, that customers can not have any impact on, much higher.

Water is a scarce commodity with price elasticity (i.e. customers' consumption will vary with price), and therefore sending signals to over- or under-consume can have significant implications on the community and the environment. This can have important implications on short term water supply and the need to invest in water infrastructure based on the long term efficient costs of the system.

31 Should we remove or reduce the cross-subsidy between water and sewerage service charges?

No. We note IPART's concerns regarding whether to address the current cross-subsidy between water and sewerage charges. This matter was considered by Essential Water in detail during the preparation of our initial submission and formed an important element of our customer engagement.

The over-recovery of the sewerage system is a legacy issue from the 2014 determination where the setting of regulated water and sewerage prices did not fully reflect the underlying cost structure of the respective services. This resulted in water prices being charged at less than the IPART-determined costs, while sewerage prices were set at greater than the IPART-determined costs, with the combined costs reflecting the total determined amounts.

It is apparent that there is no headroom in existing water charges to 'buffer' the impacts of unwinding cross subsidies and that customers without sewerage services (or customers with relatively high water usage) would be made relatively worse off by these moves, resulting in greater affordability pressures for these customers. The move would also result in pricing instability, which customers generally do not support.

Therefore, while there is a rational case to be made to unwind the current cross subsidy from an economic standpoint, we do not support unwinding it at the 2019 determination due to the potential affordability impact for some customers.

Essential Water notes that maintaining the current cross subsidy would not adversely affect efficient investment in the water and sewerage services we provide; therefore, the primary considerations would appear to be affordability and pricing stability concerns. In our view, consideration of this matter is better left to the subsequent (i.e. 2023) determination.

32 Should we maintain the current proportion of fixed and variable charges for water services?

Yes. Essential Water sought the views of our customers when assessing whether to propose to maintain the current proportion of fixed and variable charges for water services. A more detailed discussion of this matter is found in Chapter 4 and in Attachments 2 and 3 of our initial submission.

In summary, customers told us that they do not want to change the fixed and variable proportions of their bills. Approximately 70% of residential customers and 66% of business customers wanted their bill structure to stay the same.

Approximately 23% of residential customers and 30% of business customers preferred to increase the variable component, more often nominating an increase from 34% to 50%.

We note the high proportion of customers that do not want to change the current fixed and variable proportion of their bills. We encourage IPART to consider this when assessing its pricing decisions, such as whether to base usage charges on short term or long term marginal costs and the impacts a move away from current pricing structures may have on the fixed and variable proportions of customers' bills.

33 Are Essential Water's proposed water service and usage prices reasonable?

Based on a detailed consideration of the relevant factors, including our assessment of marginal costs and customer feedback, we maintain that our proposed water service and usage pricing structures and levels are reasonable.

34 When setting water usage charges, should we have regard to Short Run Marginal Cost or Long Run Marginal Cost?

Essential Water maintains its support for using the long run marginal cost (LRMC) to calculate the water usage charge. We consider that this sends better price signals than short run marginal costs (SRMC) about the costs of water consumption and provides greater pricing stability for customers.

The matter of whether SRMC or LRMC is more appropriate for pricing purposes for Broken Hill was considered in detail in Chapter 12 and Attachment 6 of our initial submission.

In summary, there are many advantages for LRMC over SRMC as the basis for water usage pricing. These include:

- On the demand side, LRMC sends better signals for long-term decisions that affect consumption levels, such as households' investment in water-using appliances and industries' location choices;
- LRMC signals to customers the costs of augmenting the network at some point in the future as physical capacity is depleted;
- LRMC provides greater pricing stability for customers, as a longer-term view of marginal costs would smooth out the potentially significant price increases associated with SRMC pricing as physical capacity tightens;
- LRMC provides a framework that is consistent with regulatory trends for infrastructure companies that overwhelmingly are based on LRMC; and
- The current metering arrangements do not support more flexible pricing that addresses scarcity needed under an SRMC framework.

Essential Water notes that, while it supports the use of LRMC as the starting point for setting of infrastructure usage charges, LRMC is by no means a perfect basis for setting usage charges.

On balance, however, Essential Water considers that the advantages of adopting LRMC as the appropriate starting point for the setting of water usage charges outweigh the associated disadvantages and is a more appropriate starting point for the setting usage charges than SRMC.

35 Should we set different water prices for different customer groups, based on the underlying costs of servicing these customers?

IPART suggests that the costs of providing water differs between geographical areas and that setting different prices for these customers would be consistent with IPART's pricing principles.

IPART has indicated that it will investigate whether it is appropriate to introduce differential pricing for:

- Broken Hill;
- The graziers who currently have offtakes along the Menindee Lakes pipeline; and
- Customers at Sunset Strip village and Caravan Park.

Essential Water notes that it is possible to set prices for each geographical area and an argument can be made that some form of 'nodal' pricing can be efficient. We note, however, that any potential departure from the current 'postage stamp' pricing to pricing on a geographical basis within our existing network would require rigorous analysis, including the following:

- A detailed review of the capital and operating costs by geographical region would be required. This task would not be trivial, requiring considerable resources to be allocated to this task over the next two to three months;
- Allocating the existing regulatory asset base (RAB) to geographical areas. This would also not be a straightforward exercise if needed to be undertaken over the short term;
- Assessment of marginal costs for each geographic region. This would be required if separate pricing structures are contemplated in order to ensure the prices for each region are efficient;
- An assessment of any changes to our billing systems to accommodate these changes; and
- Customer impacts - there are likely to be considerable customer impacts associated with a move to geographically-based prices. We question whether IPART has sufficiently engaged with the community on this matter.

Essential Water queries whether there is sufficient time to fully assess the above matters that are required before a move to fully geographically-based prices. Undertaking the required analysis in the time available would be extremely challenging.

We note our preferred approach to supplying the graziers allows for a government funded small pipeline supply to the graziers. The Consequential Works project of a small pipeline and minor pumping station to supply to Sunset Strip from Menindee is critical to maintain supply to Sunset Strip water treatment plant. Retirement of the existing Sunset Strip WTP and small pipeline supply from Menindee is critical to reduce supply costs to Sunset Strip. Failure to proceed would mean far higher already prohibitive operating costs to supply Sunset Strip. Also, the water treatment plant would not be able to treat poor quality water from the large existing unreliable Menindee pipeline.

However, if IPART determines a different regulatory funding arrangement for supplying the 11 graziers as suggested by IPART, there may be a case for introducing separate pricing arrangements for these customers.

36 Should we set different residential service charges for apartments and houses?

No. Based on our customer engagement survey, as discussed in our initial submission, around 3 in 4 residents (75%) believe service charges for houses and apartments should be the same.

On this basis, we have not proposed to change current arrangements. We suggest additional customer consultation would need to be undertaken before IPART considers adopting a change to current arrangements.

We support IPART's preliminary view that introducing different service charges may increase complexity with little corresponding benefit.

37 Should we maintain our current pricing approach for the mines?

Yes. At the 2014 determination, and given the lapse of the NSW Mines Agreement, individual cost-reflective prices for water usage were approved by IPART for pricing for the mines. This method takes into account the assets utilised by the mines and other customers, historical funding and the maintenance costs associated with these assets. In addition, depreciation expense and return of capital is taken into account. This means that all customers will be paying prices that are cost reflective, with no subsidy between small customers and the mines.

Mines prices for the 2014 determination were developed in conjunction with the NSW Department of Public Works and consultation was held with the mines.

As the proportion of water used by the mines in relation to total water used in Broken Hill has not changed significantly, Essential Water proposes to maintain the approach to mines pricing from the 2014 determination and to increase mines' charges by the average increase (X factor) each year.

We maintain this is the most appropriate method of providing cost reflective prices for the mines and that it is not appropriate to place the mines on meter-based charges like smaller customers.

IPART has noted that it may need to adapt its approach consistent with its proposed approach of addressing the costs of the Wentworth to Broken Hill Pipeline that is owned and operated by WaterNSW. While we consider that the current pricing arrangements for the mines are appropriate and should be maintained, we look forward to assisting IPART in its assessment of any new pricing arrangements for the mines as required.

38 How should we treat new mining customers, should they eventuate?

In the event a new mine should commence operations, Essential Water proposes to provide a price that is calculated using the same approach as for the current mines prices.

If a new mine commences operations in the 2019 determination period, a cost reflective price would be developed on the same basis as prices were calculated for the existing mines.

39 Are Essential Water's proposed sewerage service and usage prices reasonable?

Based on a detailed consideration of the relevant factors affecting sewerage prices, including the allocation of efficient costs, customer feedback and the lack of metering for sewerage services (and therefore the questionable role of marginal costs in sewerage pricing), we maintain that our proposed sewerage charges are reasonable.

40 Should residential customers pay more for sewerage services so that they pay similar prices to non-residential customers with equivalent use?

No. Essential Water considered this matter in detail when formulating our initial submission and we have formed our views taking account of the feedback we obtained from customers on this matter.

While we consider that introducing a deemed wastewater allowance to address any differences may have some (albeit limited) merit from an economic perspective, we recognise that many residential customers in the community are experiencing hardship and cannot afford even a small increase to remove any difference between the sewerage prices for residential and commercial customers.

To help inform our position, we engaged the community. Chapter 4 'Customer and stakeholder engagement' of our initial submission outlined our approach to engaging with customers during this review and discussed our quantitative survey undertaken in the region. This matter was specifically addressed.

As noted in our initial submission, customers surveyed were asked if they felt that addressing this sewerage pricing imbalance was a priority. If so, would residential customers be prepared to accept an increase in their sewerage bill of approximately \$10 so that the costs of providing a similar service were more closely aligned to commercial customers.

Even though 60% of residential customers indicated that all customers should pay the same for water and sewerage services, 55% of residential customers would not be prepared to pay around \$10 more in order to reduce the current sewerage pricing difference.

Perhaps more interesting is that, even though 60% of business owners also indicated that all customers should pay the same for water and sewerage services, only 37% of business owners felt that residents should pay more to reduce sewerage charges for businesses.

As illustrated above, neither residential nor business customers supported increasing residential sewerage bills to bring the residential and non-residential sewerage bills into alignment, even though 60% of customers thought all customers should pay the same for water and sewerage services.

Having regard to customer feedback and the marginal economic benefit that addressing the sewerage cross subsidy would have, we maintain that IPART should not restructure sewerage charges to reduce the current pricing difference between residential and non-residential customers at the 2019 determination.

41 Are Essential Water's proposed increase in prices for trade waste and miscellaneous services reasonable?

Essential Water maintains that its approach to increasing prices for trade waste and miscellaneous charges by the change in total annual revenue requirement over the determination period is reasonable and consistent with proposed price changes for other water and sewerage services.

We note IPART's comment that "Essential Water's pricing proposal forecasts about \$2,000 a year in trade waste revenue over the determination period. Essential Water has reported to us that this only includes trade waste revenue from two mining customers. While Essential Water provides trade waste service to other non-residential customers, it does not appear to recover these costs".

While Essential Water will investigate the total amount of trade waste revenue to be offset from our notional revenue requirement further, we maintain that the proposed increase in prices for trade waste and miscellaneous services is reasonable.

42 Should we set maximum prices for Essential Water's recycled water services now, as part of this review? If so, why?

We note IPART's preliminary position on pricing for recycled water services as stated in the Issues Paper (page 100) is as follows:

Therefore, our preliminary position is not to set maximum recycled water prices for Essential Water as part of this price review. Rather, we would seek to apply the outcomes of our 2018-19 recycled water pricing review at the next review of the Essential Water's prices. However, we will consider stakeholders' views before deciding whether to set recycled water prices in this review.

As indicated by IPART in its September 2018 Issues Paper on the Review of recycled water prices for public water utilities (page 1):

Given that we are currently reviewing prices for ... Essential Energy to apply from 1 July 2019, the application of the revised pricing arrangements for recycled water and related services will be deferred to their next scheduled price review.

Based on IPART's communications, we assume the following to be correct:

- IPART will need to include a framework for recycled water as part of the Essential Water 2019 determination; and
- IPART's recycled water review will not be completed in sufficient time to apply to Essential Water.

In the 2014 determination, IPART decided that Essential Water should treat effluent water as an unregulated income source and share this income equally between Essential Water and its customers. IPART considered this was reasonable, as effluent water is not a monopoly service.

IPART's general approach to unregulated income to date has been to share it equally between the business and its customers on the basis that the regulated business is earning income from assets included in the RAB, which are funded through the prices set by IPART. Therefore, IPART determined that customers should benefit from the income generated from the regulated assets and allowing Essential Water to retain 50 per cent of the revenue provides an incentive for it to optimise earnings from its regulated assets.

In the absence of IPART's recycled water determination outcomes being available, we propose to continue IPART's current regulatory practice of treating effluent water as an unregulated income source with revenue shared 50:50 between Essential Water and customers.

We note, however, that the requirement to share revenue on a 50:50 basis may have the unintended consequence of increasing the efficient price to recycled water customers to recover the costs of revenue sharing. An alternative may be to establish a maximum price (e.g. the potable water price) up to which the parties can negotiate to ensure customers are not disadvantaged. Under this alternative approach, the requirement to share the revenues on a 50:50 basis would be eliminated.