Sydney Water's response to IPART's Wholesale Pricing Supplementary Draft Report and Determination

IPART's review of prices for wholesale water and sewerage services

1 May 2017

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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's) *Prices for wholesale water and sewerage services – Supplementary Draft Report – Water – March 2017 (*the Supplementary Draft Report) along with the *Maximum prices for wholesale water, sewerage and trade waste services supplied to recycled water systems from 1 July 2017 – Draft Determination – March 2017* (the Supplementary Draft Determination).

The wholesale prices determined by IPART will apply to the services we provide to new entrants in the urban water market. These new entrants – who provide water, wastewater and recycled water services to end-use customers – are licensed under the *Water Industry Competition Act 2006* (the WIC Act) or supply services to WIC Act licensees.

Sydney Water's key positions

Our response to IPART's Supplementary Draft Report and Determination covers the following key points:

- Competition can create positive outcomes for the community by increasing efficiency and providing incentives to raise service standards and/or lower prices. We support competition in the NSW urban water market where it contributes to better outcomes for our five million enduse customers.
- We appreciate IPART's efforts in this review to ensure appropriate decisions are made to encourage long-term efficient entry into the Sydney and Hunter region urban water markets.
- We strongly support IPART's supplementary draft decision that all wholesale services should be priced consistently, even when a recycled water plant is being operated.
- We agree that a retail minus pricing approach is the only appropriate approach for all
 wholesale services given the postage stamp pricing context in which we exist. Based on our
 experience, our preference would be to use a retail minus Equally Efficient Competitor (EEC)
 approach as we believe this is the best way to ensure no unnecessary increases to customer
 bills, even in the short-term.
- In our view the dynamic efficiency gains are speculative. However, we understand IPART's
 position on promoting such gains, and appreciate IPART applying a reasonable methodology
 to calculate the Reasonably Efficient Competitor (REC) costs. The adoption of the REC
 approach as a way of balancing the objectives of efficiency and promoting competition is
 preferable to applying a non-residential price.
- Integrated water cycle management (IWCM) and recycled water have been a major focus for many stakeholders during this review. Sydney Water is actively pursuing IWCM where it benefits customers and creates a sustainable, liveable and resilient city, which in turn improves productivity and economic growth. We strongly support the industry moving towards robust and efficient integrated water servicing solutions, including recycling.
- We would support a broader industry review to clarify the Government's objectives for competition, and consider the value (direct and indirect) and benefits of IWCM.

Setting the right context for the review

Sydney Water supports competition in the NSW urban water market, to the extent it contributes to positive outcomes for our 5 million end-use customers through lower prices or added value. This is consistent with IPART's stated objectives for this wholesale price review – to allow new entry into the market for end-use water and wastewater services where this is efficient, for the long-term benefit of consumers.

IPART's draft decisions will provide a subsidy to new entrants. The price charged for providing wholesale services will not equal the efficient cost of Sydney Water providing them in a postage stamp pricing environment. While we remain unconvinced of the extent to which dynamic efficiencies will be achieved through competition, we strongly support the changes IPART has made to its previous decisions to ensure future entry into the market is efficient. We understand IPART's balancing of competing views and support IPART in its decisions.

As IPART has noted throughout this review, its decisions for how it sets wholesale prices are impacted by the NSW Government's decision in 2008 to set water, wastewater and stormwater developer charges to zero. There may be some benefit in considering the reintroduction of developer charges to encourage new entry where private utilities can service a new development more cheaply than the incumbent.

Many stakeholders throughout this review have called for a whole-of-industry review. While the decision to commission such a review is ultimately a matter for Government, given the number of issues being raised it may be timely to examine the Government's objectives for the NSW urban water market and the policy settings needed to support them.

Integrated water cycle management and recycled water

IWCM and recycled water have been a major focus for many stakeholders during this review. Outcomes from IWCM can enable a more sustainable, liveable and resilient city, which in turn improves productivity and economic growth. We are committed to delivering these outcomes in a way that our customers value.

Adoption of a range of IWCM approaches is needed to address the range of urban water challenges that we are facing in greater Sydney and we strongly support the industry moving towards efficient integrated water servicing solutions, including recycling.

We agree with IPART that the focus should be on identifying optimal outcomes to be targeted by regulation, which in turn may enhance the viability of IWCM and recycled water. Given the emerging importance of recycling and IWCM we would be keen to participate in a review that investigates the best way to enable all players to deliver such solutions.

Sydney Water's response to IPART's draft pricing approaches

We continue to support a retail minus pricing approach for wholesale services. As recognised by IPART, retail minus is the only way to maintain the Government policy position of postage stamp pricing, and allow an incumbent public utility and a WIC Act licensee to compete on equal terms.

IPART has made a significant change in approach from its *Prices for wholesale water and sewerage service – Water – Draft Report – November 2016* (the November 2016 Draft Report).

We strongly support this move as it recognises the role Sydney Water plays in providing wastewater services to wholesale customers, even where they operate a recycled water plant. It ensures that the wholesale customer pays an appropriate contribution to the costs we incur to provide the service it is relying on.

Under IPART's proposed retail minus approach, the price for the wholesale service is set at the retail price less the costs of providing water or wastewater services from the wholesale connection point to the end-user (for system-wide prices, this includes a deduction for retail and local reticulation services that are provided by the WIC Act licensee). This provides an appropriate reduction from the retail price and reflects the the service the wholesale customer is providing.

In principle, our preference is to use a retail minus EEC cost standard, as this would promote efficient new entry and avoid the need for the incumbent or its customers to subsidise WIC Act licensees. However, we acknowledge that IPART is trying to balance competing views and objectives, and trying to promote dynamic efficiency gains. While we maintain the dynamic efficiency gains are speculative, we appreciate IPART applying a reasonable methodology to calculate the REC costs. We agree with IPART that the REC component should reduce over time. We believe it would be in the public interest for IPART to report on the level of dynamic efficiency gains that arise over time, as part of reviewing the effectiveness of the competition regime.

In practice, we agree that applying non-residential pricing for recycled water plant services (where there is no on-selling of water and wastewater services) is appropriate, as it generally reflects the costs and capacity in our network to provide these services. However, in our view the provision of drinking water top-up and recycled water plant waste disposal services are not wholesale services. We believe that recycled water plant waste disposal services, where there is no sewerage service being on-sold to end-use customers, are essentially sewer mining schemes. IPART's proposed pricing is not in line with its previous position not to determine a price for sewer mining. We would appreciate IPART's view on whether it now intends to treat sewer mining schemes as if they are a wholesale customer to which non-residential prices apply. Our preference is for these to remain outside of the wholesale pricing determination.

Quantum and nature of the REC assumptions

We believe the amounts used for the REC cost minus could be further refined. In overall terms, REC costs are significantly higher than Sydney Water's costs for these activities, even considering potential scale effects. We believe this may be due to the over-estimation of some input costs, which has resulted in several assumptions not being consistent with standard NSW industry practice.

Sydney Water is also of the view that the assumptions on what meters are best used for different scheme configurations may not be appropriate, leading to an overestimated minus component.

Summary of any change to our position since IPART's previous draft

Most of Sydney Water's positions in relation to IPART's draft decisions in the November 2016 Draft Report remain largely unchanged. However, for completeness, we have responded to all IPART's supplementary draft decisions. A summary of the differences between this response and our response to the November 2016 Draft Report is provided in Table 1.

Table 1 - Summary of differences between the November 2016 Draft Report and the March 2017 Supplementary Draft Report and Sydney Water's response

Issue	What has changed	Sydney Water's response to the Supplementary Draft Determination
Pricing for disposal of waste from a recycled water plant where a wholesale customer on-sells the sewerage service to end-use customers	IPART's previous view was that this service was an input to production not an on-selling service so retail non-residential prices would apply. IPART has changed its view and now treats such services as on-selling, so retail minus prices apply.	Using a retail minus pricing approach will provide a better outcome for end-use customers. We acknowledge that this remains a very complex and contentious issue and appreciate the additional time and effort IPART has spent to come to a well-informed position. IPART's supplementary draft decision on this issue also means that almost all the implementation issues we previously raised have now been addressed or no longer exist. See sections 3.2 and 4.
Assumptions used to estimate the Reasonably Efficient Competitor costs	IPART has made a considerable effort to refine the assumptions used since their November 2016 Draft Report.	The assumptions IPART has used are largely robust, however we suggest a few minor improvements to align with standard industry practice See 3.3 and Appendix A.
Recovery of revenue shortfall	The size of the shortfall is likely to be smaller due to IPART's change in position regarding pricing for disposal of waste from a recycled water plant where a wholesale customer on-sells the sewerage service to end-use customers.	We note IPART's position that this will be dealt with at our next price determination and look forward to working with IPART in this regard. See section 3.3.2.
The definitions of wholesale customers, services and on-selling	These have changed significantly since IPART's November 2016 Draft Determination.	We largely support the revised definitions. However, we believe that they still capture tankering and private waste facilities as providing an on-selling service which attract a wholesale price. We do not support this as it: is administratively burdensome would capture multiple independent parties does not appear to be IPART's intention. See section 7.1.

Issue	What has changed	Sydney Water's response to the Supplementary Draft Determination
The meter(s) used to determine the volumetric water usage charge	The volumetric usage charge is now calculated as the sum of volumes measured from end-use customer meters, rather than the total volume measured at the wholesale connection point.	 is administratively burdensome provides no incentive for a wholesale customer to manage water wastage in their reticulation network risks encouraging increased costs that are not covered by the wholesale price, which Sydney Water has no ability to control. Our preference would be to use the meter at the wholesale connection point. However, if IPART uses the sum of the volumes measured by the end-use customer meters, we suggest a limit is placed on the non-revenue water allowed (from leakage and other sources) in the wholesale customer's network. See sections 4.1.1 and 7.2.
The need to determine prices for recycled water plant waste disposal and drinking water top-up services	IPART's new definitions of these services mean that these are now identical to the sewer mining and trade waste services Sydney Water already provides.	We do not believe these are wholesale services. However, if included, we request IPART explain in the Final Report how this decision relates to its previous decision to not regulate sewer mining services. See sections 5.1 and 5.2.
The nature of facilitation savings likely when a wholesale customer operates a recycled water treatment plant	IPART has made a considerable effort to examine these in detail since their November 2016 Draft Report.	IPART's engineering consultant's report is very thorough and generally adopts a robust and reasonable approach. However, there is an error in relation to which costs and savings are appropriate to consider in a retail minus pricing approach when a wholesale customer operates a recycled water scheme. Water network and treatment operational savings should not be included as a minus, as these are already reflected in the reduced volumetric charges. To include them again would be compensating the wholesale customer twice. This error does not affect the system-wide prices in the Supplementary Draft Determination. However, we request that IPART confirms these minus categories would not be included in a future scheme-specific determination. See section 6.3.

1 Introduction

1.1 Overview

This submission outlines Sydney Water Corporation's (Sydney Water) views in relation to the Independent Pricing and Regulatory Tribunal's (IPART's) *Prices for wholesale water and sewerage services – Supplementary Draft Report – Water – March 2017* (the Supplementary Draft Report) along with the *Maximum prices for wholesale water, sewerage and trade waste services supplied to recycled water systems from 1 July 2017 – Draft Determination –March 2017* (the Supplementary Draft Determination). Our positions are primarily influenced by the potential impact of IPART's draft decisions on our five million end-use customers.

In this response we have addressed each of IPART's draft decisions in the Supplementary Draft Report. In many instances our positions remain unchanged since the previous draft in November 2016. Further detail on our positions can be found in our previous submissions to this review.

We have also made our best effort to assess IPART's approach from a practical perspective. Where possible, we suggest an alternative approach to address potential gaps or challenges.

Sydney Water's position on each of IPART's draft decisions (noted by bold) is outlined below.

Throughout this table and document, we have used the following terms to mean:

- Supported: Sydney Water agrees with IPART's draft decision or proposal.
- Not supported: Sydney Water has reservations with IPART's draft decision or proposal.
- Accepted: Sydney Water is not challenging or contesting IPART's draft decision or proposal.

Nature of wholesale services and customers

- 1. For the purposes of this review, we consider a wholesale service is a service:
 - purchased from Sydney Water or Hunter Water by a wholesale customer that is used (by the wholesale customer or another party that it supplies) to supply end use customers under a retail supplier's licence under the WIC Act
 - that is used by the WIC Act licensee to provide water and sewerage services which the relevant utility could provide to end-use customers
 - that has the following characteristics:
 - a. the service purchased is a monopoly service
 - the service purchased is used to provide the WIC Act licensee's end-use customers with the same service or a close substitute to one provided by Sydney Water or Hunter Water
 - the service is limited to that used to supply end-use customers with services that Sydney Water or Hunter Water could provide within the limits of their respective operating licences, and
 - d. the service can include some transformed services where the wholesale customer provides water and sewerage services to end-use customers.

Supported. We generally agree with IPART's characteristics. However, the current definition of On-Selling Sewerage Services may still include some scenarios involving tankering. We have suggested potential changes to the definitions to address this. See Section 7.1.

Approach to implementing wholesale prices for this review

2. We have decided to:

- determine system-wide wholesale prices for new wholesale schemes
- allow for wholesale customers and wholesale service providers to opt-out of IPART's Determinations and opt into unregulated pricing agreements, where there is mutual agreement to do so
- consider requests to undertake price reviews and determinations for individual wholesale schemes (existing and new).

System-wide prices – Supported. These are an efficient way to encourage new entry and innovation.

Unregulated pricing agreements – Not supported. We do not believe that unregulated pricing agreements would work in practice. If there is to be a regulated price for wholesale services, this price should be applied consistently to all wholesale customers.

Allow scheme-specific price reviews – Supported. This will encourage innovation and greater scope for integrated water cycle management (IWCM).

See Chapter 6.

3. We have decided to adopt a determination period of four years, from 1 July 2017 to 30 June 2021, for the system-wide determinations.

Accepted. We support a period of no longer than four years. This will allow all parties to assess how the determination has worked in practice and recommend changes in approach as needed. A four-year determination period also allows scope for a potential broader review of the market, which many stakeholders have called for, without entrenching regulations for the longer-term. See Section 6.3.

Pricing approach for on-selling drinking water and sewerage services

4. We have decided to use a retail minus approach to set prices for the wholesale supply of drinking water and sewerage services for the purpose of on-selling to end-use customers.

Supported. This is the only appropriate pricing approach for on-selling of services within a postage stamp pricing environment and without changing the structure of retail and wholesale markets. See Section 3.1.

We have decided to apply a retail-minus price for the supply of sewerage services relating to waste from recycled water plants where the wholesale customer on-supplies sewerage services to end-use customers.

Supported. This is the only pricing approach that is appropriate for the on-selling of water and wastewater services. See Section 3.2.

6. We have decided to use the reasonably efficient competitor cost approach to calculating the minus component in retail-minus prices for the supply of drinking water and sewerage services for the purpose of on-selling to end users.

Not supported. Our preference would be to use a retail minus Equally Efficient Competitor cost (EEC) component, which would result in a better outcome for customers, even in the short-term. However, we note IPART's preference for this approach and believe the overall methodology used to calculate Reasonably Efficient Competitor (REC) costs is sound. We support the decision to move towards an EEC cost over time as new entrants become more efficient. See Section 3.3.

System-wide retail minus prices for on-selling

- 7. We have decided the retail component of the retail minus reasonably efficient competitor cost prices would be based on the:
 - retail prices for water, sewerage and trade waste services included in the prevailing
 Sydney Water or Hunter Water retail price determinations
 - number of end-use customers being serviced by the wholesale customer, and
 - the volume of water supplied to end-use customers.

Supported, in principle. We have identified some implementation issues with the Supplementary Draft Determination in relation to the starting point retail charges that should be used to calculate wholesale prices. See Sections 4.1.1 and 7.2.

8. We have decided not to include an adjustment mechanism to account for any over or under recovery in relation to system-wide retail-minus prices.

Accepted. We agree that if this became a significant problem in terms of disputes, IPART should consider this in future wholesale price reviews. See Section 4.2.

- 9. We have decided to set minus values:
 - for water and sewerage retail and reticulation services
 - that are the same for Sydney Water and Hunter Water
 - that are based on 'customers' for retail services and 'kilometres' of pipe for reticulation services
 - adopting a modern engineering equivalent replacement asset value approach
 - adopting a weighted average of retail and reticulation costs based on the composition of existing schemes as weights
 - adopting the same building block method used in retail price reviews to establish the minuses, including carrying forward tax losses, and using tax asset lives to calculate tax depreciation
 - using straight-line depreciation when calculating tax depreciation, and
 - using an equivalent annuity of the annual building block costs over a 50-year period, applying a discount rate based on the prevailing Sydney Water and Hunter Water real pre-tax WACC of 5.9%.

Supported. While our preference would be to use a retail minus EEC approach, IPART's methodology for a REC approach appears reasonable and internally consistent. We do have some suggestions for improving the inputs used. See Section 4.3.

10. We have decided to set system-wide minus values as shown in Table 6.1.

Accepted. Use of a consistent methodology for all situations where services are on-sold (regardless of whether a wholesale customer is producing recycled water) provides the correct signal to new entrants in the current postage stamp price environment. However, we are concerned that the level of the minus is relatively high for some categories. We do not believe they reflect reasonably efficient costs and may incentivise inefficient entry without a corresponding increase in dynamic efficiency. See Section 6.1.

Pricing approach for recycled water services

11. We have decided that the appropriate pricing approach for supplying drinking water to top up recycled water schemes is the supplier's retail non-residential service and usage prices for the drinking water supply.

Not supported. We have previously argued that we do not believe this needs to be considered a wholesale service, as it is not on-sold to customers as drinking water. However, we agree with IPART that a non-residential price is appropriate for this type of service. See Section 5.1.

- 12. We have decided that wholesale customers that purchase drinking water for the purpose of on-selling and drinking water top-up should be charged:
 - a retail-minus price for the water supplied for drinking water on-selling, and
 - the retail non-residential water service and usage prices for the water supplied for drinking water top-up.

Supported. Use of consistent prices for when services are on-sold provides the correct signal to new entrants in the current postage stamp price environment. See Section 5.1.

13. We have decided that in cases where the connection to the recycled water system (drinking water top-up) is not separately metered, and the wholesale customer is receiving drinking water for both on-selling and top-up, the wholesale customers should be charged a non-residential retail service charge for drinking water top-up based on a deemed meter size of 100mm.

Supported. We note that this is designed to incentivise wholesale customers to meter their drinking water top-up connections. See Section 5.1.

14. We have decided to apply non-residential retail prices for the supply of sewerage services relating to waste from recycled water plants where the wholesale customer does not onsell sewerage services to end-use customers.

Not supported. We do not believe this is a wholesale service. There is a sufficient framework in place to deal with recycled water plant waste disposal services where Sydney Water is the wastewater service provider – that is, sewer mining and trade waste arrangements. If IPART decides to determine wholesale prices for sewer mining, we agree that non-residential pricing is appropriate. See Section 5.2.

Facilitation costs

- 15. We have decided that facilitation costs should be included in wholesale prices where they are:
 - additional to what the wholesale service provider would have otherwise incurred in the absence of servicing the wholesale customer, and
 - not reflected elsewhere in the wholesale price or recovered via another charging or funding mechanism of the wholesale service provider.

Supported. In principle, all additional costs or savings that are not reflected in the default wholesale price should be included as facilitation costs. See Section 6.3.

16. We have decided not to include facilitation costs in the draft system-wide wholesale prices but would consider them in scheme-specific determinations.

Accepted. In principle, all facilitation costs should be included in wholesale prices. However, we accept IPART's draft decision not to include any facilitation costs in system-wide prices for this first determination. See Section 6.3.

- 17. We have decided that facilitation costs should:
 - reflect the status of water and sewerage developer charges
 - include positive (costs) and negative costs (cost savings), where appropriate.

Supported. We agree with IPART's supplementary draft decision that initial transaction costs, and ongoing, non-material administration costs should be considered when they are material. See Section 6.3.

Scheme-specific reviews and unregulated pricing agreements

18. We have decided to use the process in Box 9.1 to review and determine scheme-specific prices for wholesale water and/or sewerage services.

Accepted. See Section 6.4.

19. We have decided not to set an interim price to apply while a scheme-specific review is being undertaken, or apply a true-up mechanism to adjust for any differences between the price before and after a scheme-specific determination is made.

Accepted. See Section 4.2.

20. We have decided to allow wholesale service providers and wholesale customers to opt-out of IPART's determined wholesale water and sewerage prices by voluntarily entering into unregulated pricing agreements.

Not supported. We do not believe that unregulated pricing agreements would work in practice. Our position is that if there is to be a regulated price for wholesale services, this price should be applied consistently to all wholesale customers. See Section 6.5.

1.2 Structure of this submission

The following chapters of this submission provide detailed comments on the following areas:

- Chapter 2 context for the wholesale review
- Chapter 3 pricing approaches for on-selling drinking water and wastewater services
- Chapter 4 system-wide retail minus prices for on-selling services
- Chapter 5 pricing approaches for recycled water services
- Chapter 6 other matters
- Chapter 7 implementation issues.

Further detail supporting our response is provided in the appendices.

2 IPART's context for the review

Key messages

- We support competition in the NSW urban water market that promotes efficiency and provides good outcomes for end-use customers.
- We agree with IPART's objective to establish an approach for regulating wholesale prices that allows efficient new entry to the market to promote competition for the longterm benefit of consumers.
- We appreciate IPART's efforts in this review to ensure the most appropriate decisions are made to encourage efficient long-term entry into the Sydney urban water market.
- Many stakeholders and other interested parties have called for a whole-of-industry review. We agree that such a review could be useful in confirming the Government's objectives for the NSW urban water market, the types of outcomes it wants to see from the introduction of competition, and the anticipated customer impact.
- We support IPART continuing its review of wholesale prices, as this is an appropriate response in the absence of a whole-of-industry review.
- We agree with IPART that integrated water cycled management (IWCM) and recycled water can be used to achieve positive outcomes for the community. These include enhanced environmental outcomes and liveability. However, we also agree that these pursuits are not ends in themselves and should be pursued where they are an efficient way of achieving a range of outcomes and objectives.
- Sydney Water is actively pursuing IWCM where it benefits customers and creates a sustainable, liveable and resilient city, which in turn improves productivity and economic growth. We strongly support the industry moving towards robust and efficient integrated water servicing solutions, including recycling.
- IPART's determination provides an appropriate framework and incentives for the efficient use of IWCM and recycled water.
- We note that the NSW Government's decision in 2008 to set developer charges to zero
 may create a barrier to entry as incumbents can recover the costs of growth from their
 entire customer base. We accept that IPART is making its draft decisions in an attempt
 to create a level playing field in the absence of developer charges.

2.1 Nature of competition

We agree with IPART's objective during this review that competition be used to encourage efficiency and promote the long-term interests of customers. The NSW urban water market is still largely in its infancy and we appreciate IPART's efforts in carrying out this review to ensure future entry is efficient and will create positive outcomes for customers.

While we remain unconvinced of the extent to which dynamic efficiencies will be achieved, we strongly support the changes IPART has made to its previous decisions to ensure entry into the market is efficient. We understand IPART is attempting to balance competing objectives.

2.1.1 Objective for the review of wholesale prices

IPART's stated objective for this review is to:

"establish an approach for regulating wholesale prices that allows new entry to the market for end-use water and wastewater services to occur where efficient, to promote competition for the benefit of consumers".

As with the November 2016 Draft Report, IPART's supplementary draft decisions will provide a subsidy to new entrants². The price charged for providing wholesale services will not equal the efficient cost of Sydney Water providing them in a postage stamp pricing environment. This may lead to inefficient investment.

We support competition in the NSW urban water market where it promotes efficiency and provides positive outcomes for customers though lower prices or added value. We consider the potential for dynamic efficiencies from competition in the Sydney urban water market is speculative. We are also of the view that there will always be challenges in stimulating a vibrant competitive retail market for end-use customers within a postage stamp pricing context.

Further detail on our views on this matter, and the type of competition being promoted in the urban water market, can be found in our previous submissions to this review.

2.1.2 Pricing parity

To date, new entrants have implemented a policy of price parity with Sydney Water. Adopting pricing parity means that the cost savings or efficiencies achieved by a new entrant relative to the prices they pay us are not being passed on to their customers through lower prices.

We note that IPART has recognised in the Supplementary Draft Report that wholesale customers are free to set prices for recycled water at levels that reflect customers' willingness to pay. We agree with this view and believe it is important that wholesale customers send the right signals to the market on the costs to provide recycled water and other IWCM approaches.

2.2 Developer charges

Developer charges are a simple mechanism whereby a developer essentially pays the infrastructure costs for the assets required to service their development. In 2008, the NSW Government set water, wastewater and stormwater developer charges to zero, to address housing affordability. Now, rather than recover the costs of growth from developers, Sydney Water recovers the costs of servicing new developments from its general customer base. This means that those benefitting directly from the growth infrastructure (that is, developers, and people buying land and homes) do not directly pay for the services.

As IPART has noted throughout this review, its decisions for how it sets wholesale prices are impacted by the NSW Government's 2008 decision to set water, wastewater and stormwater developer charges to zero. We agree with IPART that an environment of zero developer charges and postage stamp pricing may create potential advantages for incumbents. We note, however,

¹ IPART, Supplementary Draft Report, page 18

² We note that the quantum of this subsidy is far smaller than that which would have resulted from IPART's November 2016 Draft Report decisions

that new entrants benefit from other advantages, such as having the ability to levy developer charges or other infrastructure levies, or raise other charges not available to Sydney Water.

We agree that facilitation costs should not relate to development that would otherwise be funded by Sydney Water's postage stamp price. We acknowledge that IPART is making this decision in an attempt to create a level playing field in the absence of developer charges, and support this intention.

We believe there may be benefit in considering the reintroduction of developer charges in NSW, as part of a broader exploration of value capture. Re-introducing developer charges may benefit competition by creating a level playing field between incumbents and private utilities, and encouraging new entry where private utilities can service a new development more cheaply than the incumbent.

2.3 IWCM and recycled water

Throughout this review, IWCM and recycled water have been a major focus for many stakeholders. IWCM is emerging as a key pillar of servicing growth, particularly in nutrient constrained environments. Outcomes from IWCM can enable a more sustainable, liveable and resilient city, which in turn improves productivity and economic growth. Sydney Water is keenly exploring possibilities to implement more IWCM solutions in line with customer values.

Adoption of a range of IWCM approaches is needed to address the range of urban water challenges that we are facing in greater Sydney, particularly from high forecast population growth and ongoing climate change impacts. We want to deliver services that our customers value and that protect our environment, building a water sensitive city.

We strongly support the industry moving towards efficient integrated water servicing solutions, including recycling. Recycled water servicing solutions can provide significant benefits to customers and the environment. Where these benefits arise from new wholesale schemes connected to our network, we are happy for this to be reflected in the wholesale prices we charge these parties.

Given the emerging importance of recycling and IWCM it is critical that all players, public and private, can contribute on an equal footing. IPART's decisions in the Supplementary Draft Report set a good foundation for this to occur.

We would be keen to participate in a review that investigates the best way to enable all players to deliver such solutions. We particularly agree with IPART's position that the focus should be in identifying optimal outcomes to be targeted by regulation, which in turn may enhance the viability of IWCM and recycled water.

3 Pricing approaches for on-selling water and wastewater services

Key messages

- We strongly support IPART's decision that all wholesale services should be priced consistently even when a recycled water plant is being operated. This draft decision:
 - acknowledges that the customers of public utilities should not subsidise private companies to enter the market
 - o acknowledges that benefits from recycled water plants are largely location-specific and best determined on a case-by-case basis
 - o is consistent with the approach to pricing recycled water for public utilities.
- We support a retail minus approach for all on-selling services.
- Our preference would be to use a retail minus EEC approach. This would ensure no unnecessary increases to customer bills, even in the short-term. Sydney Water and Hunter Water costs are subject to robust review processes by IPART, so an EEC approach should represent efficient costs.
- However, we understand IPART's position on promoting dynamic efficiency gains and appreciate IPART applying a reasonable methodology to calculate the REC costs.
- We are concerned that the quantum of IPART's REC minus may not encourage efficient entry and could lead to a negative impact on Sydney Water's customers, and the community in general.
- Dynamic efficiencies should lead to lower costs/prices or higher valued services for consumers. IPART's Supplementary Draft Report does not contain detailed or quantified explanations about the types and/or quantum of dynamic efficiencies that would need to occur, to see consumers better off in the long-term.
- Our analysis shows there is a risk that IPART's proposed pricing approaches will never result in enough dynamic efficiency gains to produce long-term benefits for consumers.
- We support IPART's position that it will move to an EEC approach over time. We consider this may somewhat mitigate the risk that customers will see inflated bills due to inefficient entry.

3.1 Retail minus approach

Sydney Water continues to support IPART's draft decision to use a retail minus approach for the wholesale supply of water and wastewater services. We agree that it is the most appropriate pricing approach that is compatible with the NSW's Government's postage stamp pricing policy. Without separating the retail and wholesale functions into distinct markets, it is the only approach under the existing framework that allows the incumbent water utility and new entrant to compete on equal terms.

3.2 Sewerage service being on-sold via a recycled water plant

Sydney Water strongly supports IPART's decision that all wholesale services should be priced consistently even when a recycled water plant is being operated. We note that this is a significant change from IPART's draft decisions in the November 2016 Draft Report.

3.2.1 IPART's draft decisions on on-selling

Sydney Water's biggest concern with IPART's draft decision in the November 2016 Draft Report was that wholesale customers who provide both recycled water and wastewater services to enduse customers would be charged at non-residential pricing. We strongly support IPART's significant change in its position on this and agree that:

- The existence of a recycled water plant in a development that is connected to our
 wastewater system does not change the nature of the wholesale wastewater service we
 provide to the new entrant. With or without a recycled water plant, Sydney Water will be
 providing the wholesale customer with a wastewater service that is on-sold to end-use
 customers.
- The service we provide to the wholesale customer is not transformed by the presence of a recycled water plant. As we can still receive large amounts of the end-use customers' untreated wastewater and pollutants, and provide significant components of the wastewater service, this is not a transformed service.
- Using non-residential prices would result in wastewater customers of public utilities crosssubsidising recycled water plants in Water Industry Competition Act 2006 (WIC Act) schemes.
- Where a WIC Act licensee is providing recycled water and wastewater services, applying a non-residential price:
 - o creates an unfair arbitrage opportunity that will allow it to out-compete Sydney Water, and
 - would increase the costs to Sydney Water's customers,

without providing a better service or lower cost. This is a fundamental objective of competition.

3.2.2 Retail minus an appropriate pricing approach

Given postage stamp pricing, our preferred pricing approach is a retail minus pricing approach. This is because Sydney Water:

- provides a full back-up service to the wholesale customer, and
- supplies a significant component of the end-to-end service of the end-use customer's wastewater service even when the recycled water plant is operating.

A retail minus pricing approach appropriately allows Sydney Water to recover the costs of providing a wastewater service to the wholesale customer. It also reflects that Sydney Water must maintain sufficient capacity for when a recycled water plant is on bypass (for example during maintenance, or during a power failure or other event out of their control) or during times of low recycled water demand.

Further information on the service we provide recycled water plants and our preferred pricing approach is outlined in our previous submissions to this review.

3.2.3 Creating a level playing field

We are supportive of IPART's objective to pursue a level playing field between public and private water utilities in how recycled water is funded. However, we note that wholesale customers can still recover the costs of recycled water schemes in a way not available to public utilities. That is, through cross-subsidising between water, wastewater and recycled water products where there are no avoided costs.

3.2.4 Recognising the potential benefits of recycled water

We strongly believe that it is possible for a recycled scheme to reduce the costs of delivering water or wastewater services. Recycled water can provide great benefits to our customers and the environment, and we are looking to capitalise on those benefits in how we service growth in the future. However, these benefits are primarily scheme-specific and do not necessarily arise in every situation. We support IPART's view that the largely location specific benefits that recycled water plants can provide are best determined on a case-by-case basis via a scheme-specific review.

3.3 REC vs EEC approach to the minus component

Sydney Water's preference would be to use a retail minus EEC cost approach for on-selling services. A retail minus EEC approach would enable efficient entry, while avoiding increases to customer bills or a potential reduction in dividends to Government, even in the short-term.

The REC approach assumes that new entrants will have higher costs than public utilities. However, this may not be the case. As noted in our previous responses, some new entrants may have access to large economies of scale, particularly in relation to retail services. This is demonstrated by recent experience in the UK, where some water businesses, such as Thames Water, are choosing to exit the non-residential retail market in the face of new entrants who are efficient, large, international, multi-utility companies.

Notwithstanding this, we understand that IPART wishes to balance their objectives under the *Independent Pricing and Regulatory Tribunal Act 1992* (the IPART Act)³, and so has determined that the risk of increased costs in the short-term is balanced by the potential for dynamic efficiency gains in the long-term. The adoption of the REC approach as a way of balancing these objectives is preferable to applying a non-residential price.

Further information on our views on the REC approach can be found in our previous submissions on this review.

3.3.1 Legal issues

Sydney Water notes that during the November 2016 public hearing a participant questioned the legality of the retail minus approach⁴. Sydney Water does not agree with that interpretation and further detail on our position is outlined in our previous submissions.

³ Particularly the objectives to ensure services are provided efficiently and to increase competition

⁴ Transcript of public hearing – 28 November 2016, page 29

3.3.2 Revenue recovery

As REC costs are determined to be less efficient than the incumbent's, the public utility is left with a revenue shortfall. It is a fundamental principle of regulatory best practice that a regulated business should have a reasonable opportunity to recover its efficient costs. We note IPART has reiterated this will be considered in the next retail price review. We look forward to working with IPART on this issue at that time.

In using an REC pricing approach, we agree that the minus component should reduce over time, eventually approaching an EEC cost minus. Our view remains that it would increase certainty for industry participants if IPART provided detail in the Final Report regarding how this might occur.

3.4 Scenario modelling of dynamic efficiencies

The Supplementary Draft Report does not quantify the types or size of dynamic efficiencies that would need to occur to see long-term benefits accrue to consumers. It would be useful for this to be considered in the Final Report. We also believe it would be in the public interest for IPART to monitor and report on the level of benefits/dynamic efficiency gains that arise over time, as part of reviewing the effectiveness of the competition regime.

We have conducted scenario modelling of the potential quantum of efficiencies and the possible length of time that retail customers would need to continue subsidising new entry for these to be realised (if at all).

In summary, our scenario modelling shows that there is a risk of increased end-use customer bills for many years with IPART's REC approach, and it is possible customers will not see a reduction in bills for over ten years.

There is also a risk that IPART's proposed pricing approaches will never result in enough dynamic efficiency gains to produce long-term benefits for consumers. The present value of dynamic efficiencies which must be delivered to end-users to make society no worse off relative to retail minus EEC pricing are as much as \$65 million. We are not convinced that this is likely given the current market constraints.

The potential for the REC to produce such a reduction is highly dependent on the:

- rate of WIC Act licensee market uptake
- realisation of generous dynamic efficiency gains
- REC approach transitioning to a retail minus EEC approach over time.

See Appendix A for further details.

4 System-wide retail minus prices for on-selling

Key messages

- IPART's methodology for setting system-wide wholesale prices appears sound and we agree that potentially complex deferral/bring forward benefits should be determined through a scheme-specific determinations.
- We suggest some refinements to the REC cost calculation, in particular:
 - labour costs associated with billing support functions
 The current assumptions result in a generous allowance on per customer basis. This contributes to the REC cost minus for retail services at six times higher than our efficient cost allowance. We question how this will contribute to achieving IPART's objective of a more efficient market.
 - customer meter installation costs
 To avoid unnecessary bill increases, the assumptions for this allowance should align with existing cost sharing arrangements and better reflect least cost customer metering practices.
 - the inclusion of large infrastructure costs
 The result of including such an allowance may encourage cherry picking of low cost to serve schemes with very little or no large infrastructure required.

4.1 Calculating the retail component

The method for calculating the retail component appears largely reasonable. However, we note the change in IPART's formula for how we are to calculate the drinking water usage charge.

4.1.1 Drinking water usage charge

IPART's formula for the purposes of volumetric charging now only refers to end-use customer water usage (rather than water usage at the wholesale connection point). This appears to be inconsistent with IPART's position in the Supplementary Draft Report. In Appendix D of the Supplementary Draft Report⁵, IPART states that the retail component for on-selling water services would be calculated as the retail usage charge multiplied by the total volume of water taken by the wholesale customer at the wholesale connection point.

Using end-use customer volumes will not incentivise the wholesale customer to manage leaks and other non-revenue water within their own network. If a wholesale customer's system leaks due to poor maintenance, this will result in wasted water and lead to additional costs Sydney Water has no ability to control or recover. Further information on this is included in Section 7.2.

⁵ IPART, Supplementary Draft Report, page 18

4.2 True-up or adjustment mechanism

We appreciate IPART's clarification in the Supplementary Draft Report that a true-up is appropriate, but would be best negotiated via the contractual arrangements between the parties. We agree that should this issue become significant (for example, if there are a large number of disputes), IPART could consider including a true-up mechanism in future wholesale price reviews.

4.3 Calculating in the REC costs

While Sydney Water's preference is not to use a REC approach, the methodology used by IPART to calculate the relevant REC minus costs appears sound and internally consistent.

We agree with IPART's proposed approach to use a per customer minus for retail costs and a per kilometre minus for local reticulation. These are the most appropriate cost drivers for these components of the wholesale service. Other forms of system-wide prices, such as percentages, would have provided an unwanted incentive for new entrants to cherry-pick infill schemes because greenfield schemes require more reticulation per customer.

At the public hearing in November 2016 stakeholders commented that a per kilometre minus for reticulation may create a perverse incentive to inefficiently service their development to obtain a larger reduction in the wholesale price⁶. A wholesale customer who did this to game IPART's wholesale prices would risk higher operational costs once IPART transitioned to EEC prices. This could also be addressed during the WIC Act licensing application process.

4.3.1 Quantum and nature of REC assumptions

We believe the amounts used for the REC cost minus, particularly in relation to retail services, could be further refined. Overall, we estimate REC costs are 1.3 to 6 times higher than Sydney Water's costs for these activities, even considering potential scale effects. This may be due to several assumptions that over-estimate some inputs, or are not consistent with standard NSW industry practice. These include:

- Significantly higher meter installation costs in the minus (up to six times EEC⁷). These have been based on standard practice in Melbourne appearing to include the cost of installing the entire section of meter assembly (risers, tap and meter) which potentially requires two hours of labour. In Sydney, all the pipework between the main and the home is funded by the developers and/or homeowners, so the installation costs for the public utility is based on around 15 minutes of labour to install the meter only.
- The assumption that telemetry meters will be installed in greenfield areas. We currently do not install telemetry meters in greenfield areas as the additional capital cost of the meters significantly outweighs the longer term operational savings⁸.
- Extremely high REC costs for operating back office and billing services on a per customer basis when it is likely these could be outsourced competitively. Although the assumptions used

⁶ Transcript of public hearing – 28 November 2016, page 54

⁷ For a standard (non-telemetry) meter

⁸ We note there may be benefits to the associated operational costs of a pressure wastewater service (if that service was delivered to the same properties). However, these benefits would be realised in the delivery of that service so any additional costs do not need to be included in the REC costs for water services

to estimate these costs are reasonable, we question the need to provide such an allowance to all schemes when the majority of WIC Act licensees are subsidiaries of large, well-established and well-resourced existing companies.

 Including large infrastructure costs (pumping stations and reservoirs) in the wastewater system-wide minus. IPART has changed its position on this since the November 2016 Draft Report. This change creates an incentive for new entrants to cherry-pick low cost to serve schemes as, in our view, no entrants who wish to operate large infrastructure are likely to accept the highly averaged system-wide minus.

We request that IPART re-consider these inputs and assumptions before setting final wholesale prices.

5 Pricing approach for recycled water services

Key messages

- We agree with IPART's supplementary draft decision that supplying drinking water to top
 up recycled water schemes should be priced at retail non-residential drinking water
 prices. While we maintain that this is not a wholesale service, a non-residential price
 generally reflects the costs and capacity required in our network to provide this service.
- We support IPART's supplementary draft decision that wholesale customers who
 purchase drinking water for both the purposes of on-selling and for drinking water top-up
 should be charged:
 - o a retail minus price for the water supplied for drinking water on-selling
 - the retail non-residential water service and usage prices for the water supplied for drinking water top-up.
- Sydney Water is of the view that recycled water plant waste disposal services under the Supplementary Draft Report are essentially sewer mining services.
- IPART's position under the *Pricing arrangements for recycled water and sewer mining*⁹ is that it will not determine prices for sewer mining. IPART should make it clear if it now intends to do so under the wholesale price determination.
- In practice, we agree that when a wholesale customer does not on-sell sewerage services to end-use customers, it is appropriate that we charge them retail nonresidential sewerage and trade waste charges.

This chapter looks at IPART's approach to pricing services where the WIC Act licensee only provides recycled water services to end-use customers. Our preference would be for these situations to be captured under the retail determinations or our sewer mining policy.

5.1 Drinking water top-up

We have previously argued that we do not believe that drinking water top-up should be considered a wholesale service. However, we agree with IPART that a retail non-residential price is appropriate for this type of service. Using a non-residential price generally reflects the costs and capacity required in our network to provide this service.

In practice, Sydney Water is unlikely to be able to apply a drinking water-top up charge to WIC Act licensees where Sydney Water is the drinking water service provider. This is because, unless the WIC Act licensee owns the property on which the recycled water plant is located, we have the water connection with the property owner. As on-suppliers are not included in the definition of a wholesale customer for recycled water plant services, this will not trigger top-up charges.

⁹ IPART, Pricing arrangements for recycled water and sewer mining – Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council - Final Report, September 2006

We agree that Sydney Water should charge a wholesale customer separately for the different services we provide for on-selling and drinking water top-up.

As previously noted in this review, we consider that a deemed meter size of 100mm, while likely larger than required, will incentivise wholesale customers to meter drinking water top-up. We support IPART in this regard.

5.2 Recycled water plant waste disposal

As with drinking water top-up, we do not believe there is a need for a wholesale price where Sydney Water is the wastewater provider to a scheme, and a WIC Act licensee provides recycled water only. We believe there is a sufficient framework in place to deal with recycled water plant waste disposal services where Sydney Water is the wastewater service provider – that is, sewer mining and trade waste arrangements.

5.2.1 Sewer mining

Under IPART's *Pricing arrangements for recycled water and sewer mining*¹⁰, sewer mining is defined as:

"the extraction of raw sewage from a point in the sewerage network upstream of a sewage treatment plant (STP), for treatment and recycling by a party other than the operator of that network" ¹¹.

Where the WIC Act licensee is only providing recycled water services to end-use customers, and therefore only extracts wastewater from Sydney Water's network, we believe that this meets the above definition.

IPART has previously made the decision that it would not make a price determination for sewer mining and noted that:

"sewer miners have significant negotiating power in the market and...the principles in Sydney Water's sewer mining policy provide a sound framework for such negotiations" ¹².

Effectively, IPART's supplementary draft decisions to charge a recycled water plant waste disposal service (which is now defined in the same way as a sewer mining service) as a non-residential customer is a change from IPART's previous decision on sewer mining pricing.

We believe that Sydney Water's current sewer mining policy provides an appropriate framework for sewer mining schemes. It allows parties to negotiate the terms of the agreement, and allows Sydney Water to recover the costs incurred by enabling sewer mining connection and operation. This is something we would not able to recover under the draft decisions in the Supplementary Draft Report.

¹⁰ IPART, *Pricing arrangements for recycled water and sewer mining – Sydney Water Corporation, Hunter Water Corporation*, Gosford City Council and Wyong Shire Council - Final Report, September 2006

¹¹ IPART, *Pricing arrangements for recycled water and sewer mining – Sydney Water Corporation, Hunter Water Corporation*, Gosford City Council and Wyong Shire Council - Final Report, September 2006, Page 1

¹² IPART, *Pricing arrangements for recycled water and sewer mining – Sydney Water Corporation, Hunter Water Corporation*, Gosford City Council and Wyong Shire Council - Final Report, September 2006, Page 5

Sydney Water requests that IPART outlines its intended position on this issue in the Final Report on wholesale pricing. It would be useful for this to specifically address if IPART's intention is to now treat sewer mining schemes as if they are a wholesale customer to which non-residential prices apply.

5.2.2 Recycled water sourced from other inputs

As IPART notes, there is potential that recycled water plants can source other inputs such as stormwater or ground water. However, we do not believe that IPART should consider that these are wholesale services. If the recycled water plant was using harvested stormwater or groundwater, it would only discharge trade waste to Sydney Water's network. We do not allow additional or off specification stormwater or ground water to be discharged into our wastewater network. Much effort has been made over many decades to make and keep the stormwater system separate from the wastewater system.

6 Other matters

Key messages

System-wide prices

 We continue to support IPART's draft decisions to set system-wide wholesale prices for simple wholesale schemes, where the use of average cost minuses or system-wide prices is appropriate. System-wide prices for such schemes are an administratively efficient way to encourage new entry and innovation.

Determination length

We accept a length of four years for this initial determination. Due to the infancy of the
market and lack of experience with wholesale schemes, we think it is important not to set
a longer period, particularly given the possibility of a broader industry review.

Facilitation costs

- We agree that facilitation costs can be both positive and negative and that any significant facilitation costs are best determined on a case-by-case basis.
- In principle, all facilitation costs should be included in wholesale prices. However, we
 accept the exclusion of initial transaction costs, and ongoing, non-material administration
 costs for this first determination.

Scheme-specific reviews

 IPART's proposed scheme-specific review methodology and schedule appears reasonable.

Unregulated pricing agreements

 We maintain our view that unregulated pricing agreements are unlikely to occur in practice. If there is to be a regulated price for wholesale services, this price should be applied consistently to all wholesale customers.

Existing arraignments

We support IPART's draft decision to only apply wholesale prices to new schemes.

This chapter provides a summary of Sydney Water's position on those matters that have not significantly changed in the Supplementary Draft Report. Further detail on these positions can be found in our previous submissions to this review.

6.1 System-wide prices

In our submission to IPART's Discussion Paper, we supported the option of setting wholesale prices on a system-wide basis for schemes that involve a simple infrastructure configuration. This remains our preferred position.

We agree with IPART that the benefits of a system-wide approach are lower administration costs (compared to scheme-specific reviews) and the provision of information to existing and potential market participants (which can inform decisions regarding market entry).

6.2 Determination length

IPART's supplementary draft decision remains to adopt a length of four years for the initial determination of system-wide wholesale prices. We accept this proposal and would be concerned with a longer length.

Wholesale services is a new area of regulation and given the infancy of the market, there may be significant issues that various parties seek to revisit in the next review of wholesale prices, once more data becomes available.

6.3 Facilitation costs

We agree that facilitation costs can be both positive and negative, and that any significant facilitation costs are best determined on a case-by-case basis.

In principle, all facilitation costs should be included in wholesale prices. However, we accept IPART's draft decision to exclude initial transaction costs, and ongoing, non-material administration costs for this first determination.

6.3.1 Cost drivers and savings associated with recycled water plant operation

Although IPART has decided not to include a facilitation minus in system-wide prices, we are concerned an incorrect assumption noted in the Supplementary Draft Report may be relied on for future scheme-specific determinations. As such, we would like to highlight an error in the assessment of the cost drivers noted in IPART's consultant's report.

We do not consider that it is reasonable to include water treatment and network operational savings as a minus for recycled water plant operation. The reduction in these costs is already captured by the reduced volumetric charge the wholesale customer is paying, due to their reduced demand for potable water (because they instead produce their own recycled water). Further adjustment to the wholesale water price is unnecessary.

We agree that from a whole of society perspective, such as might be appropriate when comparing integrated water servicing options, those costs of water treatment and network operations would be avoided. However, in such a comparison, that option would also include the cost to produce that same volume of recycled water. In the wholesale pricing context, it would be incorrect to consider either of these costs/avoided costs, as neither contribute to the retail component of the retail minus price.

6.4 Scheme-specific reviews

We support IPART's supplementary draft decision to allow wholesale customers and/or service providers to apply for a scheme-specific determination where they consider that the determined prices do not reflect the characteristics of a wholesale scheme. This provides an opportunity for all parties to ensure that the wholesale price appropriately reflects the services being provided, as well as accounts for any additional benefits the wholesale customer is producing.

We agree that the Wholesale Pricing Proposal should be developed by the wholesale service provider. We note IPART's statement that the response time for the Wholesale Pricing Proposal would likely be one to three months, depending on the complexity of the scheme. One month is unlikely to be enough time, especially given the wholesale service provider will be required to consult with the wholesale customer, and incorporate the results of this engagement into the pricing proposal.

6.5 Unregulated pricing agreements

We note IPART's draft decision to allow for unregulated pricing agreements. We continue to hold the view (as we have in previous submissions) that if there is to be a regulated price for wholesale services, this price should be applied consistently to all wholesale customers.

We do not believe that unregulated agreements would happen in practice, as we cannot envisage a situation where it would be beneficial for both parties to deviate from the determined price.

There may also be practical difficulties associated with entering an unregulated pricing agreement, as the public utility is then required to ring-fence any change in costs resulting from that agreement. Such ring-fencing has a high administrative cost and, at present, could be difficult to do on an individual customer basis.

6.6 Existing arrangements

We support IPART maintaining its draft decision to only apply wholesale prices to new schemes. It is appropriate that agreements negotiated prior to this determination are not automatically captured by the default system-wide prices.

In our submission to the November 2016 Draft Report, we requested that IPART confirm what will happen at the end of the term of any current agreements. We note IPART's intention is for these existing schemes to be excluded regardless of the duration of any agreement between the parties. We support IPART's position that should either party consider that the determination does not reflect the characteristics of the wholesale service agreement, they can apply for a scheme-specific determination.

We would appreciate IPART's confirmation that existing agreements, although not subject to the prices within this determination, should not be treated as unregulated income, now or in the future. Unregulated revenue streams must be ring-fenced and currently we treat the revenue we receive from existing agreements as regulated. It would take significant administrative effort to ring-fence these schemes' costs and revenues.

7 Implementation issues

Key messages

- We support IPART's definition of the nature of wholesale services and customers although some small changes to wording may be needed.
- Sydney Water has suggested some proposed changes to the Supplementary Draft Determination to ensure that we can practically implement the Final Determination.
- Our main areas of concern are:
 - o trade waste charges for recycled water plants
 - use of end-use customers' water usage rather than at the wholesale connection point
 - o potential tankering arrangements still being captured.
- We have provided some worked examples of how we would charge WIC Act schemes in Appendix B.

This chapter outlines Sydney Water's position on the potential implementation issues we have identified with the Supplementary Draft Determination. We would be pleased to work with IPART further on these matters to inform the Final Determination.

7.1 Trade waste

Sydney Water currently has in place trade waste agreements with WIC Act licensees who operate recycled water schemes (as opposed to the agreement being with the property owner on which the plant is located). Under the Supplementary Draft Determination, it appears that, where a wholesale customer on-sells a wastewater service and provides recycled water, the property on which a recycled water plant is situated would be included in the calculation of the retail component of the wholesale price for on-selling (as per clause 3.1 of Schedule 2 of the Draft Determination).

Our concern with this is that we provide specific trade waste services to a WIC Act licensee who operates a recycled water plant, including monitoring and daily composite sampling. The cost of providing such services are recovered via our trade waste industrial agreement charges (as listed in Table F3 of the Supplementary Draft Report) to ensure our downstream infrastructure is safe and well-maintained. Under the Supplementary Draft Determination, we would not be able to recover these where a WIC Act licensee both on-sells wastewater services and operates a recycled water plant. Two alternative approaches are outlined in the box below.

We note that this issue only relates to costs associated with administering a trade waste agreement, and not to pollutant charges. Under the Supplementary Draft Determination, Sydney Water would be able to recover appropriate pollutant charges through the calculation of the retail

component. However, we will also need to monitor the waste being discharged from a recycled water plant to ensure there are no impacts on our network and to take appropriate action¹³.

Proposed approaches for trade waste

There are two potential approaches IPART could take to ensure Sydney Water is able to charge trade waste administration fees to a WIC Act licensee who operates a recycled water plant, where they also on-sell wastewater services to end-use customers. In both scenarios, Sydney Water would continue its current practice of entering into a trade waste agreement with the WIC Act licensee directly. However, the levying of appropriate administration and monitoring charges could be done in one of two ways:

- 1. The parties would enter into the trade waste agreement outside of the wholesale pricing framework. This would allow the parties to negotiate the terms and conditions of the agreement, including establishment of the agreement, ongoing inspection and monitoring, and the treatment of any additional pollutants that may result from the operation of the recycled water plant. If IPART adopts this approach, it would be useful to note that IPART endorses this approach in the Final Report.
- 2. IPART could include wording in the Final Determination that allows Sydney Water to recover administration fees under Schedule 2 where the trade waste agreement is directly with the WIC Act Licensee. In this case, we would propose the following changes to clause 3.4(b) of Schedule 2 of the Supplementary Draft Determination:

3.4 Trade Waste Charges

- (b) For the purposes of paragraph (a), the Trade Waste Charge for a Property does not include any fee or charge that Sydney Water would otherwise be able to charge for:
 - (1) establishing, administering, renewing or varying a Trade Wastewater Agreement for the supply of trade waste services to that Property;
 - (2) conducting inspections in relation to trade waste services supplied to that Property; or
 - (3) processing applications in relation to trade waste services,

if it supplied the Retail Trade Waste Services, unless Sydney Water provides those services to a Wholesale Customer through a Trade Waste Agreement.

¹³ There is the possibility that a recycled water plant uses both wastewater and other sources (ground water and/or stormwater). Here, there is an increased risk of contaminants which our treatment plants are not designed to treat. This could affect the contaminant grading of the biosolids we produce. The WIC Act licensees who operate the recycled water plants should be subject to the necessary trade waste checks to maintain the safety of our downstream networks.

7.2 Water usage charges

7.2.1 Calculating the usage component

As noted in Section 4.1.1, IPART has made a change in the way it proposes to calculate the usage component of the price for on-selling drinking water from that used in the November 2016 Draft Determination. IPART's previous formula allowed Sydney Water to charge for the volume of water supplied at the wholesale connection point. The new formula only allows Sydney Water to charge for the water used by end-use customers.

Sydney Water does not agree with the change in IPART's approach. Our preference would be to return to the formula used in the November 2016 Draft Determination. The new approach:

- · adds unnecessary administrative effort
- risks wasted water
- risks encouraging increased costs not covered by the wholesale price, which we have no ability to control or recover
- is inconsistent with IPART's position in Appendix D of the Supplementary Draft Report¹⁴.

Non-revenue water is the water which is provided to the wholesale customer but does not get measured by the end-use customer meters. It is present in all water networks. To a large extent, it constitutes water that leaks from pipes, but it also includes water, that is stolen (water theft) and used by the utility for operational purposes. By basing the usage component only on the volume of water that downstream properties (end-users) use, Sydney Water will incur additional costs if the wholesale customer does not efficiently manage the non-revenue water that occurs within their network. This may encourage water wastage which we do not consider to be appropriate.

In Sydney Water's view, it would be preferable to base the charges on the volume measured at the wholesale connection point. This would involve much lower administrative effort for both the wholesale customer and the wholesale service provider with respect to the data transfer required. It would also encourage wholesale customers to efficiently maintain their reticulation network.

Non-revenue water allowance

If IPART does decide to base the usage component on end-use customer meters, we recommend including a limit to the non-revenue water implicitly allowed for in the wholesale pricing formula. In determining Sydney Water's retail prices for the current price period, IPART has included an allowance for non-revenue water of 10.6% of bulk water purchases. We suggest the same allowance be set for wholesale customers. This would represent a reasonable allocation of risk in relation to non-revenue water between the wholesale customer and wholesale service provider. Suggested amendments to the pricing formula in the determination is provided below.

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¹⁴ IPART, Supplementary Draft Report, page 18

Proposed amendments to water usage charge calculations

We suggest that clauses 3.1 and 3.2 of the Supplementary Draft Determination be amended to reflect the wording in clause 3.1 of the November 2016 Draft Determination as follows:

3.1 Calculation of Retail Component

(a) The Retail Component for an On-Selling Water Service supplied to a Wholesale Customer at a Wholesale Connection Point in a Period is the amount calculated as follows:

$$R = (Vx WUC) - WUC + \sum WSC$$

Where:

R is the Retail Component for that On-Selling Water Service supplied to that Wholesale Customer at that Wholesale Connection Point in that Period;—and

V is the volume, in kL, of Filtered Water supplied by Sydney Water to that Wholesale Customer at that Wholesale Connection Point in that Period:

EWUC is the maximum water usage charge, per kL, that Sydney Water may levy under the Retail Determination for supplying each kL of Filtered Water in that Period the sum of the Water Usage Charges, determined in accordance with clause 3.2, for the Downstream Properties; and

EWSC is the sum of the Water Service Charges, determined in accordance with clause 3.3, for the Downstream Properties: ...

3.2 Water Usage Charges

The Water Usage Charge for a Property in a Period is equal to the maximum water usage charge that Sydney Water would be able to charge under the Retail Determination for supplying the Retail Water Services, if Sydney Water supplied the Retail Water Services.

If IPART uses the formula in the Supplementary Draft Determination, there will be no mechanism for us to recover the cost of unreasonable leakage and other non-revenue water that occurs within the wholesale customer's network. We would be pleased to work with IPART to ensure wholesale customers manage an equitable component of the risk relating to non-revenue water.

End-user data

We will still need individual non-residential end-users' water consumption data (together with their discharge factor), to be able to calculate the wastewater usage component of the retail minus charge. As there are likely to be fewer non-residential customers and no alternative approach available, the administrative effort to calculate this component of wholesale charges is reasonable.

7.2.2 Drinking water top-up

Where the wholesale customer chooses not to install a separate top-up meter, we will only be able to calculate the top-up usage amount as the difference between the end-use customers' usage and the metered usage at the wholesale connection point(s). Here, the drinking water top-up

charge will include all remaining water used within the scheme, including non-revenue water. This method correctly incentivises the wholesale customer to install a meter on their top-up connection.

7.3 Definitions of wholesale customers and services

We support IPART's definition of the nature of wholesale services and wholesale customers. However, as currently worded, it is possible that a tankering service working with a private waste facility (with a connection to our infrastructure) could be considered part of the supply chain. This is because the trade waste facility has a contract with Sydney Water for the disposal of waste, is directly connected to us, and would be part of a supply chain to a retail supplier. This would trigger clause 1.2 of Schedule 5 of the Supplementary Draft Determination and we would be obliged to charge the private waste facility a wholesale price. This would be administratively complex, due to the number of independent parties involved in the supply chain.

We understand it is IPART's intention to only include tankering arrangements if they are used by a wholesale customer as a direct alternative to a physical connection to a wholesale provider's infrastructure. We agree with IPART that this situation would constitute a supply chain, and should be included in this determination.

We note that adding the private waste facility to this supply chain would also result in a largely identical service being on-sold. However, our preference remains to exclude tankering scenarios including private waste facilities from this first wholesale determination, for simplicity and ease of administration. If this becomes an issue over the course of the first wholesale price determination, IPART may choose to adopt a different approach in future.

Proposed amendments to definition of wholesale customers

We suggest that an additional clause be added to clause 1.2 of Schedule 5 of the Supplementary Draft Determination as follows:

1.2(d): A supply chain under paragraph (a) or (c) does not include a tanker transport company which does not supply the relevant service, in the case of a sewerage or trade waste service, under a contract with Sydney Water for the disposal of waste.

This change results in the private waste facility no longer satisfying clause 1.2(a)(1).

7.4 CPI Factor

There is an error in the definition of CPI Factor in Schedule 5 of the Supplementary Draft Determination. As the prices are already in \$2017–18, it should be CPI for the March quarter immediately preceding that Period, divided by CPI for the March quarter of 2017.

Proposed amendments to CPI Factor

We suggest the following amendment to Schedule 5 of the Supplementary Draft:

CPI Factor means for a Period, CPI for the March quarter immediately preceding that Period, divided by CPI for the March quarter of 2016 2017.

7.5 Worked examples

To ensure we have correctly interpreted the Supplementary Draft Determination, we have provided examples in Appendix B using the list of current WIC Act schemes in the Supplementary Draft Report. This is to highlight what charges we would levy if those schemes began post 1 July 2017 and is for illustrative purposes only (noting existing schemes are excluded from the determination). If we have misinterpreted the Supplementary Draft Determination, we would be pleased to work with IPART to ensure the Final Determination reflects IPART's decisions.

Appendix A Bill/shareholder impact modelling

Background and context

IPART's supplementary draft wholesale prices are likely to result in an under-recovery of the total cost required by Sydney Water to provide water and wastewater services to the community, at least in the short-term. IPART have stated that these additional costs would either be levied on Sydney Water's wider customer base through an increase in customer bills, or result in a reduced dividend to the NSW Government¹⁵. IPART has not analysed the likely size of the additional costs/subsidy.

Sydney Water has developed a model to estimate the potential impact on our customers' bills. We have modelled three potential future scenarios, each assuming different market uptake by wholesale WIC Act licensees in combination with a resulting level of savings end-use customers might expect from increased dynamic efficiencies in these markets.

For this, we have defined the market as being the two components that IPART has adopted in system-wide prices – ie reticulation and retail services. Our base case assumes that IPART adopts a wholesale pricing approach using an EEC cost minus.

The bill impact for each of the three scenarios is the difference between IPART setting retail minus EEC prices compared to the system wide REC prices in the Supplementary Draft Determination.

Key findings

We have examined the impact of the prices in IPART's Supplementary Draft Determination for each of the three WIC Act licensee market uptake scenarios.

Under IPART's proposed retail minus REC prices, the present value of dynamic efficiencies which must be delivered to end-users to make society no worse off relative to retail minus EEC prices are as much as \$65 million, depending on the rate and volume of market uptake by WIC Act licensees. This is equivalent to a 50 per cent increase in the catch-up and ongoing efficiency rates applied in recent retail price determinations ¹⁶.

Table 2 - Dynamic efficiency required to balance the subsidy by scenario (PV\$M)

Dynamic Efficiency required to balance the subsidy (PV\$M)	Under REC
Static	\$65
Modest	\$35
High	\$0*

^{*}As the High scenario assumes maximum market share for WIC Act Licensees from the outset, all WIC Act licensees would also pay EEC prices from the outset (see Scenario

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¹⁵ Supplementary Draft Report, page 56

¹⁶ Recent combined catch-up and ongoing efficiency rates applied to Sydney Water's cost to serve have been roughly 1% per annum. Dynamic efficiency would need to achieve up to 1.5% per annum incremental efficiency in the delivery of retail and new reticulation services to make society no worse off under retail minus REC relative to retail minus EEC under the three scenarios forecast

assumptions section). Therefore, no additional dynamic efficiency is required as the subsidy is zero in this scenario.

Scenario assumptions

- We forecast changes in market share and the efficiency of Sydney Water based on analysis of how these have changed since the introduction of the WIC Act.
- Present values have been calculated over 50 years.
- The discount rate is the real post tax WACC of 5.9%.
- Increases in efficiency which might result from an increase in market share by WIC Act licensees have been developed using the Mini-Delphi forecasting method. They consider what might be reasonable, relative to the historical increases in efficiency IPART has required of Sydney Water in recent retail price determinations.
- The EEC annual revenue requirement (bill impact) has been calculated using a similar methodology to that used by IPART to determine the REC revenue requirement (the minus) but using Sydney Water's costs.
- The model uses EEC and REC annual revenue allowances to deliver retail and reticulation services proportional to the typical 2,000 dwelling infill and 10,000 dwelling greenfield wholesale scenarios presented in IPART's draft determination. The modelling also assumes wholesale customers continue to adopt a price parity policy.
- Table 3 provides the assumptions used for each scenario and comments on how and why these assumptions were chosen.

Table 3 - Scenario assumptions

Assumption	Base case	Static scenario	Modest scenario	High scenario	Comments
WIC Act market share – what proportion of new dwellings will be serviced by WIC Act licensees each year	Static proportion of 1.9% each year in the future (this is still an increasing number of dwellings served but at roughly half the proportion of new dwellings they serviced in 2016) For comparison, this scenario assumes all services are delivered at EEC. This means that the WIC Act market share has no bill or shareholder impact.	Static proportion of 3.8% each year (that is, increasing number of dwellings served but no change in the proportion of the new dwellings served since 2016)	Increasing proportion, 2% higher each year.	Static proportion of 37% (theoretical maximum) from the outset.	All assumed future WIC Act market shares are reasonable scenarios given the increases seen in previous years. The base case assumes that half of the current market share is purely driven by the potential for nonres pricing arbitrage so assumes the WIC Act market share would halve in the first year if this was removed. The high scenario assumes the WIC Act market share moves to the maximum possible in the first year. This is a very high increase in share relative to previous years however has been chosen to illustrate the maximum impact possible.
Ultimate WIC Act market	1.9%	3.8%	37%	37%	37% represents the theoretical
share – what is the highest proportion of new dwellings serviced by WIC Act licensees in any year	This scenario assumes no change in the proportion of new dwellings serviced by WIC Act Licensees in each year.	This scenario assumes there will only be a single step change in the proportion of new dwellings serviced by WIC Act Licensees (in the first year, with no further change in any year after that).			maximum WIC Act market share for new dwellings. It has been calculated as the proportion of growth which is either Greenfield or Urban renewal over the next 30 years. As the remaining infill growth is likely to occur in small pockets we have assumed it would be unlikely to be serviced by WIC Act licensees.

Assumption	Base case	Static scenario	Modest scenario	High scenario	Comments
Number of years taken to transition from REC to EEC – relative to the year the WIC Act market reaches the theoretical maximum market share.	All cost to serve and consequential revenue allowances are EEC from the outset.	N/A WIC Act Licensees in this scenario are never transitioned to EEC as the WIC Act market share is static and well below the theoretical maximum.	10 years before the WIC Act market share reaches the theoretical maximum	As this scenario assumes the theoretical maximum share from the outset, EEC costs are also assumed from the outset.	We have assumed a linear rate of transition.
Underlying increase in market efficiency – annual % reduction in revenue requirement to deliver retail services to all customers	1%	1%	1%	1%	Consistent with IPART's recent retail pricing determinations of combined catch-up and ongoing efficiency used by IPART/consultants in expenditure review.
and reticulation services to new customers					This increase in efficiency has been applied to the retail component of the EEC cost to serve all customers (as this cost is largely homogenous across Sydney Water's customer base so any efficiency in the delivery of retail services to new customers would mean that the average existing customer cost to serve also decreased).

Assumption	Base case	Static scenario	Modest scenario	High scenario	Comments
Additional efficiency directly attributable to increased market share by WIC Act Licensees – additional annual % reduction in revenue requirement to deliver retail services to all customers and reticulation services to new customers (since 2009).	0%	0.25% That is, 25% higher total incremental efficiency each year than the base case	0.5% That is, 50% higher total incremental efficiency each year than the base case	0.75% That is, 75% higher total incremental efficiency each year than the base case	Developed using the Mini-Delphi forecasting method. This increase in efficiency has been applied to the retail component of the EEC cost to serve all customers (as this cost is largely homogenous across Sydney Water's customer base, so any efficiency in delivery of retail services to new customers would mean that the average existing customer cost to serve also decreased).
Cumulative efficiency ceiling – the total decrease in nominal revenue requirement possible to deliver retail services to all	30%	30%	30%	30%	Developed using Mini-Delphi forecasting method. Presumably increases in efficiency cannot occur forever as services cannot be delivered for free.
customers and reticulation services to new customers relative to the EEC cost now.					As Sydney Water has been regulated for many years, and a large portion of cost to serve components are outsourced by competitive tender, it is likely that these costs are already approaching those of a 'frontier firm'.

Appendix B Worked examples of wholesale pricing scenarios

Table 4 provides examples of the charges we would levy the current WIC Act schemes, as listed in the Appendix B of the Supplementary Draft Report. This is for illustrative purposes only, and we understand that some of these schemes will be excluded from the determination.

Table 4 - Worked examples of wholesale pricing scenarios

Scheme name	Proposed services received from Sydney Water	End-use services supplied by Licensed retailed	Proposed charges levied by Sydney Water under Supplementary Draft Determination	Other agreements with WIC Act licensee and charges to be levied
Barangaroo South infill housing / commercial development	 Drinking water supply through recycled water system Sewerage service Sewer mining Disposal of excess recycled water Disposal treatment plant waste 	Recycled water supplySewerage services	 On-selling sewerage services only* 	 Trade Waste Agreement ** Sewer Mining Agreement***
Bingara Gorge greenfield housing development	 Drinking water supply through recycled water system 	Recycled water supplySewerage services	 No wholesale charges* 	N/A
Bligh Street sewer mining scheme	 Drinking water supply through recycled water system Sewer mining Disposal treatment plant waste 	 Recycled water supply 	No wholesale charges*	 Trade Waste Agreement ** Sewer Mining Agreement***
Box Hill North greenfield housing development	 Drinking water supply through recycled water system 	Recycled water supplySewerage services	 No wholesale charges* 	N/A

Scheme name	Proposed services received from Sydney Water	End-use services supplied by Licensed retailed	Proposed charges levied by Sydney Water under Supplementary Draft Determination	Other agreements with WIC Act licensee and charges to be levied
Central Park infill housing / commercial development	 Drinking water Drinking water supply through recycled water system Disposal of excess recycled water Sewerage service Sewer mining Disposal treatment plant waste 	 Drinking water supply Recycled water supply Sewerage services 	 On-selling water services On-selling wastewater services Drinking water top-up services 	 Trade Waste Agreement ** Sewer Mining Agreement***
Darling Walk sewer mining scheme	 Drinking water supply through recycled water system Sewer mining Disposal treatment plant waste 	 Recycled water supply 	No wholesale charges*	 Trade Waste Agreement ** Sewer Mining Agreement***
Discovery Point infill housing / commercial development	 Drinking water Drinking water supply through recycled water system Sewerage service Disposal of excess recycled water Disposal treatment plant waste 	 Drinking water supply Recycled water supply Sewerage services 	 On-selling water services On-selling wastewater services Drinking water top-up services 	 Trade Waste Agreement ** Sewer Mining Agreement***
Green Square infill housing / commercial development	 Drinking water supply through recycled water system Disposal of treatment plant waste 	 Recycled water supply 	No wholesale charges*	 Trade Waste Agreement ** Sewer Mining Agreement***

Scheme name	Proposed services received from Sydney Water	End-use services supplied by Licensed retailed	Proposed charges levied by Sydney Water under Supplementary Draft Determination	Other agreements with WIC Act licensee and charges to be levied
Pitt Town greenfield housing development	 Drinking water top-up of recycled water system 	Recycled water supplySewerage services	No wholesale charges*	N/A

Notes

- * Drinking water top-up service charges will not be levied as there is no direct connection with the wholesale customer. We will levy usual drinking water charges to the property owner.
- ** The Trade Waste Agreement is with the WIC Act licensee (not the property owner) we levy all trade waste charges, including for establishing, administering, renewing or varying the agreement, conducting inspections, and processing. It would be our intention to continue to have this agreement in place with the WIC Act licensee, although noting pollutant charges would be recovered through the retail component of retail minus pricing.
- *** We levy all charges established under the Sewer Mining Agreement. As noted in section 5.2 this is something we would not able to recover under the draft decisions in the Supplementary Draft Report.

