

# Competition and wholesale pricing in urban water – the NSW Story

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## Slide 1

This presentation covers two key topics:

- ▼ The first is competition in the urban water market in NSW, including an overview of the *Water Industry Competition Act 2006*, or WICA as it's commonly known, and what competition and new entry has occurred to date; and
- ▼ The second is our wholesale pricing review for Sydney Water and Hunter Water, which will ultimately determine what prices these incumbent utilities can charge for services provided to their competitors, or potential competitors.

## Slide 2 - Competition

Competition is important because it can lead to better outcomes for consumers and the economy as a whole.

However, the objective of competition policy/reforms is NOT competition for competition's sake, but the outcomes it can generate.

In a competitive market, firms strive to outperform each other in maximising profits - through minimising costs and maximising revenue.

In turn, this drives efficiency, innovation, lower prices, better service, and more choices for consumers.

The urban water market in NSW is dominated by incumbent monopolies, which are largely vertically integrated:

- ▼ Sydney Water services the Sydney and Illawarra regions, and sources its bulk water from WaterNSW (formerly the Sydney Catchment Authority) and, to a lesser extent, the Sydney Desalination Plant. It then provides water and wastewater treatment, distribution and retail services.
- ▼ Hunter Water services the Lower Hunter region in NSW and provides integrated bulk water, treatment, distribution and retail services; and integrated wastewater distribution, treatment and retail services.
- ▼ The Central Coast Council, services the areas of Gosford and Wyong, and also provides bulk water, treatment, distribution and retail services, and integrated wastewater services.

There is, however, extensive competitive procurement by the incumbents – for example, Hunter Water has recently engaged in large scale operating and maintenance contracts for its treatment plants; and Sydney Water has a Build Own, Operate, Transfer (BOOT) contract with a private firm for the Prospect Water Filtration Plant, the largest plant in Sydney.

Over recent years, there has been some innovation and development of alternative water sources and servicing solutions. This includes the Sydney Desalination Plant, and a number of recycled water and decentralised schemes – including from providers other than the incumbent monopolies. This appears to be in response to water scarcity during the drought, environmental regulations, and the introduction of WICA, which will be the focus of the rest of this presentation.

WICA came into force in 2008 and includes a:

- ▼ licensing regime and
- ▼ a third party negotiate/arbitrate access regime for water and wastewater monopoly infrastructure.

WICA is aimed at encouraging competition, innovation and new investment in the water market.

IPART's main roles under WICA include:

- ▼ assessing licence applications, and making recommendations to the Minister for Primary Industries, Lands and Water, who is responsible for granting these licences
- ▼ monitoring and enforcing compliance of WICA licensees with their licence conditions; and
- ▼ assessing coverage declarations under the access regime, and acting as an arbitrator in the case of any access disputes.

### Slide 3 – WICA schemes

The licensing framework under WICA includes:

- ▼ Network operator's licences – are required to construct, maintain and operate water industry infrastructure; and
- ▼ Retail supplier's licences – are required to supply water or provide sewerage services.

There are currently 20 network operator's licences and 9 retail supplier's licences in force under WICA, covering 19 schemes. There are more network operator's licences because some retail licences cover a number of schemes, whereas the network operator licences are scheme specific.

The WICA schemes that exist now generally fall into one of four categories:

- ▼ First, there are greenfield developments – where WICA licensees construct a network and a recycled water treatment plant to provide sewerage and recycled water services to new developments, often on the fringe, or outside of Sydney Water or Hunter Water’s network area.
  - One example of this is the Bingara Gorge development South West of Sydney. Here, Veolia holds a WICA licence to provide sewerage services and supply recycled water. Sydney Water still supplies the development with drinking water, and also provides Veolia with drinking water to top up the recycled water system.
  - At other greenfield developments, the WICA licensee will also provide drinking water, although this is often sourced from Sydney Water or Hunter Water. For example, at the Huntlee development in the Hunter Valley, shown in this picture, Flow Systems is providing drinking water to customers, as well as sewerage services and recycled water. Flow Systems purchases this drinking water off Hunter Water.
  - Other than the desalination plant, which I’ll come to later, we have only had one licence applicant proposing to source their own drinking water. We are currently assessing an application which includes the applicant operating its own dam for drinking water supply at the Narara Eco Village, on the Central Coast.
- ▼ Second, there are infill developments – where WICA licensees construct a small network, and a recycled water treatment plant to provide sewerage and recycled water services to the often high rise development site. The licensee may also provide drinking water services using water purchased from Sydney Water or Hunter Water.

- To date, we have only seen these types of schemes in Sydney. Two examples are shown in the pictures – Barangaroo and Central Park. Both of which are in the Sydney CBD.
  - At Barangaroo, the WICA licensee can provide sewerage services and supply recycled water.
  - At Central Park, the WICA licensee also provides drinking water services.
- ▼ Third, there are sewer-mining schemes – where WICA licensees simply provide recycled water to customers.
    - One example of this is Workplace 6 in Pyrmont, where the WICA licensee has a sewer mine that takes sewage from Sydney Water’s sewer and provides recycled water to a commercial building.
- ▼ Finally, there is one bulk water supplier – the Sydney Desalination Plant, located at Kurnell. The desal plant provides drinking water to Sydney Water. The Sydney Desalination Plant required a WICA licence after it was sold by Sydney Water.

As at the end of June 2015 (as that is the latest official data we have from WICA licensees), in the Sydney Water area, WICA licensees were providing services to around 2,400 customers, compared to Sydney Water’s 1.8 million or so customers – as shown in this graph.

In Hunter Water’s area, WICA licensees were not yet providing any services to customers in June 2015, however we do understand around 50 customers have connected since then.

It is hard to tell the ultimate number of customers that will be serviced by WICA licensees, as they do not report projected customer connections to us. However, we estimate that based on the current licence holders, there would be less than 30,000 customers total across the state, which is still substantially smaller than Sydney Water and Hunter Water's combined customer base of over 2 million.

#### Slide 4 - Access regime

As I mentioned before, WICA also includes an access regime. The access regime covers areas currently serviced by Sydney Water and Hunter Water, for both drinking water infrastructure and sewerage infrastructure. A new entrant can apply for access to 'infrastructure services' covered by an incumbent's voluntary 'access undertaking', or for access to infrastructure services subject to a coverage declaration.

"Infrastructure services" that are open to access under the WICA regime are limited to those for the storage, conveyance or reticulation of water or sewage, and exclude treatment plants and dams. As shown in the diagram, access is therefore mostly limited to Sydney Water and Hunter Water's distribution networks.

The goal of an access regime is to allow for competition in the markets upstream and downstream of the monopoly components of the supply chain. For example, a competitor could come in and supply its own source of water, by building a desalination plant for example, then use access to the incumbent utility's network infrastructure to transport water to end use customers, to compete in the provision of drinking water services.

Currently, the Bondi, Malabar and Northhead wastewater reticulation networks are subject to a coverage declaration – which means that new entrants can negotiate with Sydney Water to obtain access to these networks for the purpose of competing in upstream and downstream wastewater service markets. That is, subject to agreeing to terms and conditions with Sydney Water (or having an access dispute arbitrated), a new entrant could gain access to Sydney Water's wastewater reticulation networks for the purpose of providing wastewater retail, treatment and disposal services to end use customers.

New entrants can apply for other infrastructure to be subject to coverage declarations – that is, to be ‘declared’. To be declared, the infrastructure must meet the declaration criteria, which include:

- ▼ That the infrastructure is of state significance
- ▼ That it would not be economically feasible to duplicate the infrastructure
- ▼ That access is necessary to promote competition in an upstream or downstream market; and
- ▼ That access would not be contrary to the public interest.

As yet, there have been no third party access seekers under WICA.

Rather than using the access regime, WICA licensees are instead buying a bundled service off Sydney Water or Hunter Water. By bundled services, I mean services in addition to the transportation or reticulation services that are covered by WICA's access regime.

#### Slide 5 – wholesale services

A number of WICA licensees purchase bundled services from Sydney Water or Hunter Water and then use these to provide water or sewerage services to their own customers.

For example, they purchase water at the point of connection to the network, which is effectively a bundled bulk water treatment and reticulation service.

In these cases, we consider that Sydney Water and Hunter Water are providing wholesale services.

There are a number of different wholesale supply scenarios currently occurring, which I'll step through.

It's important to note, that these wholesale services are often provided under a private utility services agreement between the two parties, and IPART does not know the details of exactly what wholesale services are being provided or the price being charged.

The following slides are what we currently understand the supply scenarios to be.

#### Slide 6 - wholesale drinking water

All licensees that currently supply drinking water to customers, purchase this water from Sydney Water or Hunter Water. Examples of this are the schemes at Central Park and Huntlee.

In this scenario the WICA licensee purchases the bundled service of bulk water, treatment and some transport from Sydney Water or Hunter Water and supplies drinking water to its own retail customers. The WICA licensee maybe also provide some transport of the drinking water, such as at Huntlee, where there will be an entire drinking water network including storage reservoirs.

#### Slide 7 - wholesale sewerage

At some schemes, the WICA licensee may also purchase a wholesale sewerage service off Sydney Water or Hunter Water.



In this scenario the WICA licensee transfers untreated sewage into the incumbent's network. They are therefore purchasing a bundled service of sewage reticulation, treatment and disposal.

To date, such arrangements have only been temporary, so that the WICA licensee can provide sewerage services, while they are constructing their recycled water treatment plant.

One example of this is the temporary arrangements at Central Park, where sewage is being discharged directly into Sydney Water's network while the recycled water plant is under construction.

#### Slide 8 - wholesale recycled water - drinking water top up

The wholesale services related to recycled water schemes are a bit more complicated.

The first is drinking water top up. In these scenarios the WICA licensee purchases drinking water from Sydney Water or Hunter Water to top up their recycled water system when demand is greater than supply. This is common across most recycled water schemes such as Central Park, Huntlee and Barangaroo.

So while the WICA licensee is purchasing a wholesale drinking water service, it is using this to provide a recycled water service to its customers.

#### Slide 9 - wholesale recycled water - trade waste

In some recycled water schemes, the WICA licensee may also use Sydney Water or Hunter Water sewerage system to dispose of waste from the recycled water treatment plant, or excess recycled water. We understand that this is often done under a trade waste agreement, and is more common in infill developments where the sewerage system is more accessible, such as at Central Park and Barangaroo.

In these scenarios, the WICA licensee is purchasing a wholesale trade waste service, but providing its customers with a sewerage service and recycled water service.

#### Slide 10 – wholesale pricing

IPART has to regulate prices for wholesale services. This is because we have a standing reference to conduct investigations and determine prices for Sydney Water and Hunter Water's declared monopoly services. These monopoly services include water supply, sewerage services and trade waste services, regardless of whether these are retail or wholesale services.

We also consider there is an in-principle need for us to regulate Sydney Water's and Hunter Water's wholesale prices to protect wholesale customers from potential abuses of the incumbents' monopoly power.

We are therefore currently reviewing the prices Sydney Water and Hunter Water can charge for these 'wholesale services'.

We initially intended to review these prices as part of the recent retail price reviews but decided to conduct a separate review for three main reasons:

- ▼ First, wholesale pricing is a new area of price regulation for IPART and the water industry. It is also a complex area that has potential implications for the wider NSW urban water market. Extending the review gives us more time to consult with stakeholders and develop the best wholesale pricing approach. In particular, we consider stakeholders need time to assess the implications of any pricing proposals on their businesses.

- ▼ Second, a separate review and determination will help us ensure that our pricing approach for wholesale services is consistent for Sydney Water and Hunter Water. This will provide wholesale customers with greater certainty on the approach, and may better facilitate state-wide expansion of activities.
- ▼ Third, a separate review and determination will allow us to set an appropriate determination period for wholesale prices, rather than necessarily linking it to the retail price determination period. This will allow the determination period to better reflect wholesale providers' and customers' needs.

We released a Discussion Paper in April this year and submissions closed at the end of May. We are currently considering the submissions and preparing a draft report and determination.

Our objective in determining wholesale prices is to create a level playing field, so that new entry to the water and sewerage services markets occurs where it is efficient.

Specifically, it is important to get wholesale prices right, otherwise prices may:

- ▼ encourage inefficient entry if the price is too low, or
- ▼ discourage efficient entry if the price is too high.

To achieve this objective in the current policy and operating environment, we need to set prices that allow:

- ▼ the wholesale service providers (the incumbent utilities) and wholesale customers (new entrants) to compete on a level playing field, and
- ▼ new entrants to compete with each other on a level playing field.

Such prices should allow new entrants to enter the contestable parts of the market where it is efficient for them to do so. That is, where they can compete by supplying contestable services at lower cost and/or by enhancing value to customers through the services they provide.

Over time, increasing competition should encourage greater efficiency in the supply of water and sewerage services, thus reducing costs and enhancing services for the benefit of consumers.

#### Slide 11 - postage stamp pricing

One of the key challenges to determining the 'right' wholesale price, is finding a pricing approach that creates a level playing field in the context of postage stamp pricing for retail services, which Sydney Water and Hunter Water are subject to.

The retail postage stamp price reflects the average cost of servicing an entire area - for example, Sydney Water's area of operations. Within this large area, each individual areas will have a different site specific costs of service.

This is shown in the diagram, where the green bars are the real cost of servicing an individual area, and the red line is the average cost, which is the retail postage stamp price that Sydney Water and Hunter Water must charge all customers.

This means that low cost areas provide a contribution to the postage stamp price, above their cost of service, and high cost areas receive a subsidy from the postage stamp price, so they pay less than their true cost of service.

For low cost areas, this creates an uneven playing field where a new entrant can enter the market with a higher cost of service than the incumbent utility, shown by the blue bar, but could still charge a lower price because it does not have to pay the cross-subsidy to postage stamp pricing.

For high cost areas, the reverse is true, where the incumbent can charge a lower price than its true cost of service due to the cross subsidy it receives from the postage stamp price. This means a new entrant could be more efficient at providing services than the incumbent, but may not be able to compete.

For this reason, a scheme specific cost of service approach to wholesale pricing would not create a level playing field, because new entrants could cherry pick low cost areas and be disadvantaged in high cost areas.

We have explored a number of alternative pricing approaches, including retail-minus.

In our Discussion Paper we also proposed that wholesale customers be free to negotiate unregulated pricing agreements with the incumbent utilities if both parties so choose. Regulated prices would apply unless an unregulated pricing agreement has been agreed between the parties.

#### Slide 12 - Retail minus pricing

IPART has not yet made any decisions on its preferred pricing approach. However, in the Discussion Paper, we considered that a retail minus approach was the only viable wholesale pricing approach that could create a level playing field, while postage stamp pricing applies to Sydney Water and Hunter Water.

Retail-minus is based on the total end user retail charges (as determined by IPART) minus the costs of the contestable services.

The contestable services are those services the wholesale customer is providing (or seeking to provide) to retail customers 'downstream' of the wholesale services it has purchased from the incumbent utility. That is, the service between the wholesale connection point and the end user (retail) customers, as shown in this diagram.

A retail minus pricing approach ensures that any cross subsidies, both positive and negative, from the retail postage stamp price are included in the wholesale price, thus levelling the playing field between incumbent utilities and new entrants.

The effectiveness of a retail-minus approach in creating a level playing field depends on how the 'minus' component is calculated.

We are looking at different ways to calculate this.

We started by looking at the avoidable cost approach used by the ACCC in its determination on prices Sydney Water could charge Services Sydney for access to its distribution network. Under this approach, avoidable costs are those Sydney Water and Hunter Water may avoid in the present and future, or could have avoided in the past if the entry of a wholesale customer was expected.

We are also looking at the pre-emptive application of an efficient competitor test, as used in anti-trust assessments in some jurisdictions. This would create a margin between the wholesale and retail prices that allows an efficient utility to enter the market and sustainably charge the postage stamp retail price, while providing a water and/or sewerage service of equal quality to the wholesale service provider's retail operations.

Under this approach, we are considering two main options for defining the efficient competitor benchmark:

- ▼ One is an 'as-efficient' competitor. This would reflect the total costs the incumbent would incur between the wholesale connection point and serving end users.<sup>1</sup> Prices calculated according to this method should be similar to retail-minus avoidable cost prices.

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<sup>1</sup> The underlying assets in this approach can be valued in a number of ways, including average regulatory asset base value, depreciated replacement cost value and modern engineering equivalent replacement asset value.

- ▼ The alternative is a ‘reasonably efficient’ competitor. This would reflect the total costs a reasonably efficient business would incur between the wholesale connection point and serving end users. This approach recognises that it may be unrealistic for a new entrant to achieve the scale economies of the incumbent utility immediately or to perfectly identify the vertically integrated incumbent’s costs for certain services.

In our Discussion Paper, we preferred the ‘reasonably efficient competitor’ benchmark, while the competitive market is developing.

This is because over time, competition should create an incentive for innovation that lowers costs and enhances services. Ultimately, we must weigh up these potential longer term dynamic efficiency gains against the shorter term productive efficiency gains that would come from an ‘as-efficient competitor’ or ‘avoidable costs’ approach.

Our proposed formula also included net facilitation costs. We considered that the wholesale customer receiving a wholesale service should pay for the net facilitation costs that service provision creates.

Facilitation costs are costs (positive) or cost savings (negative) to the wholesale service provider of servicing the wholesale customer that are:

- ▼ not reflected elsewhere in the retail-minus pricing formula, and
- ▼ additional to what the wholesale service provider would have otherwise incurred in the absence of servicing the wholesale customer.

For example:

- ▼ a positive facilitation cost may arise if a wholesale service provider needs to upgrade or extend its water network to provide water to a wholesale customer, or

- ▼ a negative facilitation cost may arise if a wholesale customer produces recycled water that allows the wholesale service provider to defer its next scheduled water supply augmentation.

We are currently considering what our preferred pricing approach will be for the draft report and determination.

If we do land on a retail minus pricing approach, there are a number of different ways to implement this. At one end of the spectrum, we would do a separate determination for every scheme to ensure that both the minus component and the net facilitation costs reflect the true costs of that scheme. This would ensure that prices better reflect the characteristics of each scheme, but may be costly to administer and may not provide sufficient certainty to the industry while the determination is being made.

An alternative approach would be to use a system-wide average or typical minus and net facilitation costs for all schemes.

The minus component would comprise a minimum standard percentage or value to be deducted from the retail price per type of wholesale service provided (water or sewerage). It could also extend to a schedule of percentages or values to reflect different wholesale customer models and locations.

This would reflect our best estimate of the costs that a reasonably efficient competitor would typically (or on average) incur in supplying water and/or sewerage services from the wholesale connection point to the end users.

Similarly, the net facilitation cost component would be an estimate of typical or average net facilitation costs (as a percentage of retail revenue or other value) or a schedule of average net facilitation costs (eg, for different types of locations and/or network component augmentations).



This option could be relatively simple (and lower cost) to administer and provide transparency and hence some certainty to all stakeholders. However, it would not account for scheme-specific characteristics or variations from the average. There are therefore stronger arguments for this approach where the nature and costs of contestable services (the services from the wholesale connection point to end users) do not vary significantly between schemes. One example of this could be retail services, such as billing and responding to customer queries. However, if the contestable services, and therefore the minus components, do in fact vary significantly across schemes, then applying a typical or average minus may undermine the whole principle of retail minus pricing in the first place.

We are currently investigating the cost drivers for different contestable services, and will consider whether standard prices can be used for any wholesale services, or whether scheme specific prices are needed.

Stakeholders generally supported a hybrid of standard and scheme specific prices, with standard prices being used for 'simple schemes' where the average costs are likely to be an accurate representation of the actual costs, and scheme specific prices for more complex schemes.

### Slide 13 - other issues

There are also a number of other issues that we are faced with in this wholesale pricing review. I will highlight a few of those today, and note that we are still working through these issues now, and IPART is yet to make any decisions.

### **Definition**

The first is the definition of a wholesale service. This definition is fundamental to our review, because it provides the policy rationale for who we are regulating and why we are regulating wholesale prices.

It also defines who the wholesale pricing determination will apply to and therefore who the retail pricing determinations do not apply to.

While most people consider the direct on-supply of water and sewerage services to be wholesale services, as shown in the first two example scenarios earlier, there are mixed stakeholder views on whether the services provided to recycled water schemes.

The question arises as to whether transformed services eg, drinking water top up of a recycled water service, should be considered a wholesale service. If they are a wholesale service, there is the added complication of how to price these, and whether or how a retail minus pricing approach would work.

Another issues raised by stakeholders is whether services provided to end use customers outside of Sydney Water or Hunter Water's area of operation should be considered wholesale services.

### **Interim prices**

Another issue is interim prices. These could be required if we decide to carry out scheme specific price determinations, because we will need to decide what prices Sydney Water and Hunter Water should charge wholesale customers before the scheme specific determination is made.

We could remain silent on wholesale prices in the interim, meaning some schemes will be regulated, where the customer is defined as a 'property' and hence, covered by the retail determination, and others would remain unregulated, as they are today.

Alternatively, we could determine an interim or default price. Options for this include a retail minus price using the average minus and facilitation costs or the prevailing IPART-determined retail non-residential prices.

We are investigating these further and will also consider whether any true up mechanism should be used to account for differences between an interim price and the final scheme-specific price.

### **Impact of pricing decision**

Another key issue is the potential impact of our wholesale pricing decision.

Stakeholders have raised concerns about the impact of the wholesale price on existing WICA schemes, and some stakeholders have also suggested grand-fathering existing prices to protect current schemes.

We will assess the impact of our pricing decisions on wholesale customers and, if necessary, will consider mitigation measures such as transitioning to any higher prices over a period of time.

We will also consider the potential impact of pricing decisions on Sydney Water and Hunter Water, and their customers.

There are a number of challenges in doing this, as we are not always privy to the prices that are being charged to WICA licensees now, and do not know the commercial arrangements of each scheme.

### **Links with public water utility licensing**

There are also a number of links between the wholesale pricing review and Sydney Water and Hunter Water's operating licences.

One key issue is the obligation to service:

Sydney Water and Hunter Water are currently only obliged to provide services on request to 'properties' connected to, or for which connection is available to, their networks.

'Property' refers to land or premises, rather than to water or sewerage infrastructure.

This means that Sydney Water and Hunter Water are only obliged to provide services to the owner of the relevant land or premises for which a connection has been requested.

Sydney Water and Hunter Water are currently not obliged to provide services to customers that do not meet the definition of 'property'. This means that in some cases, where a wholesale customer may own the water or sewerage infrastructure, but not the property, for which a connection is requested, Sydney Water and Hunter Water are not obliged to provide these services.

This issue is outside the scope of our price review, but we are currently carrying out the 5 year review of Hunter Water's operating licence. The review will determine if the existing licence is meeting its objectives and whether the licence can be amended to make it more effective. The new licence will start in July 2017.

We raised the question of obligation to service in the Issues Paper we released in May this year. We are accepting submissions to the Issues Paper until the end of July, and will consider whether any changes to the licence are needed.

#### Slide 14 - timeline

For the wholesale pricing review, we are currently working on our Draft Report and Determination and expect to release these at the end of August.

We will then hold a public hearing in September, and receive submissions in early October.

We aim to release the final report and determination in December.

# Competition and wholesale pricing in urban water

## The NSW story

Hugo Harmstorf

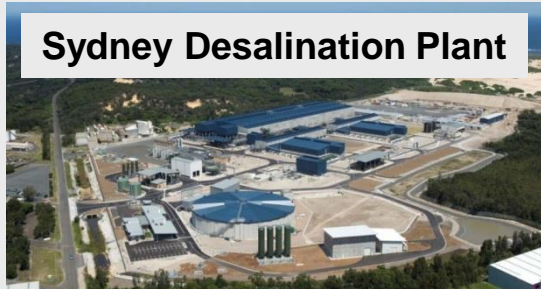
Chief Executive Officer, Independent Pricing and Regulatory Tribunal

8 July 2016

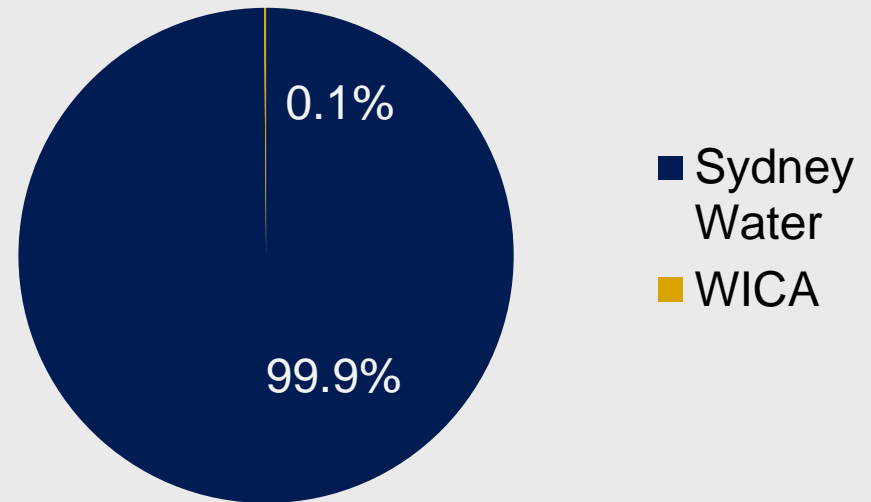
# Competition in urban water in NSW



# WICA schemes



## Sydney customer numbers 2014/15



# WICA access regime

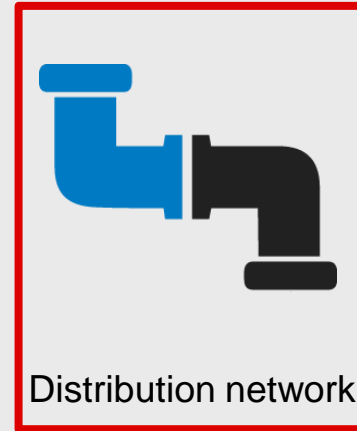
## Drinking water



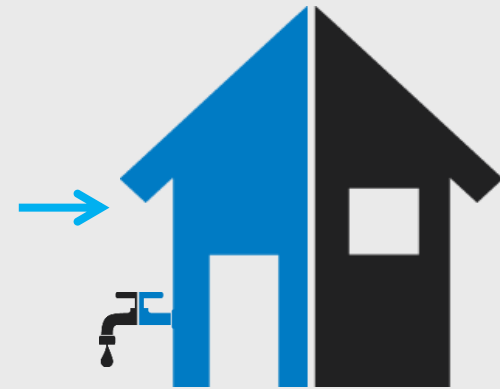
Bulk water



Water treatment



Distribution network



Retail

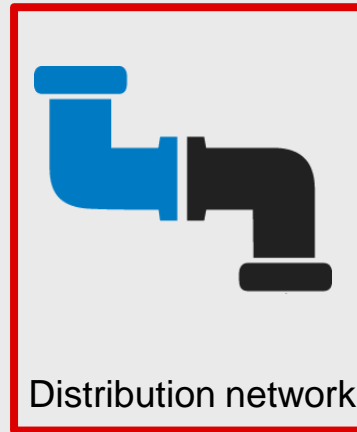
## Sewerage



Disposal



Sewage treatment



Distribution network



Retail

Access



# Wholesale services

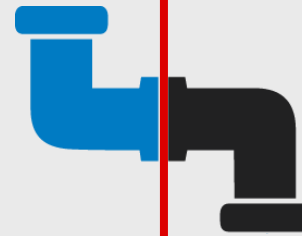
Water



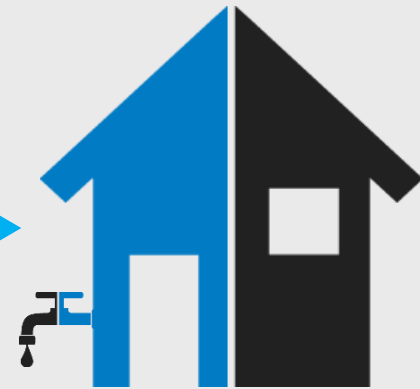
Bulk water



Water treatment



Distribution network



Retail

Sewerage

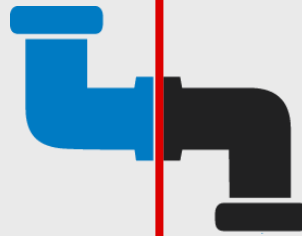
Wholesale service



Disposal



Sewage treatment



Distribution network



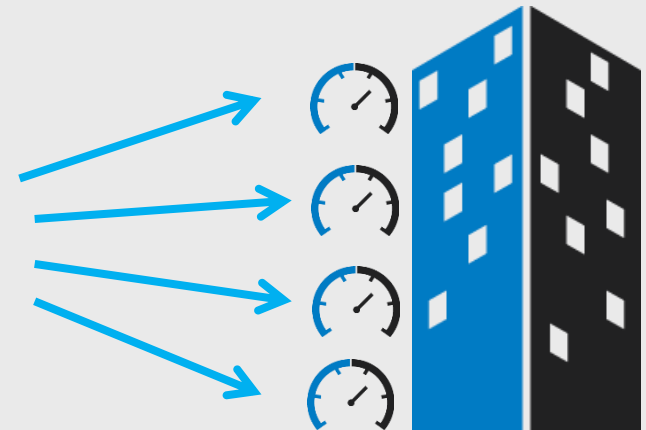
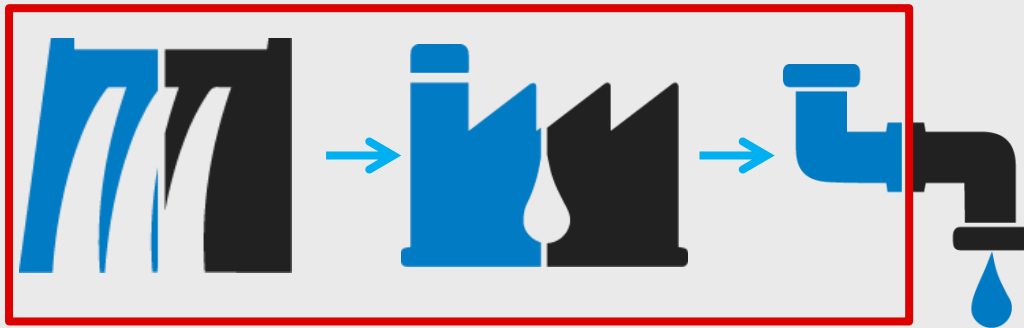
Retail

# Wholesale scenario – drinking water



Wholesale drinking water service

Drinking water supply

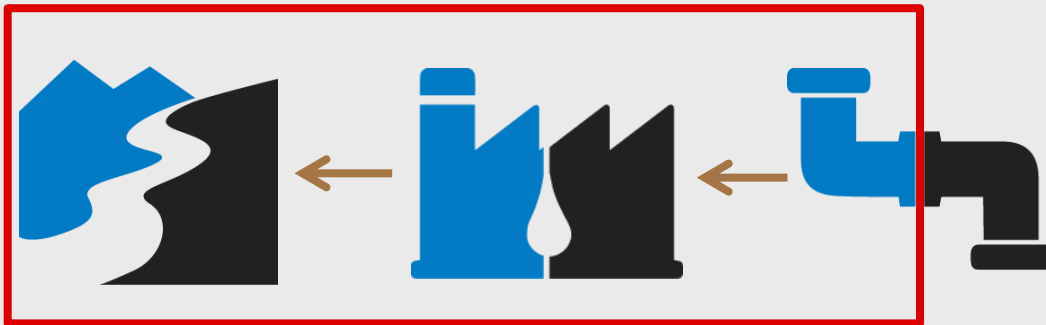


# Wholesale scenario – sewerage

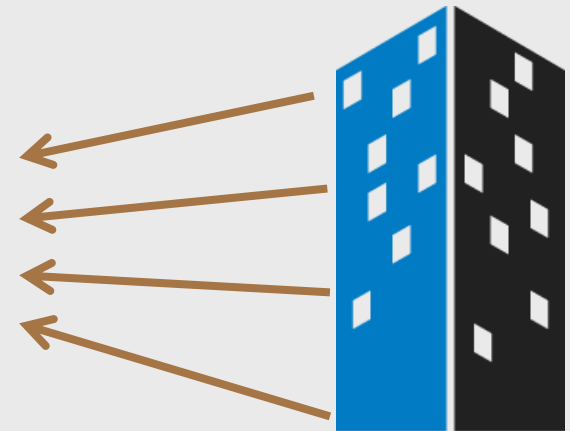
Central  
Park



Wholesale sewerage service



Sewerage service

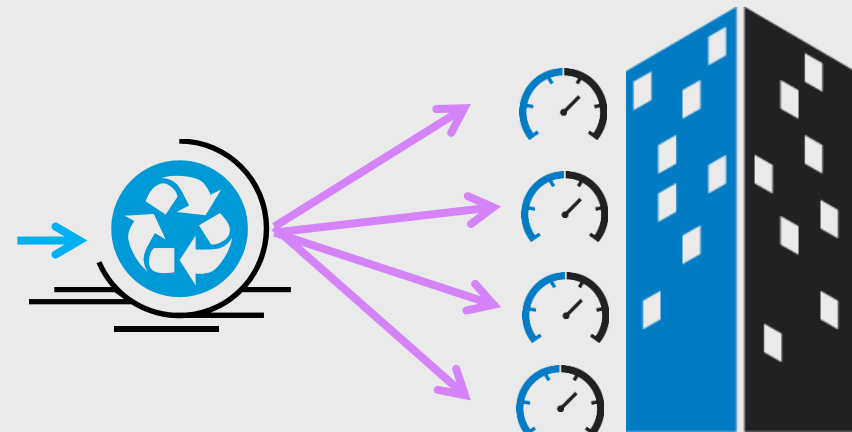
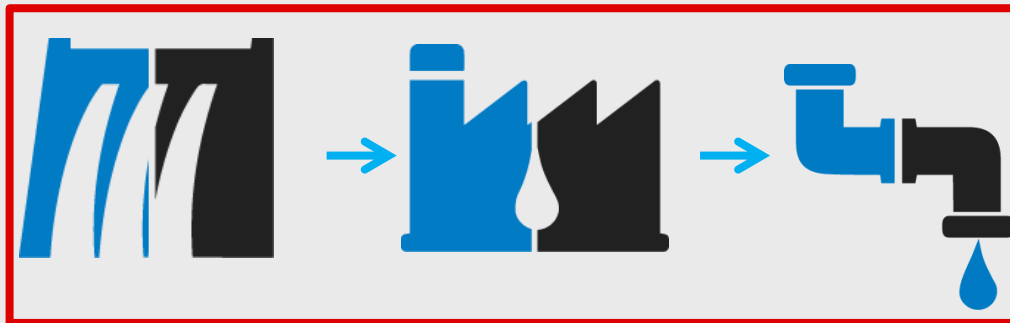


# Wholesale scenario – recycled water – drinking water top up



Wholesale drinking water service

Recycled water supply

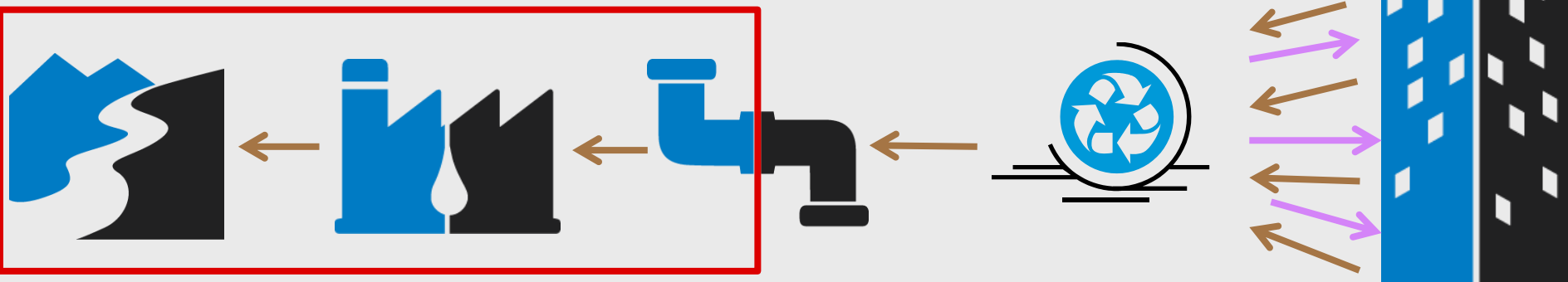


# Wholesale scenario – recycled water – trade waste discharge



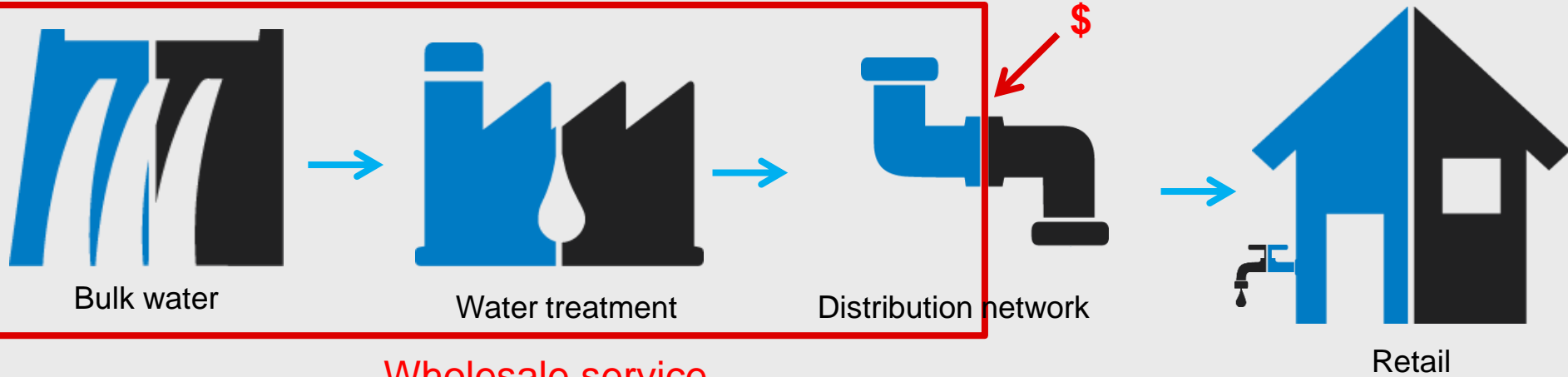
Wholesale trade waste service

Recycled water supply  
Sewerage service



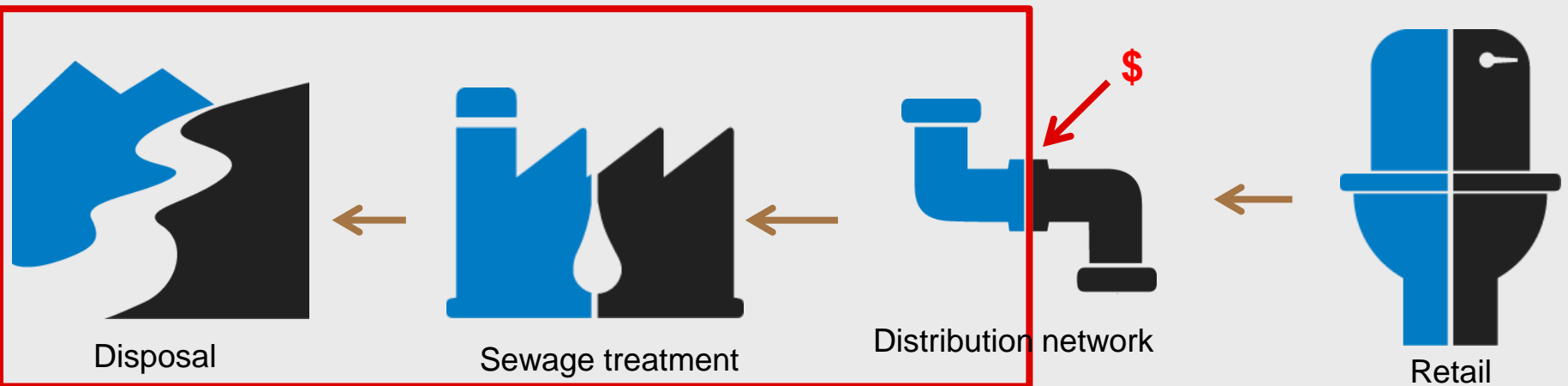
# Wholesale pricing

Water

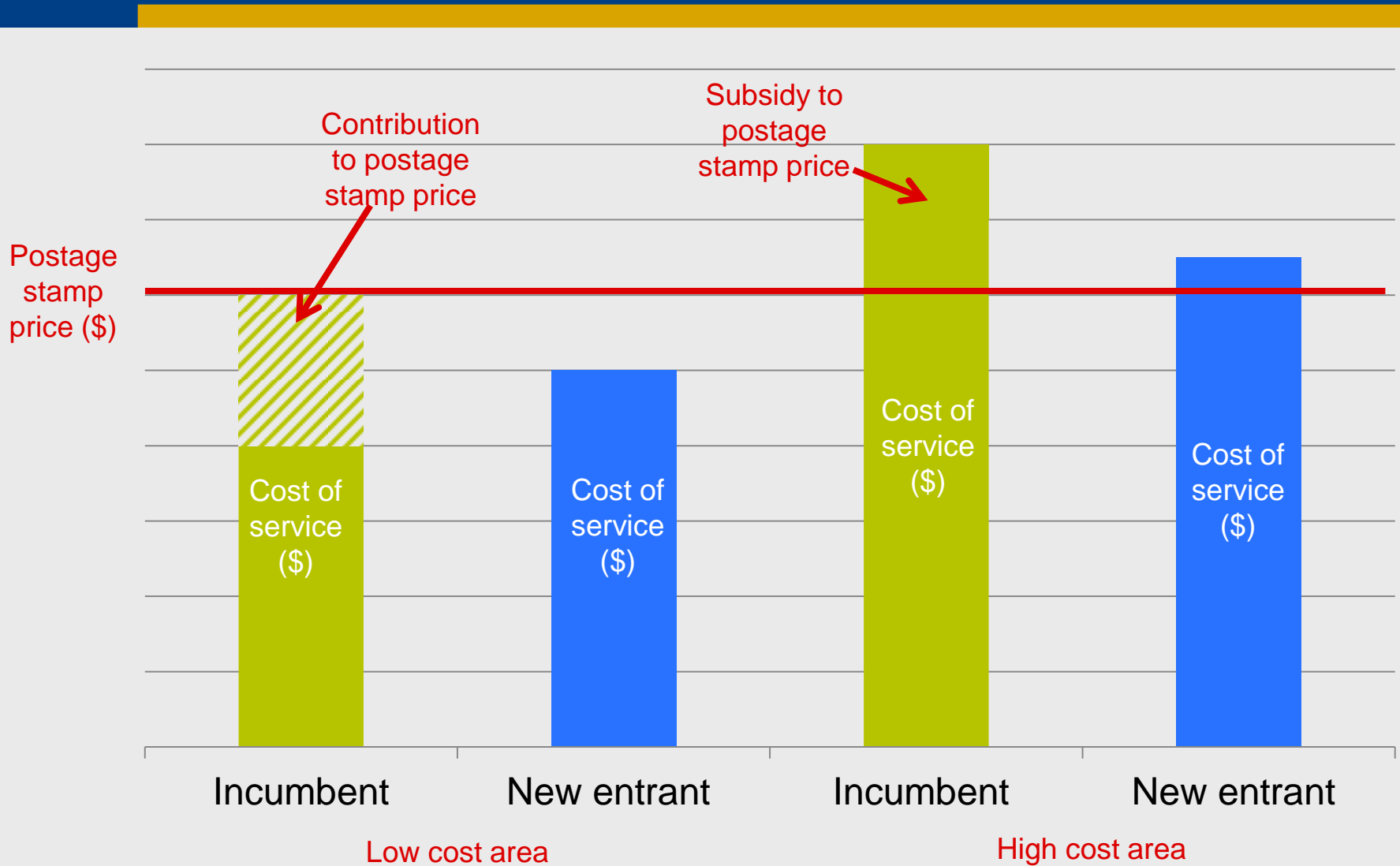


Sewerage

Wholesale service

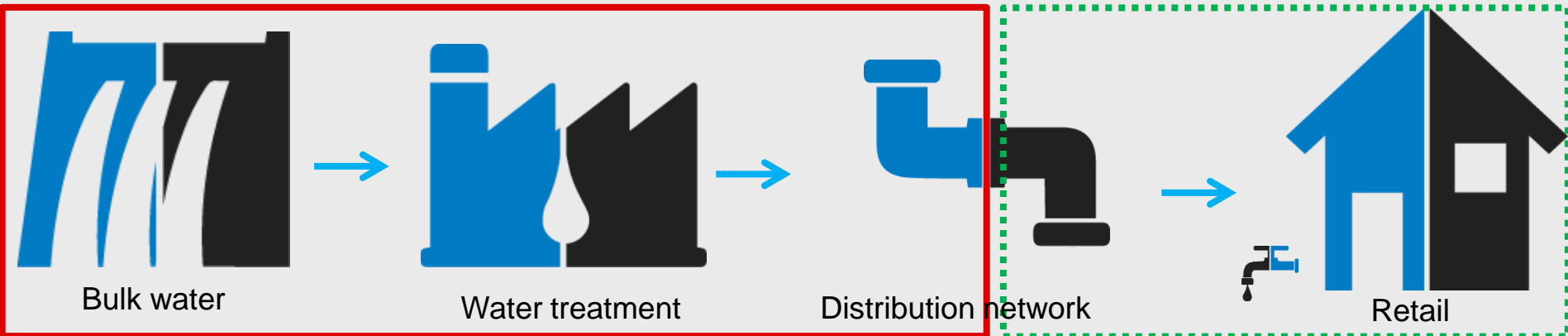


# Postage stamp pricing



# Retail minus pricing approach

Water



Wholesale service

Contestable services

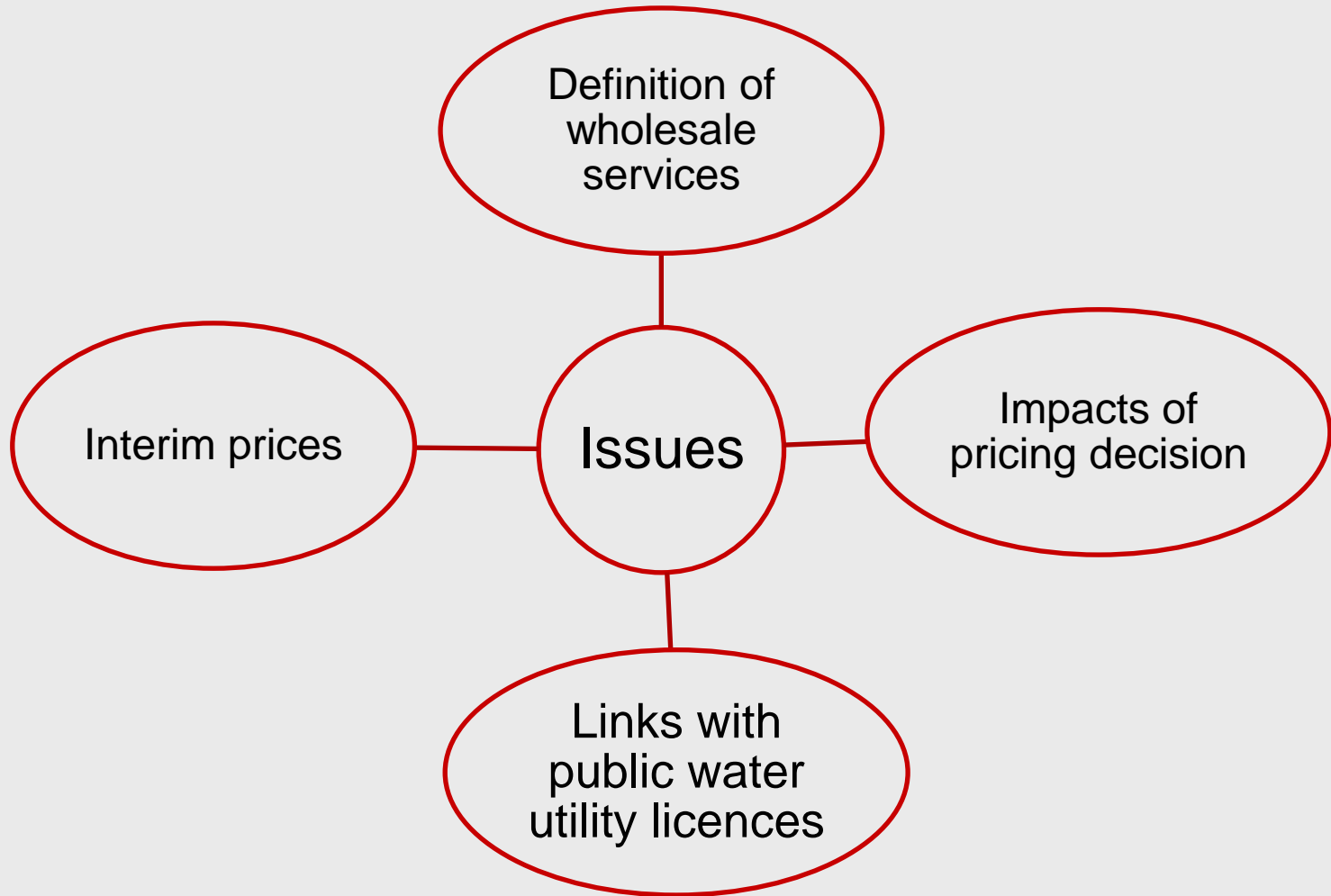
Retail price

Cost of contestable services

Wholesale price



# Wholesale pricing – other issues



# Wholesale pricing - timetable

What	When
Release Draft Report and Determination	End August 2016
Public hearing	Mid September 2016
Receive submissions	Early October
Release Final Report and Determination	December 2016

# Questions?

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Independent Pricing and Regulatory Tribunal

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