Independent Pricing and Regulatory Tribunal
New South Wales

Cost Allocation Guide

Water Industry Competition Act 2006

Draft

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The Independent Pricing and Regulatory Tribunal (IPART)

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Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

Submissions are due by 29 January 2018

We would prefer to receive them electronically via our online submission form <www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission>.

You can also send comments by mail to:

WIC Act Cost Allocation Guide
Independent Pricing and Regulatory Tribunal
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1 Introduction

The *Water Industry Competition Act 2006* (the WIC Act) came into operation on 8 August 2008.[1] The WIC Act provides for private sector participation and competition in the NSW water and wastewater industry.

A key aspect of the WIC Act (under Part 3) is the establishment of a state-based third party access regime for water industry infrastructure. This provides that an infrastructure service can be the subject of a coverage declaration (ie, 'declared'), provided that the infrastructure meets certain criteria,[2] and a coverage application has been received. A coverage declaration provides for third party access to the declared infrastructure, including the option of arbitration in the case terms of access cannot be negotiated.

1.1 Requirements for a cost allocation manual under the WIC Act

Section 42 of the WIC Act requires that, within three months after an infrastructure service becomes the subject of a coverage declaration, the service provider:[3]

- must keep separate accounts for its infrastructure services that are the subject of the declaration, and
- must submit a cost allocation manual to the Independent Pricing and Regulatory Tribunal (IPART) in relation to that infrastructure.

1.1.1 IPART's role in relation to cost allocation manuals

IPART's role in relation to cost allocation manuals is also set out in section 42 of the WIC Act:

- IPART may approve a service provider's cost allocation manual as submitted, or may require the service provider to amend it and resubmit it for approval.[4]
- A cost allocation manual may only be varied with the consent of IPART.[5]

1 WIC Act Historical Notes.

2 Under Section 23 of the WIC Act, the 'declaration criteria' are:
   a. that the infrastructure is of State significance, having regard to its nature and extent and its importance to the State economy,
   b. that it would not be economically feasible to duplicate the infrastructure,
   c. that access (or an increase in access) to the service by third parties is necessary to promote a material increase in competition in an upstream or downstream market,
   d. that the safe use of the infrastructure by access seekers can be ensured at an economically feasible cost and, if there is a safety requirement, that appropriate regulatory arrangements exist,
   e. that access (or an increase in access) to the service would not be contrary to the public interest.

3 WIC Act s42(1). The WIC Act Dictionary defines 'service provider', in relation to an infrastructure service, as the person who has, or is to have, control of the water industry infrastructure by means of which the service is, or is to be, provided, whether or not the person is a licensed network operator.

4 WIC Act s42(4).

5 WIC Act s42(6).

1.1.2 Additional WIC Act provisions or requirements in relation to cost allocation manuals

Section 42 of the WIC Act further provides or requires that:

- A cost allocation manual must be in the form of a document that sets out the basis on which the service provider proposes to establish and maintain accounts for its infrastructure services that are the subject of a coverage declaration.[6]
- The Minister may from time to time, by order published in the Gazette, establish rules for the preparation of cost allocation manuals.[7]
- From three months after IPART approves a service provider's cost allocation manual, the service provider must ensure that costs are allocated between each of those services, and between those services and its other activities, in accordance with the manual.[8]
- A service provider must make its cost allocation manual publicly available.[9]

1.1.3 Voluntary access undertakings

The WIC Act access regime also has a framework for infrastructure owners to submit voluntary access undertakings. This allows businesses to proactively put forward binding terms, conditions and prices under which access seekers will be provided access.

Under the WIC Act, IPART also has the following roles in relation to voluntary access undertakings:

- to review applications for access undertakings, and decide whether to approve the access undertaking,[10] and
- to arbitrate certain disputes regarding access to infrastructure services.[11]

We note that the cost allocation manuals required under the WIC Act apply only to declared infrastructure, and not to infrastructure covered by voluntary access undertakings.[12] An access undertaking is a document prepared *voluntarily* by a service provider. It sets out terms and conditions under which a third party can access a service, unless different terms and conditions are negotiated. If the access undertaking is accepted, the Minister can no longer determine a coverage declaration for the services covered by that undertaking.[13]

6 WIC Act s42(2).
7 WIC Act s42(3). The Minister has not established any such rules. Any rules established by the Minister for the preparation of cost allocation manuals would prevail over this Guide. IPART will review this Guide if such rules are established.
8 WIC Act s42(5).
9 WIC Act s42(7 & 9).
10 WIC Act s38.
11 WIC Act s40.
12 WIC Act s42(1).
13 WIC Act s26(1)(a)(ii).

1.2 Purpose of this guide

We have prepared this guide to assist service providers in preparing cost allocation manuals in relation to their declared infrastructure services. It has been prepared under Section 92 of the WIC Act.[14] This guide outlines our views on:

- principles that should be used by a service provider in allocating costs and developing its cost allocation manual
- what a service provider's cost allocation manual should include, as a minimum.[15]

Whether or not a service provider has adhered to this guide in developing and submitting its cost allocation manual to us for approval, we reserve the right to require the service provider to amend and re-submit it before we formally approve it.

1.3 Purpose of a cost allocation manual

Cost allocation relates to the attribution and allocation of a service provider's costs to its declared and other services. Under the WIC Act, a cost allocation manual must set out the basis on which a service provider establishes and maintains separate cost accounts for each of its declared services.[16]

The WIC Act does not specify the purpose or intended use of a cost allocation manual. We consider a key purpose of a cost allocation manual is to improve transparency and help overcome information asymmetry between the service provider and potential access seekers. This can facilitate the commencement of negotiations between the service provider and access seeker on the terms of access.

We consider that access pricing should lead to appropriate incentives for entry in the services potentially open to competition. The cost allocation manual should therefore demonstrate that costs are allocated to a service provider's declared services in such a way as to:

- reflect efficient, attributable costs, and
- not unduly favour the service provider in the provision of potentially competitive services.

Finally, a transparent cost allocation manual would assist an arbitrator (eg, IPART) if it were called upon to arbitrate a dispute between a service provider and an access seeker, and consequently was required to make a determination on the terms on of access. However, even where a service provider's cost allocation manual has been approved by us, the arbitrator (whether IPART or another person) is not bound to a particular cost allocation methodology or access pricing approach when determining terms of access. The arbitrator is however bound by the pricing principles set out in section 41 of the WIC Act (see Box 2.1).

The contents of this guide and cost allocation manuals submitted under the WIC Act also do not bind us in relation to our retail price determinations.

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14 Section 92 of the WIC Act provides that IPART may issue guidelines as to the manner in which it exercises its functions under this Act, and that these guidelines must be publicly available.

15 Chapter 2 draws partly on the Australian Energy Regulator's *Electricity transmission network service providers – Cost allocation guidelines*, September 2007.

16 WIC Act s 42(2).

The *Water Industry Competition (Access to Infrastructure Services) Regulation 2007* requires the service provider to make available an information package to access seekers on request. We require the service provider's cost allocation manual to be included in that package.[17]

1.4 Processes for approving cost allocation manuals

The WIC Act specifies that a service provider must submit a cost allocation manual to us within three months of an infrastructure service becoming the subject of a coverage declaration under the WIC Act.[18]

The service provider must submit its proposed cost allocation manual to us for review/approval in both electronic and printed form. We will publish the submitted cost allocation manuals on our website and seek comments from stakeholders. We will consider the service provider's cost allocation manual and any stakeholder submissions before deciding whether to approve the manual, and we may approve the manual as submitted or require it to be amended and resubmitted. Once approved, we will publish the manual on our website.

1.5 Revisions to this guide

We intend to review the guide periodically to ensure that its contents remain up to date and relevant to the nature of the service providers and the information requirements of access seekers. However, stakeholders are welcome to provide comment on the guide at any time, using contact details available on our website.

Following the commencement of the WIC Act in 2008, Sydney Water was required to submit a cost allocation manual to us by November 2008, covering the three wastewater networks noted in Box 3.1 below. To date, no other service providers have been required to submit a cost allocation manual to us. If infrastructure services of other service providers become the subject of a declaration under the WIC Act, we may review the content of this guide.

We will consult with stakeholders when we review this guide.

1.6 Structure of this guide

The remainder of this guide is structured as follows:

- Chapter 2 outlines the key elements that we require to be included in cost allocation manuals, and the required format of the manuals.[19]
- Chapter 3 sets out the guiding principles to be applied in the cost allocation process.
- Chapter 4 describes the minimum detail of the cost allocation methodology that we require to be included in cost allocation manuals.

17 *Water Industry Competition (Access to Infrastructure Services) Regulation 2007*, cl 8(2)(d); IPART *Negotiation protocols – Water Industry Competition (Access to Infrastructure Services) Regulation 2007*, Schedule 1, cl 2(e).

18 WIC Act s41(1)(b).

19 This chapter draws partly on: Australian Energy Regulator, *Electricity transmission network service providers – Cost allocation guidelines*, September 2007.

- Appendix A contains a checklist and further guidance to assist in the preparation of cost allocation manuals.
- Appendix B provides some worked examples of attributing direct costs and allocating indirect costs.

2 Format and contents of cost allocation manuals

The service provider's cost allocation manual should include the information set out below.

2.1 Scope of the cost allocation manual and contextual information

The cost allocation manual should provide information on the scope of the manual and its context. The service provider should include a detailed description of its operational structure, including:

- its major service delivery systems and the key services within these systems
- its declared services and how they relate to non-declared services
- its corporate functions and how they relate to declared and non-declared services.

The service provider should also clearly state the nature, scope and purpose of the cost allocation manual and the way in which it will be used by the service provider. The scope must include the basis on which the service provider proposes to establish and maintain accounts for its declared infrastructure.[20]

Some declared services may be non-standard in nature and dependent on the unique circumstances of a third-party access proposal, such as interconnection services. We consider that the cost allocation manual should, at a minimum, describe in detail the nature of these services, including any investment the access seeker may be responsible for – eg, to connect new sewers at different points of interconnection.

The cost allocation manual should also provide principles for how these costs would be established, to further facilitate the commencement of negotiations between the service provider and access seeker on the terms of access.

2.2 Governance arrangements

The service provider's cost allocation manual should include detailed information on its governance arrangements in relation to the manual, including:

- A statement signed and dated by the service provider's Managing Director/Chief Executive Officer and Chief Financial Officer, attesting that the information contained in the cost allocation manual is accurate and that the service provider intends to comply with the cost allocation methodology.
- A version history and date of issue for the document.
- Details of accountabilities within the service provider for the document, including the key roles responsible for updating, maintaining and applying the cost allocation manual and for internally monitoring and reporting on its application.

20 WIC Act s42(2).

- A description of how the service provider will monitor its compliance with the cost allocation methodology specified in its cost allocation manual.
- A description of how the service provider will review its cost allocation methodology and, if necessary, update its cost allocation manual. In the case of a service provider subject to retail price regulation, this review should occur at least once every four years and immediately following a determination of its retail prices. The service provider should report the outcome of this review to IPART within six months of the commencement of the review.
- How and where the service provider will maintain records of its allocation of costs to services, so that the allocation could be audited or otherwise verified by a third party, including IPART, if required.
- Contact details for stakeholders who have questions related to the service provider's cost allocation manual.

2.3 Cost allocation methodology and rationale

The service provider's cost allocation manual should describe its cost allocation methodology, and should provide detailed information on the principles and policies used for attributing costs directly to, or allocating costs between, its systems and services (this is discussed further in Chapter 4).

The service provider should also clearly outline the rationale for its proposed cost allocation method. We consider that access pricing should ensure there are incentives and opportunities for efficient entry in the market for the provision of potentially competitive services 'upstream' or 'downstream' of the declared services.

Accordingly, the cost allocation manual should provide a description of how the cost allocation methodology relates to:

- the development of efficient entry and competition in services upstream or downstream of the declared services
- each of the WIC Act pricing principles (section 41) listed in Box 2.1, and
- any relevant prevailing pricing determinations (eg, retail price determinations and wholesale price determinations).

As noted in section 1.3, we consider a key purpose of the cost allocation manual is to facilitate the commencement of negotiations between service providers and access seekers. If used for the purpose of setting access prices, the cost allocation methodology would therefore be expected to be applied to a service providers' *forecast* costs. Where IPART has made a retail or wholesale price determination for any part of the period under consideration for an access agreement or determination, forecast costs should be allocated such that the annual sum of all allocated costs reconciles with the service provider's total annual revenue requirement allowed by IPART at the prevailing price determination.

2.4 Supporting information

The cost allocation manual should include:

- For each of its major service delivery systems, a description of key assets and non-financial data that can inform cost allocation (eg, water and/or wastewater flows per system, system capacity and connections per system).
- A description of the service provider's information systems and the financial and non-financial information contained in these information systems that can inform cost allocation.

Box 2.1 The WIC Act's principles for infrastructure access prices

Section 41 of the WIC Act requires that when deciding whether or not to approve an access undertaking or determining a dispute in relation to the pricing of access to an infrastructure service that is the subject of a coverage declaration, IPART must have regard to the following pricing principles:

a) the price of access should generate expected revenue for the service that is at least sufficient to meet the efficient costs of providing access to the service, and include a return on investment commensurate with the regulatory and commercial risks involved

b) the price of access should allow multi-part pricing and price discrimination when it aids efficiency

c) the price of access should not allow a vertically integrated service provider to set terms and conditions that discriminate in favour of its downstream operations, except to the extent to which the cost of providing access to other operators is higher

d) the price of access should provide incentives to reduce costs or otherwise improve productivity.

Section 41(3) also requires that:

> These principles must be implemented in a manner that is consistent with any relevant pricing determinations for the supply of water and the provision of sewerage services, including (where applicable) the maintenance of 'postage stamp pricing'.

3 Cost allocation method and principles

Cost allocation is a step-by-step process that generally involves:

- identifying and defining the cost objects[21] to which costs will be assigned
- identifying and classifying costs as direct or indirect
- tracing direct costs and attributing them to the cost objects
- identifying and choosing a method of relating indirect cost items to the cost objects – ie, allocating these to cost objects using selected allocators or cost drivers.

In setting out its cost allocation methodology, the service provider must:

a) follow the steps outlined below and clearly present the requested information, or

b) if an alternative approach to cost allocation is used, provide justification and a detailed explanation of the alternative approach.

3.1 Identifying and defining cost objects

Cost allocation is the process of identifying, aggregating, and assigning costs to specific cost objects. A cost object is any activity or item for which costs are separately measured. Cost objects can be a:

- product or service
- production process
- sales region
- department or division of a company
- specific job, contract or customer, or
- organisational segment.

In accordance with the requirements of the WIC Act, the subjects of a service provider's cost allocation manual are its **declared infrastructure services**. These are the primary cost objects of the cost allocation process.

In the case of Sydney Water, for example, its declared infrastructure services currently include its North Head, Bondi and Malabar sewage reticulation networks (see Box 3.1). The cost objects of its cost allocation manual must therefore include these services.

21 A cost object is any activity or item for which costs are separately measured.

Box 3.1 Sydney Water's declared sewerage services

Three of Sydney Water's sewage reticulation networks (Bondi, Malabar and North Head) have been 'declared' from the outset of the WIC Act. Under Schedule 4 of the WIC Act, the following services are taken to be the subject of a coverage declaration from the commencement of the WIC Act:[a]

- connection of another party's works to Sydney Water's Bondi Reticulation Network; and conveyance of sewage through Sydney Water's Bondi Reticulation Network from the premises of another party's customers to the points where the Network connects with the other party's works
- connection of another party's works to Sydney Water's Malabar Reticulation Network; and conveyance of sewage through Sydney Water's Malabar Reticulation Network from the premises of another party's customers to the points where the Network connects with the other party's works
- connection of another party's works to Sydney Water's North Head Reticulation Network; and conveyance of sewage through Sydney Water's North Head Reticulation Network from the premises of another party's customers to the points where the Network connects with the other party's works.

a WIC Act Schedule 4 s2.

3.1.1 Identifying and defining all relevant cost objects

To permit review of the provider's cost allocation methodology, information should also be included on how costs are attributed or allocated to the provider's **non-declared services**. This is because the allocation of costs to declared services often depend on, or are informed by, the allocation of costs to these other services or cost objects. We also note that some access pricing methodologies require information on the costs of non-declared services. For example, the 'retail-minus' access pricing approach requires information on the costs of the potentially contestable services upstream and downstream of the declared services (see Box 3.2).

Accordingly, for any costs that cannot be directly attributed to a specific declared service (ie, indirect costs), the cost allocation manual should clearly explain and justify how costs are allocated between:

- regulated and unregulated services
- service divisions (eg, water, wastewater, stormwater and other services where applicable, such as recycled water)
- declared and non-declared within service divisions, and
- declared services, by geographic system.

By way of example, the scope of Sydney Water's cost allocation manual should cover, at a minimum, all cost objects related to:

- Sydney Water's declared sewerage services at Bondi, Malabar and North Head
- services upstream and downstream of the declared services (ie, sewage treatment, disposal and retail services) in the Bondi, Malabar and North Head sewerage systems

- sewerage services (ie, sewage reticulation, treatment and disposal and retail services) in its other wastewater systems[22]
- trade waste services (reticulation, treatment and retail), by geographic system, and
- other wastewater services, by geographic system (eg, ancillary and miscellaneous services).

Box 3.2 Cost allocation and 'retail-minus' pricing

Under a 'retail-minus' pricing approach, the price of accessing a service is generally based on the service provider's retail price minus some component. For example, a retail-minus access price is sometimes calculated by taking the service provider's retail tariff, adding the incremental costs incurred as a result of providing access, and subtracting the avoided or avoidable costs of the potentially contestable services upstream and downstream of the declared services.

A 'retail-minus' avoidable cost approach was favoured by the Australian Competition and Consumer Commission (ACCC) in its determination of the access dispute between Sydney Water Corporation and Services Sydney Pty Ltd in 2007.[23] Under this approach, the costs subtracted from the retail prices would be the average or 'building block' costs of the service provider's contestable services.

3.2 Cost classifications

At an aggregate level, costs can be classified as either *direct* or *indirect*. Direct costs are costs that can be directly traceable to a specific service (a cost object). Costs that cannot be directly traceable to a specific cost object are the remaining indirect costs.

Indirect costs can be further categorised as either common costs or joint costs:[24]

- Joint costs arise when a single and indivisible process gives rise to several products or services.
- Common (shared) costs arise when a single process gives rise to several products or services, even though they can be produced separately.

Most indirect costs for water businesses are common costs. The most notable are corporate overheads. Joint costs are also relevant for many water businesses, and may need to be considered. For example, biogas from the wastewater treatment process can be used to operate cogeneration assets and produce electricity. Biosolids are also a major by-product of the wastewater treatment process used (and potentially sold) as soil conditioner.

Relevant here is another type of basic cost classification—that involving fixed costs and variable costs. The service provider should clearly distinguish between fixed and variable direct costs.

22 In addition to its North Head, Bondi and Malabar wastewater (or sewerage) systems, Sydney Water currently has 21 other distinct geographic wastewater systems.

23 Australian Competition & Consumer Commission, *Access dispute between Services Sydney Pty Ltd and Sydney Water Corporation, Arbitration Report 19 July 2007*.

24 Pardina, M.R., Rapti, R.S., and Groom, E. (2008), *Accounting for Infrastructure Regulation*, The World Bank (Washington), p 49.

3.3 The causality principle in allocating costs

Costs should generally be determined and allocated to services on the basis of *causality*. That is, costs should be allocated in relation to the way resources are consumed or, in other words, to the source or cost object that caused the costs to be incurred.

In general, cost items should be allocated on the basis of a direct cause and effect relationship. For indirect costs (ie, joint or common costs), where such a direct cause and effect relationship cannot be established, but where there is still a verifiable relationship between the cost item and the cost object, the cost item should be allocated using an appropriate allocator (or cost driver). The sections below provide further detail.

3.3.1 Identifying direct costs and tracing them to cost objects

Identifying and allocating direct costs causes no allocation problems, as no portion of these direct costs relate to another cost object. Many costs for water businesses are direct costs. The service provider should clearly identify all major direct costs in its cost allocation manual.

3.3.2 Identifying indirect costs and allocating them to cost objects

The difficulty arises with indirect costs (ie, joint or common costs), as the allocation of these costs can involve degrees of subjectivity. These costs must be assigned to the cost objects through the allocation bases or cost drivers that cause the costs to be incurred. Ideally, the base has some cause-and-effect relationship with the cost (where such relationship cannot be established, see section 3.3.3).

Cost drivers (or allocators) can be divided into the following three types:[25]

- **Input based**. Allocation is based on the share of the other attributable inputs (direct labour, direct materials, and so on).
- **Output based**. Allocation is based on output indicators such as the production or sales volume share of the given product in total output of the company.
- **Revenue based**. Allocation is based on revenues generated by the product in question.

An appropriate allocator is one which is transparent, simple and measurable, and where there is a high degree of correlation between the cost item and the allocator. Information for the chosen allocator should also be available at reasonable cost.

For the purpose of cost allocation, indirect costs are often pooled on the basis that the cause-effect relationship between these indirect cost items and the relevant cost objects are identical or very closely related. Once the indirect costs have been allocated to appropriate cost pools, these cost pools can then be allocated to cost objects using a single cost driver or allocator.

The service provider should include a clear description in its cost allocation manual of all cost drivers used to allocate joint and common costs.

25 Pardina, M.R., Rapti, R.S., and Groom, E. (2008), *Accounting for Infrastructure Regulation*, The World Bank (Washington), p 57.

3.3.3 Allocating costs where a causal relationship cannot be established

In some cases, costs may need to be allocated on a non-causal basis. This may be, for example, if a common cost is immaterial, if a causal relationship cannot be established for a cost item without undue cost and effort, or if there is another economic argument for non-causal allocation (eg, based on price elasticity of demand).

In these instances, the basis for allocation should still be transparent and defensible. The service provider should include explicit statements in its cost allocation manual to:

- explain why a non-causal approach has been adopted
- explain the basis of cost allocation
- provide the reason for choosing the basis of cost allocation
- quantify the factor applied in allocating costs to cost objects, or explain the means of cost allocation, and
- quantify the magnitude of costs allocated on a non-causal basis.

3.4 Cost allocation relative to a service provider's annual revenue requirement

We noted above that when the cost allocation methodology is used for the purpose of setting access prices, the methodology would be applied to the service provider's *forecast* costs. Where IPART has made a retail or wholesale price determination for any part of the period under consideration for an access agreement or determination, forecast costs should be allocated such that the annual sum of all allocated costs reconciles with the service provider's total annual revenue requirement allowed by IPART at the prevailing price determination.

3.5 A cost should only be allocated once

The service provider should not allocate the same cost more than once. This means that:

- the same cost may not be treated as both a direct cost and an indirect or shared cost
- a direct cost may only be attributed once to a single cost object, and
- an indirect cost may only be allocated once between cost objects.

3.6 The basis for cost allocation should be reviewed periodically

The service provider should periodically review its cost allocation methodology (and hence its cost allocation manual), to ensure the basis for allocation remains contemporary (eg, that suitable cost drivers are being used to allocate indirect costs, and that correct numeric values are being assigned to these allocators).

In the case of a service provider subject to retail price regulation, this review should occur at least once every four years and immediately following a determination of its retail prices. The service provider should report the outcome of this review to IPART within six months of the commencement of the review.

Under the WIC Act, any amendment to a service provider's cost allocation manual requires consent from IPART.[26]

26 WIC Act s42(6).

4 Detail required in the cost allocation methodology

As noted above, the service provider's cost allocation manual should detail the principles, policies and methodologies applied in attributing or allocating costs to the declared services. This information should be provided in sufficient detail to enable a third party, including IPART, to replicate reported outcomes.[27]

Accordingly, a provider should clearly identify the **specific** operating costs (direct and indirect cost items) allocated to **each** of the declared services. It should also clearly outline the relevance of these costs to the declared services (ie, why they are directly related to each declared service or the cost drivers used to allocate the indirect cost items).

The service provider must also identify which capital assets relate to **each** declared service and outline how these assets are valued and subsequently how the capital costs are calculated. For most regulated businesses, this will involve clearly outlining the methodology used to allocate the Regulatory Asset Base (RAB) (or capital costs) to cost objects to establish the initial asset values for each declared service.

The remainder of this chapter outlines the detail of the cost allocation methodology that we expect service providers to include in their cost allocation manuals.

4.1 Direct operating and maintenance costs

Direct costs are costs that can be directly traceable to a specific cost object. Materials, energy and labour directly used when producing a specific good or delivering a specific service are examples of direct operating and maintenance costs.

For **each cost object (**eg**,** specific water and/or wastewater service, by geographic system**)**, a service provider's cost allocation manual should describe and explain:

- the nature of each direct cost item
- the characteristics of each cost item that associates it uniquely with a particular cost object – ie, the basis for classifying it as a direct cost
- the system(s) used to collect and record cost item amounts, by cost item, and
- how these systems are maintained, reviewed and updated (including frequency of review/update).

27 That is, if all the input information was provided (ie, cost items, cost objects and cost allocators), the third party should be able to reproduce the service provider's results, by applying the cost allocation methodology as described.

4.2 Indirect operating and maintenance costs

Indirect costs are costs that cannot be assigned directly to a specific cost object or service. Indirect costs are also called shared, common or joint costs. Indirect costs need to be allocated to cost objects, using appropriate cost drivers or allocators.

4.2.1 Cost items and cost objects

The service provider's cost allocation manual should identify and describe:

- the cost objects between which each indirect cost item or pool is to be allocated
- the nature of each indirect cost item or pool (including a description/explanation of the composition of an indirect cost item and why the elements within such an item or pool can be grouped together for the purposes of allocation)
- the system(s) used to collect and record cost item amounts, by cost item, and
- how these systems are maintained, reviewed and updated (including frequency of review/update).

4.2.2 Cost drivers or allocators

For each cost object and associated indirect cost items, the cost allocation manual should describe/explain:

- The nature of the allocator, or allocators, to be used for allocating each indirect cost item or pool to the cost objects.
- The reasons for selecting the allocator, or allocators, for each indirect cost item or pool and an explanation of why it is the most appropriate available allocator, or set of allocators, for the cost item/pool.
- Whether the numeric quantity or percentage of the allocator, or allocators, to be applied to each cost item will remain unchanged or change from time to time over the foreseeable future.
- If this allocating factor is to remain unchanged for the foreseeable future:
  - details of the numeric quantity or percentage of the allocator, or allocators, and
  - an explanation of how the numeric quantity or percentage has been calculated, including where the data for determining this numeric quantity or percentage have been sourced .
- If this allocating factor is to change from time to time over the foreseeable future, an explanation of how the service provider intends to calculate the numeric quantity or percentage over time, including where the data for determining the changing numeric quantities or percentages are to be sourced.
- Supporting information on cost drivers or allocators, by cost item or pool (eg, if an indirect cost item is allocated to a cost object by using customer connection numbers as the allocator, then the service provider should provide information on customer numbers across its operations, by geographic system).

4.3 Capital costs

Under IPART's current building block approach to determining total allowed costs and setting retail prices for metropolitan water agencies,[28] capital costs comprise a return on assets and a return of assets (regulatory depreciation), plus return on working capital.

The return on assets represents the opportunity cost of capital invested. It is derived by multiplying the value of the utility's Regulatory Asset Base (RAB) by an appropriate rate of return. The return on capital (depreciation) represents the costs of maintaining the capital base. It is calculated using straight line depreciation of the RAB. Therefore, the RAB is an important determinant of capital costs under the building block approach.

However, it is generally not possible to identify the specific regulatory values of pre-2000 assets within the RABs of metropolitan water agencies currently regulated by IPART. This is because the initial 'line in the sand' RABs were based on cash flows rather than a specific summation of the value of individual assets at the time (which means Sydney Water's RAB, for example, is less than the replacement value of its assets).[29] Therefore, it may also not be possible to directly attribute capital costs associated with many existing assets to specific services within the water and wastewater supply chains (eg, sewage transport, treatment, disposal and retail services) or to specific geographic water and wastewater systems.

This means that the RAB (and hence capital costs) has to be initially allocated across these services/systems. This initial allocation can then be rolled forward over time to incorporate the known subsequent efficient capital expenditure for each 'object' (or water or wastewater service) less any disposals, capital contributions and depreciation applicable to these services.

Several options exist for initially allocating the RAB (ie, asset values) across services. For example, two such options are:

1. allocate the RAB to cost objects (declared and non-declared services) in proportion to the underlying depreciated replacement values[30] of assets providing these services
2. set the value of assets providing potentially competitive services (eg, water treatment plants, sewage treatment plants and retail assets) at their depreciated replacement values and allocate the remaining RAB[31] to other services (including the declared services).

Each of these approaches (and others) come with trade-offs that the service provider will need to consider in deciding on its approach. It is our preference that the cost allocation

28 These water agencies currently include: Sydney Water Corporation, Hunter Water Corporation, Central Coast Council, and Essential Water.

29 For example, rather than being based on the replacement value of its assets, Sydney Water's opening RAB (which was established for the 2000 metropolitan water price determination) was aligned with Sydney Water's revenues for 1998/1999. That is, for the 2000 metropolitan water price determination, IPART took a 'line in the sand' approach and calculated an opening RAB value based on the present value of cash flows in 1999, assuming they would continue. Since the line in the sand establishment of the RABs of water utilities regulated by IPART, actual prudent and efficient capital expenditure has been added to each utility's RAB.

30 In regulatory settings, forward-looking estimates of asset values are generally favoured. A commonly employed approach to estimating forward-looking asset values is to estimate the current replacement costs of the assets. Two such approaches to valuation are the modern engineering equivalent replacement asset (MEERA) values or optimised replacement cost (ORC).

31 Under this approach, the 'remaining RAB' could be allocated in proportion to underlying depreciated replacement values (but not *at* depreciated replacement values).

methodology allocates the RAB across services, so not to unduly favour the service provider in the provision of potentially competitive services.

4.3.1 Initial RAB allocation

The cost allocation manual must provide a detailed explanation and rationale for the service provider's chosen approach to initially allocating the RAB, including:

- Its means of initially valuing existing assets or allocating the RAB to assets, by asset and cost object (or service).
- The rationale behind this initial valuation or allocation methodology.
- For all key assets at a minimum, the main assumptions used in this initial valuation or allocation, and the rationale or justification for these assumptions.[32]

4.3.2 Calculating and allocating capital costs

Once the initial RAB has been allocated to cost objects or services, the service provider must include in its cost allocation manual:

- Assumptions regarding the calculation of the rate of return on assets, by asset and cost object – unless a strong case is provided otherwise, IPART envisages that this would be the weighted average cost of capital (WACC) adopted by IPART in the prevailing price determination.
- An explanation of the method used to calculate the return of assets (depreciation), by asset and cost object, and assumptions underpinning this calculation (including assumed asset lives).
- Detail on how it will attribute or allocate future efficient capital expenditure (direct and indirect costs), return on assets, depreciation, disposals and capital contributions to each cost object, as these costs and revenues occur.
- An explanation of the way in which the asset base for each cost object will be calculated and rolled forward, taking into account future efficient capital expenditure, depreciation, disposal of assets and capital contributions.
- Explain the system(s) used to collect and record the above-mentioned capital costs for each cost item.
- Explain how these systems will be maintained, reviewed and updated (including frequency of review/update).

4.4 Any other relevant costs or allowances

In addition to operating and capital costs, the service provider may need to allocate other costs to the declared services, including:

- allowances for taxation costs, and

32 For example, if a depreciated replacement cost methodology is used to initially value an asset, a service provider should outline the assumed configuration, 'optimisation', performance and asset life of the 'replacement' asset relative to the existing asset, and the reasons for these assumptions.

- allowances for a Return on Working Capital.

The cost allocation manual should clearly set out how the service provider allocates such other cost items to cost objects.

4.4.1 Cost items and cost objects

The service provider's cost allocation manual should identify and describe:

- the cost objects between which each such other cost item is to be allocated
- the nature of each such other cost item
- the system(s) used to collect and record cost amounts, for each such other cost item, and
- how these systems are maintained, reviewed and updated (including frequency of review/update).

4.4.2 Cost drivers or allocators

For each cost object and associated other cost item, the cost allocation manual should describe/explain:

- The nature of the allocator, or allocators, to be used for allocating each such other cost item to the cost objects.
- The reasons for selecting the allocator, or allocators, for each such other cost and an explanation of why it is the most appropriate available allocator, or set of allocators, for the cost item.
- Whether the numeric quantity or percentage of the allocator, or allocators, to be applied to each such other cost item will remain unchanged or change from time to time over the foreseeable future.
- If this allocating factor is to remain unchanged for the foreseeable future:
  - details of the numeric quantity or percentage of the allocator, or allocators, and
  - an explanation of how the numeric quantity or percentage has been calculated, including where the data for determining this numeric quantity or percentage have been sourced.
- If this allocating factor is to change from time to time over the foreseeable future, an explanation of how the service provider intends to calculate the numeric quantity or percentage over time, including where the data for determining the changing numeric quantities or percentages are to be sourced.
- Any other relevant supporting information on cost drivers or allocators, for each such other cost item.

Appendices

A Checklist and further guidance

The following table lists the requirements contained in IPART's Guide, to serve as a checklist for the service provider in preparing its cost allocation manual. As noted in Section 1.3, this Guide:

- outlines what a service provider's cost allocation manual should include, as a minimum; and
- regardless of a service provider's adherence (or otherwise) to this Guide, IPART reserves the right to require a service provider to amend and re-submit its cost allocation manual.

Where examples have been provided in this table, these are for illustrative purposes only and do not prescribe the service provider's approach to cost allocation.

Table A.1 Consolidated list of requirements and further guidance

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
Chapter 2: Format and contents of cost allocation manuals		
2.1 Scope of the cost allocation manual and contextual information		
	The service provider should include a detailed description of its operational structure, including: ▼ its major service delivery systems and the key services within these systems ▼ its declared services and how they relate to non-declared services ▼ its corporate functions and how they relate to declared and non-declared services.	

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
	The service provider should clearly state the nature, scope and purpose of the cost allocation manual and the way in which it will be used by the service provider. The scope must include the basis on which the service provider proposes to establish and maintain accounts for its declared infrastructure.	
	The cost allocation manual should at a minimum describe in detail the nature of potentially non-standard declared services, such as interconnection services. This should include a description of any investment the access seeker may be responsible for – eg, to connect new sewers at different points of interconnection – and it should provide principles for how these costs would be established.	
2.2 Governance arrangements		
	A statement signed and dated by the service provider's Managing Director/Chief Executive Officer and Chief Financial Officer, attesting that the information contained in the cost allocation manual is accurate and that the service provider intends to comply with the cost allocation methodology.	
	A version history and date of issue for the document.	
	Details of accountabilities within the service provider for the document, including the key roles responsible for updating, maintaining and applying the cost allocation manual and for internally monitoring and reporting on its application.	
	A description of how the service provider will monitor its compliance with the cost allocation methodology specified in its cost allocation manual.	

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
Also section 3.6	The cost allocation manual should include a description of how the service provider will periodically review its cost allocation methodology and, if necessary, update its cost allocation manual. ▼ In the case of a service provider subject to retail price regulation, this review should occur at least once every four years and immediately following a determination of its retail prices. ▼ The service provider should report the outcome of this review to IPART within six months of the commencement of the review. Under the WIC Act, any amendment to a service provider's cost allocation manual requires consent from IPART.	
	A description of how and where the service provider will maintain records of its allocation of costs to services, so that the allocation could be audited or otherwise verified by a third party, including IPART, if required.	
	Contact details for stakeholders who have questions related to the service provider's cost allocation manual.	The cost allocation manual should provide adequate details on appropriate contacts within the organisation, including names, postal and email addresses and telephone numbers.
2.3 Cost allocation methodology and rationale		
	The service provider's cost allocation manual should describe its cost allocation methodology, and should provide detailed information on the principles and policies used for attributing costs directly to, or allocating costs between, its systems and services.	See chapters 3 and 4 and sections 3 and 4 in this table for detailed requirements.
	The service provider should clearly outline the rationale for its proposed cost allocation method.	
	The cost allocation manual should describe how the cost allocation methodology relates to: ▼ the development of efficient entry and competition in services upstream or downstream of the core or declared services ▼ each of the WIC Act pricing principles (section 41), and ▼ any relevant prevailing pricing determinations (eg, retail price determinations and wholesale price determinations).	
2.4 Supporting information		

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
	For each of the service provider's major service delivery systems, the cost allocation manual should describe key assets and non-financial data that can inform cost allocation (eg, water and/or wastewater flows per system, system capacity and connections per system).	
	The cost allocation manual should describe the service provider's information systems and the financial and non-financial information contained in these information systems that can inform cost allocation.	
Chapter 3: Cost allocation method and principles		
	The service provider would be expected to follow the steps outlined below in developing its cost allocation methodology. If the service provider proposes an alternative approach to cost allocation, it should clearly explain the proposed approach and provide justification. Cost allocation is a step-by-step process that generally involves: ▼ identifying and defining the cost objects to which costs will be assigned ▼ identifying and classifying costs as direct or indirect ▼ tracing direct costs and attributing them to the cost objects ▼ identifying and choosing a method of relating indirect cost items to the cost objects – ie, allocating these to cost objects using selected allocators or cost drivers.	
	In setting out its cost allocation methodology, the service provider must: a) follow the steps outlined in chapter 3 and clearly present the requested information, or b) if an alternative approach to cost allocation is used, provide justification and a detailed explanation of the alternative approach.	
3.1 Identifying and defining cost objects		
	The primary cost objects in the cost allocation manual are the service providers declared infrastructure services. Information should also be included on how costs are attributed or allocated to the provider's non-declared services.	

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
	For any costs that cannot be directly attributed to a specific declared service (ie, indirect costs), the cost allocation manual should, where relevant, clearly explain and justify how costs are allocated between: ▼ regulated and unregulated services ▼ service divisions (eg, water, wastewater and stormwater) ▼ declared and non-declared within service divisions, and ▼ declared services, by geographic system.	The cost allocation methodology should explain how the service provider attributes and allocates cost items to: ▼ major service divisions (eg, between its water, wastewater, stormwater and recycled water services) ▼ distinct systems within the relevant major service division (eg, in the case of Sydney Water, separate geographic wastewater reticulation and treatment systems) ▼ separate services (eg, sewage transport, treatment and retail services) within each distinct geographic system, including the declared and non-declared services.
3.2 Cost classifications		
	The cost allocation manual should identify all relevant cost items, and classify these items as either: ▼ direct costs which are directly traceable to a specific service or cost object ▼ indirect cost which can be either: – joint costs arising from a single and indivisible process used in the production or delivery of several products or services – common/shared costs arising from a single process used in the production or delivery of several products or services, even though they could be produced or delivered separately.	Joint: where the production or delivery of one product or service is dependent on the production or delivery of another. Common/shared: where the production or delivery of one product or service does not depend on the production or delivery of another.
3.3 The causality principle in allocating costs		
	Cost items should be allocated on the basis of a direct cause and effect relationship. For indirect costs (ie, joint or common costs), where such a direct cause and effect relationship cannot be established, but where there is still a verifiable relationship between the cost item and the cost object, the cost item should be allocated using an appropriate allocator (or cost driver).	
	The service provider should clearly identify all major direct costs in its cost allocation manual, and distinguish between fixed and variable direct costs.	

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
	The service provider should include a clear description in its cost allocation manual of all cost drivers used to allocate joint and common costs.	
	Where a causal relationship between a cost item and cost object cannot be established (without undue cost and effort), or if there is another economic argument for non-causal allocation, the service provider should include explicit statements in its cost allocation manual to: ▼ explain why a non-causal approach has been adopted ▼ explain the basis of cost allocation ▼ provide the reason for choosing the basis of cost allocation ▼ quantify the factor applied in allocating costs to cost objects, or explain the means of cost allocation, and ▼ quantify the magnitude of costs allocated on a non-causal basis.	
3.4 Cost allocation relative to a service provider's annual revenue requirement		
	Where IPART has made a retail or wholesale price determination for any part of the period under consideration for an access agreement or determination, forecast costs should be allocated such that the annual sum of all allocated costs reconciles with the service provider's total annual revenue requirement allowed by IPART at the prevailing price determination.	
3.5 A cost should only be allocated once		
	The service provider should not allocate the same cost more than once. This means that: ▼ the same cost may not be treated as both a direct cost and an indirect or shared cost ▼ a direct cost may only be attributed once to a single cost object, and ▼ an indirect cost may only be allocated once between cost objects.	A cost allocation manual should explain how its cost allocation methodology ensures that there is no double-counting and that the same cost item is not allocated more than once.
Chapter 4: Detail required in the cost allocation methodology		
4.1 Direct operating and maintenance costs		

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
	For each cost object (eg, specific water and/or wastewater service, by geographic system), a service provider's cost allocation manual should describe and explain: ▼ the nature of each direct cost item ▼ the characteristics of each cost item that associates it uniquely with a particular cost object – ie, the basis for classifying it as a direct cost ▼ the system(s) used to collect and record cost item amounts, by cost item, and ▼ how these systems are maintained, reviewed and updated (including frequency of review/update).	The cost allocation manual should: ▼ List and, where necessary, describe all direct cost items. Describe/explain the basis for classifying each 'direct cost' item as such. This may relate, for example, to the broader operational structure or characteristics of the service provider (eg, the extent to which its systems and services are distinct or interconnected), as well as the nature of each direct cost item. For example, where energy costs of a service are metered separately, these will be direct costs. ▼ Describe the system (or systems) used to collect all direct costs, including its relationship with IPART's determined revenue requirement (ie, forward looking assessment of efficient costs).
4.2 Indirect operating and maintenance costs		
	The service provider's cost allocation manual should identify and describe: ▼ the cost objects between which each indirect cost item or pool is to be allocated ▼ the nature of each indirect cost item or pool (including a description/explanation of the composition of an indirect cost item and why the elements within such an item or pool can be grouped together for the purposes of allocation) ▼ the system(s) used to collect and record cost item amounts, by cost item, and ▼ how these systems are maintained, reviewed and updated (including frequency of review/update).	

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
	For each cost object and associated indirect cost items, the cost allocation manual should describe/explain: ▼ The nature of the allocator, or allocators, to be used for allocating each indirect cost item or pool to the cost objects. ▼ The reasons for selecting the allocator, or allocators, for each indirect cost item or pool and an explanation of why it is the most appropriate available allocator, or set of allocators, for the cost item/pool. ▼ Whether the numeric quantity or percentage of the allocator, or allocators, to be applied to each cost item will remain unchanged or change from time to time over the foreseeable future. ▼ If this allocating factor is to remain unchanged for the foreseeable future: – details of the numeric quantity or percentage of the allocator, or allocators, and – an explanation of how the numeric quantity or percentage has been calculated, including where the data for determining this numeric quantity or percentage have been sourced. ▼ If this allocating factor is to change from time to time over the foreseeable future, an explanation of how the service provider intends to calculate the numeric quantity or percentage over time, including where the data for determining the changing numeric quantities or percentages are to be sourced. ▼ Supporting information on cost drivers or allocators, by cost item or pool (eg, if an indirect cost item is allocated to a cost object by using customer connection numbers as the allocator, then the service provider should provide information on customer numbers across its operations, by geographic system).	A cost allocation manual needs to specify the means of allocating each indirect cost item to cost objects. For example, it may be that a service provider proposes to allocate indirect cost items to cost objects on the basis of proportion of direct costs attributable to cost objects, length of pipeline, water or wastewater flows per system, connections or customers per system, people hours attributable to particular systems or cost objects, etc. Several tiers of allocation (and allocators) may be required. For instance, to allocate corporate costs (indirect cost items) to cost objects, a service provider might: ▼ first allocate these costs across its water, wastewater, stormwater and recycled water divisions (eg, on the basis of proportion of total connections or customers) ▼ then allocate the portion of 'wastewater' corporate costs to specific geographic wastewater systems (eg, also on the basis of connections or customer numbers) ▼ then allocate these costs to cost objects (services) within each geographic system (eg, on the basis of proportion of direct costs attributable to each cost object). Allocators should generally be cost drivers – ie, determinants of resource use. That is, there should be a high correlation and close cause and effect relationship between the allocator and cost. The cost allocation manual should include supporting data related to a service provider's cost allocation methodology. This may include operational information (eg, connection numbers, water and/or wastewater flows, length of pipeline, etc) as well as reference to public reports and other sources of information on a service provider's operations, where relevant.
4.3 Capital costs		

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
	The cost allocation manual must provide a detailed explanation and rationale for the service provider's chosen approach to initially allocating the RAB, including: ▼ Its means of initially valuing existing assets or allocating the RAB to assets, by asset and cost object (or service). ▼ The rationale behind this initial valuation or allocation methodology. ▼ For all key assets at a minimum, the main assumptions used in this initial valuation or allocation, and the rationale or justification for these assumptions.	The cost allocation manual should detail the approach to initially valuing existing assets or allocating the RAB between declared services and non-declared services. In the case of Sydney Water, for example, details should be provided on how the RAB is: ▼ initially divided (or allocated) between its water, wastewater, recycled water and stormwater divisions; and then ▼ allocated to each distinct wastewater system (declared and non-declared); and then ▼ allocated to services (declared and non-declared) within each of these wastewater systems. The approach to the initial valuation/allocation should be explained in sufficient detail to enable third parties to obtain a clear understanding of the approach. The service provider should provide the reasoning behind, or justification for, its means of initially valuing existing assets or allocating the RAB.

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
	Once the initial RAB has been allocated to cost objects or services, the service provider must include in its cost allocation manual: ▼ Assumptions regarding the calculation of the rate of return on assets, by asset and cost object – unless a strong case is provided otherwise, IPART envisages that this would be the weighted average cost of capital (WACC) adopted by IPART in the prevailing price determination. ▼ An explanation of the method used to calculate the return of assets (depreciation), by asset and cost object, and assumptions underpinning this calculation (including assumed asset lives). ▼ Detail on how it will attribute or allocate future efficient capital expenditure (direct and indirect costs), return on assets, depreciation, disposals and capital contributions to each cost object, as these costs and revenues occur. ▼ An explanation of the way in which the asset base for each cost object will be calculated and rolled forward, taking into account future efficient capital expenditure, depreciation, disposal of assets and capital contributions. ▼ Explain the system(s) used to collect and record the above-mentioned capital costs for each cost item. ▼ Explain how these systems will be maintained, reviewed and updated (including frequency of review/update).	Unless a strong case is provided otherwise, IPART envisages that this would be the rate of return adopted by IPART at the prevailing price determination (in situations where the service provider is the subject of retail price regulation). The cost allocation manual should: ▼ Provide information on the basis by which capital cost items are classified as 'direct' (as opposed to 'indirect'). For example, Information Technology (IT) capital expenditure is likely to be 'indirect' and therefore allocated across cost objects. ▼ Explain how each indirect capital cost item is allocated between cost objects/services ▼ Justify the means of allocation, for each stage of the allocation process and for each indirect capital cost item. The cost allocation manual should describe in sufficient detail the approach to updating and maintaining the asset base for each cost object, including whether separate asset bases are maintained for each cost object, system, etc.
4.4 Any other relevant costs or allowances		
	The service provider's cost allocation manual should identify and describe: ▼ the cost objects between which each such other cost item is to be allocated ▼ the nature of each such other cost item ▼ the system(s) used to collect and record cost amounts, for each such other cost item, and ▼ how these systems are maintained, reviewed and updated (including frequency of review/update).	

Guide Reference	Consolidated list of requirements of a cost allocation manual	Further comments/guidance where applicable
	For each cost object and associated other cost item, the cost allocation manual should describe/explain: ▼ The nature of the allocator, or allocators, to be used for allocating each such other cost item to the cost objects. ▼ The reasons for selecting the allocator, or allocators, for each such other cost and an explanation of why it is the most appropriate available allocator, or set of allocators, for the cost item. ▼ Whether the numeric quantity or percentage of the allocator, or allocators, to be applied to each such other cost item will remain unchanged or change from time to time over the foreseeable future. ▼ If this allocating factor is to remain unchanged for the foreseeable future: – details of the numeric quantity or percentage of the allocator, or allocators, and – an explanation of how the numeric quantity or percentage has been calculated, including where the data for determining this numeric quantity or percentage have been sourced. ▼ If this allocating factor is to change from time to time over the foreseeable future, an explanation of how the service provider intends to calculate the numeric quantity or percentage over time, including where the data for determining the changing numeric quantities or percentages are to be sourced. ▼ Any other relevant supporting information on cost drivers or allocators, for each such other cost item.	

B Examples of attributing direct and allocating indirect costs

The following tables provide worked examples of cost attribution and allocation, to assist service providers in the preparation of cost allocation manuals. The examples are for illustrative purposes only. They do not form a comprehensive list of all direct and indirect cost items that a business is expected to incur, and they do not prescribe particular approaches to cost allocation.

Table B.1 Example – direct costs attributed to services

Direct cost	Details on the cost item	Basis for classification
Direct energy costs	This cost item includes the energy metered separately for and consumed directly by the service or cost object (eg, a water or wastewater transportation network). It excludes energy costs incurred by business units that provide services to facilitate or support the operation of the service but which also support other services, such as energy consumed by corporate (eg, IT) business units. These are indirect costs, which need to be allocated to services using an appropriate allocator or cost driver (see examples below).	If energy for operating the service is metered separately, then the cost of this energy can be directly attributed to the service.
Direct chemical costs	This includes the cost of any chemicals used in operating and maintaining the declared service. It excludes the cost of chemicals used in 'upstream' or 'downstream' services (eg, a sewage treatment plant downstream of a declared wastewater reticulation network), or in providing services in other geographic systems.	The costs of chemicals that are used exclusively for maintaining and operating a service are direct costs (as they can be attributed directly to that service).
Direct labour costs	This includes labour costs incurred solely in maintaining and operating a service (eg, the costs of a maintenance crew devoted to a declared reticulation network). It excludes labour costs incurred by business units that provide services to support the operation of the declared service but which also support other services, such as corporate labour costs (eg, HR, IT and management labour costs). These are indirect labour costs, which need to be allocated to services using an appropriate allocator or cost driver.	Labour costs can be quantified where personnel are devoted solely to particular services and/or where labour time (eg, minutes or hours) is recorded rigorously against specific services. Where labour costs are incurred solely in providing a service, they should be attributed directly to that service.

Table B.2 Example – Indirect costs allocated to services

Indirect cost	Details on the cost item or pool	Cost objects	Allocation method	Justification for method
Corporate costs	This includes the costs of business/service support functions, such as IT, HR, insurance and finance.	All services	As examples, these costs could be allocated to: ▼ A utility's overall wastewater division, based on number of wastewater customer connections (relative to the utility's total water, wastewater, recycled water and stormwater customer connections) ▼ Specific geographic wastewater systems, based on each system's proportion of total wastewater customer connections ▼ Services (eg, wastewater treatment, transportation and retail) within each of these wastewater systems, based on each service's proportion of total direct costs of the specific geographic wastewater system.	Number of customer connections is a reasonable determinant of a system's corporate costs, with a higher number of customer connections likely to incur greater costs (and vice-versa). A service's indirect costs are also likely to be highly correlated with its direct costs.