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INQUIRY INTO AN ACCESS REGIME FOR WATER AND SEWERAGE INFRASTRUCTURE SERVICES

FINAL REPORT
VOLUME II:
ANALYSIS AND DISCUSSION OF ISSUES

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STRUCTURE OF THE FINAL REPORT

The Commission's final report on its inquiry into developing a state-based access regime for water and sewerage infrastructure services is set out in three volumes:

- The first volume sets out the Commission's findings and its recommendations to the Minister for Finance.
- This volume provides a comprehensive explanation of the Commission's analysis and findings. It elaborates on the reasoning behind its recommendations and discusses responses received from stakeholders.
- The third volume comprises supplementary material set out in appendices to the report. These appendices provide background information and more technical analyses related to several issues covered in the second volume.

The three volumes are all available on the Commission's website www.esc.vic.gov.au. The Commission's issues paper, its presentation to the public hearing on 15 July 2009, submissions to the issues paper and draft report, and a report prepared by Deloitte on functional separation are also available on its website.

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ABBREVIATIONS

ACCC	Australian Competition and Consumer Commission
AER	Australian Energy Regulator
CALC	Consumer Action Law Centre
COAG	Council of Australian Governments
the Commission	Essential Services Commission (Victoria)
CUAC	Consumer Utilities Advocacy Centre
DHS	Department of Human Services (Victoria)
DSE	Department of Sustainability and Environment (Victoria)
EPA Act	*Environment Protection Act 1970* (Vic)
ERA	Economic Regulation Authority (Western Australia)
ESC Act	*Essential Services Commission Act 2001* (Vic)
EWOV	Energy and Water Ombudsman of Victoria
IPART	Independent Pricing and Regulatory Tribunal (NSW)
IPE	independent procurement entity
NCC	National Competition Council
OHS Act	*Occupational Health and Safety Act 2004* (Vic)
Ofwat	Office of Water (United Kingdom)
RoLR	Retailer of Last Resort
SLA	service level agreements
SoOs	Statements of Obligations
TPA	*Trade Practices Act 1974* (Cth)
VCAT	Victorian Civil and Administrative Tribunal

VCOSS	Victorian Council of Social Service
VicWater	Victorian Water Industry Association
Water Act	*Water Act 1989* (Vic)
WACC	weighted average cost of capital
Water Industry Act	*Water Industry Act 1994* (Vic)
WIRO	Water Industry Regulatory Order 2003 (Vic)

GLOSSARY

Access commitment	An agreement by an infrastructure operator to negotiate with access seekers on sharing specified infrastructure services (see chapter 10).
Access regime	An access regime is a set of legislative and regulatory arrangements that establish a right for an access seeker to negotiate with an infrastructure operator to share the use of natural monopoly infrastructure. An access regime generally includes a framework to facilitate access negotiations and dispute resolution mechanisms to apply when agreement cannot be negotiated.
Access seeker	A business or individual who applies to share the use of natural monopoly infrastructure.
Access undertaking	A voluntary commitment by an infrastructure operator that sets out the terms and conditions on which it will share the use of a specified natural monopoly infrastructure facility.
Arbitration	A process for resolving disputes between people or organisations by referring them to an arbitrator, either agreed on by them or provided by law. Typically, an arbitrator's decision is final and binding.
Certification	A determination by the relevant Australian Government Minister (the Minister for Competition Policy and Consumer Affairs) that a state-based access regime is consistent with National Competition Policy, including the principles in clause 6 of the Competition Principles Agreement (see appendix F).
Cherry picking	Singling out the most profitable customers from the larger customer base. Generally, this occurs where the price for a service reflects the average cost of providing a service to all customers and some customers can be serviced at a lower cost.
Contestability	Contestability refers to markets that are relatively easy and cheap for new service providers to enter in order to compete with the incumbent(s). Provided a market is contestable, the threat of competition from a new entrant business will create an incentive for a monopoly service provider to operate more efficiently and to set prices to

	reflect costs, without charging monopoly profits.
Cost of service approach	A methodology for determining access prices. Determined by estimating the costs of providing each element of a service covered by an access regime. Also known as the 'building block' approach (see chapter 5).
Coverage	The scope of an access regime. Specifically, the geographical area and types of infrastructure services to which the regime applies.
Declaration	Confirmation that a particular infrastructure service satisfies the declaration criteria (see chapter 3).
Declared service	A specific infrastructure service that has been determined to satisfy the declaration criteria for access (see chapter 3).
Downstream market	A market downstream of a natural monopoly infrastructure facility. For example, sewage treatment is downstream of the sewerage pipe network.
Economies of scale	A reduction in the unit cost of an activity that occurs when the number of units produced (volume of output) increases.
Functional separation	Where certain functions or activities of the business are operated as if they were independent of the rest of the business (see chapter 6).
Greenfields investment	Investment in a facility in an area where no similar facilities already exist.
Headworks	Dams, weirs and associated works used for the harvest, storage and supply of water.
Independent procurement entity	A body responsible for ensuring that water supply and demand are balanced at the lowest possible cost, while maintaining security of supply at a level determined by Government.
Infrastructure services	Services provided by water and sewerage infrastructure facilities.
Inset development	A new development within a larger area that has already been partly developed.
Judicial review	A type of court proceeding in which the judge reviews the legality of a decision or action taken by a public body.

Long run marginal cost (LRMC)	The change in total cost resulting from a one unit change in output, over a long enough timeframe such that no inputs are 'fixed'. It is the sum of short run marginal operating and long run marginal capital costs.
Marginal cost	The change in total cost when one additional unit is produced.
Merits review	A process where a person or body other than the original decision maker reconsiders the facts, law and policy aspects of the original decision to decide if it was the correct and reasonable decision given the available information and circumstances.
Natural monopoly	Exists where the costs of providing services is lower when there is a single supplier due to economies of scale over the range of demand for the service.
National competition policy	A series of reforms as set out in three intergovernmental agreements to promote competition and discourage anti-competitive behaviour. The three agreements include the Competition Principles Agreement, the Conduct Code Agreement and Agreement to Implement the Competition Policy and Related Reforms.
Regulatory asset base	The value of water business assets for regulatory purposes. These values were initially set by the Minister for Water and are adjusted on an ongoing basis to account for new investments, asset disposals, depreciation and inflation.
Recycled water	Wastewater that is treated to a standard appropriate for its intended use.
Regulatory depreciation	An amount set to allow the regulated water businesses to recover the cost of capital investments over time.
Retail minus approach	A methodology for determining access prices. Determined by taking the approved retail price for a bundled service and applying a discount to account for the service components that the access seeker does not require from the infrastructure operator (see chapter 5).
Reticulation	A network of local pipelines used for transporting water or sewage.
Revenue requirement	The revenue needed by each water business to cover operating costs and taxes, and provide a return on assets and a return of assets (depreciation).
Ring fencing	The process of providing separate accounts for certain functions within a business (see chapter 6).

Sewage	Liquid waste discharged into the sewerage system.
Sewer mining	Process of extracting sewage from a sewerage system for the purpose of treating and recycling it.
Sewerage	A physical arrangement of pipes and plant for the collection, removal, treatment and disposal of liquid waste.
Stormwater	Rainfall run-off.
Third party access regime	See ‘access regime’.
Trade waste	Industrial and commercial liquid waste discharged to the sewerage system.
Transfer pricing	The price that is assumed to have been charged by one part of a company for products and services it provides to another part of the same company in order to calculate each division's profit and loss separately.
Upstream market	Markets upstream of an infrastructure facility. For example, water sourcing is upstream of the water distribution network.
Wastewater	Includes greywater, sewage and stormwater.
Water entitlement	A right to use water determined by the Minister for Water under the *Water Act 1989* (Vic). A water entitlement is the maximum amount of water authorised to be taken and used by a person or organisation under specified conditions.
Water storage	A space to hold water, such as a dam or reservoir.

1 OBJECTIVES OF AN ACCESS REGIME

On 19 November 2008, the Minister for Finance directed the Commission to undertake an inquiry into the development of a state-based access regime for water and sewerage infrastructure services, under section 41 of the *Essential Services Commission Act 2001*. On 15 April 2009, the Minister extended the due date for the Commission to submit the final report by four weeks to 28 September 2009.

This report presents the Commission's findings and final recommendations to assist the Government in developing an access regime covering water and sewerage infrastructure across Victoria.

As required by the terms of reference, the Commission has made recommendations on: the coverage of an access regime; a negotiation framework and dispute resolution mechanism; methodologies for access pricing and accounting ring fencing; measures to maintain health and safety, water quality, customer protection, and environmental standards; regulation of an access regime; and an implementation process and indicative timeframe. The report also identifies other matters requiring further consideration in the context of developing an effective access regime. The terms of reference are provided in appendix A.

1.1 Improving efficiency and reliability in the water industry

Prolonged drought, continuing water restrictions and significant price rises for water and sewerage services have increased the focus on efficient provision of these services and innovative solutions for balancing supply and demand. Improving security of supply has also been an important focus of the Government's water strategy.[1]

This inquiry occurs at a time when the Victorian water businesses are undertaking a number of major supply augmentation projects. For metropolitan Melbourne, these projects include the desalination plant, the Sugarloaf pipeline (in conjunction with the Foodbowl Modernisation Project), construction of a water treatment plant at the Tarago Reservoir, and upgrading the Eastern Treatment Plant to increase water recycling. In regional and rural Victoria, the water businesses are investing in substantial augmentation projects to enhance the security of water supply, in

[1] See Department of Sustainability and Environment 2007, *Our Water, Our Future—The Next Stage of the Government's Water Plan*, June.

infrastructure renewal to improve service reliability and to reduce losses in rural water systems, and in increased water recycling and reuse.[2]

As well as these augmentation projects, the Government's water strategy includes a commitment to diversify water sources and promote innovation in developing local water supply solutions. For example, the metropolitan Melbourne water businesses are required to meet water recycling targets. While regional businesses are not subject to explicit recycling targets, there is a general obligation in their Statements of Obligations to optimise the use of recycled water. Work is currently underway to clarify rights to alternative water sources, develop sewer mining guidelines and establish water sensitive urban design principles. In addition, the metropolitan water businesses are required to reduce costs by sharing services.[3]

For the longer term, the Government has stated that reform opportunities principally relate to:

> *clarifying roles and responsibilities in an augmented, diversified and interconnected Melbourne water supply system, including long-term, state-wide planning responsibilities*
>
> *developing water markets to enable water to move to its highest value use including exploring the feasibility of a large user market in Melbourne*
>
> *pricing reforms to signal efficient future investment and use*
>
> *strengthening governance arrangements to ensure water businesses continue to face incentives to deliver services at least cost and*
>
> *ensuring regulatory arrangements enable and facilitate competition and competitive market outcomes wherever possible.*[4]

Developing an access regime is one aspect of the Government's broader policy program to ensure regulatory arrangements enable and facilitate competition and competitive market outcomes. The Government has stated that its policy program will ensure 'the efficient utilisation of existing and new sources of supply to protect the long-term interests of consumers with respect to water security, quality, reliability and price'.[5]

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2 Major projects include: the Goldfields, Wimmera Mallee, Broadford, Hamilton and Merbein pipelines; the Foodbowl Modernisation Project; the Macalister Irrigation District 2030 project; and upgrading the Werribee Irrigation District Recycled Water Scheme.

3 See Essential Services Commission 2009, *Metropolitan Melbourne Water Price Review 2008-09—Draft Decision, Vol. I*, April, chapter 4; and Victorian Competition and Efficiency Commission 2008, *Water Ways: Inquiry into Reform of the Metropolitan Retail Water Sector*, Final report, February.

4 Victorian Government 2008, *Victorian Government Response to the Victorian Competition and Efficiency Commission's Final Report, Water Ways: Inquiry into Reform of the Metropolitan Retail Water Sector,* July, p. 5.

5 *ibid*.

1.1.1 Review of the structure of the metropolitan Melbourne water sector

In August 2007, the Government announced a review of the structure of the retail water industry in metropolitan Melbourne, to be undertaken by the Victorian Competition and Efficiency Commission (VCEC). The terms of reference required VCEC to make recommendations to ensure that the water industry provides a least cost, effective and efficient service to households and industry into the future.

In its final report, VCEC recommended that the Government implement a number of measures to facilitate the possible introduction of increased contestability and competition in the water industry. It recommended that the Government develop an access regime for water and wastewater infrastructure services.[6]

In its response to VCEC's report, the Government supported VCEC's recommendation that it establish an access regime. It indicated that it would ask the Commission to undertake an inquiry into developing a state-based access regime, including establishing an access pricing methodology and accounting ring fencing.[7]

1.1.2 The Government's objectives for an access regime

In the terms of reference for this inquiry, the Government listed its objectives in developing an access regime as:

- promoting the economically efficient operation of, use of and investment in water and sewerage infrastructure, thereby promoting effective competition in upstream and downstream markets
- ensuring existing water businesses and new service providers are able to comply with legislation and regulations related to resource management, the environment, water quality, health and safety
- providing certainty and, where appropriate, consistency for incumbent and potential providers of water and/or sewerage services in the terms and conditions governing access to Victoria's water and sewerage infrastructure services
- facilitating innovation in local water supply solutions consistent with broader sustainable urban planning objectives and
- not inhibiting the potential for further reform of the water industry in the longer term.

The Government also indicated in the terms of reference that it intends to apply to the National Competition Council (NCC) for certification that the Victorian access regime is effective in promoting greater efficiency in the water industry by facilitating competitive provision of water and sewerage services. (See section 2.3 for further discussion of certification.)

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6 Victorian Competition and Efficiency Commission 2008, *Water Ways: Inquiry into Reform of the Metropolitan Retail Water Sector,* Final Report, July. VCEC made a number of other recommendations, which are listed in its report.

7 Victorian Government 2008, *op. cit.*.

1.2 Sharing the use of water industry infrastructure

This section discusses how allowing new water and sewerage service providers to share the use of certain water industry infrastructure facilities will contribute to improving the efficiency and reliability of water and sewerage service provision. It explains how an access regime would facilitate arrangements for sharing infrastructure.

1.2.1 Reasons for sharing infrastructure facilities

The water industry is characterised by 'natural monopoly' infrastructure facilities. A natural monopoly exists where it is cheaper to have only a single supplier of particular services or facilities than to have multiple providers.

For example, in the water industry, it is cheaper and more efficient to have a single underground water and sewerage pipe network. Duplication of the network would, in most cases, be uneconomic because the marginal cost of providing services to additional customers will, over a wide range of demand levels, always be lower using the existing network. In other words, once a water (or sewerage) pipeline has been built, the extra cost of delivering water (or providing sewerage services) to additional customers (up to the capacity limits of the pipeline) is much lower than the cost of servicing those customers by building another pipeline.

Not all elements of the water and sewerage supply chain, however, exhibit natural monopoly characteristics.[8] Figure 1.1 shows the supply chain for urban water and sewerage services.[9] It identifies which service components could be expected to exhibit natural monopoly characteristics and which service components are potentially competitive.

The only natural monopoly elements of the supply chain are the water and sewerage (wastewater) pipe networks and some large storage facilities.[10] The services provided by these natural monopoly infrastructure facilities are shown in shaded boxes in figure 1.1. The other services in the supply chain—including water

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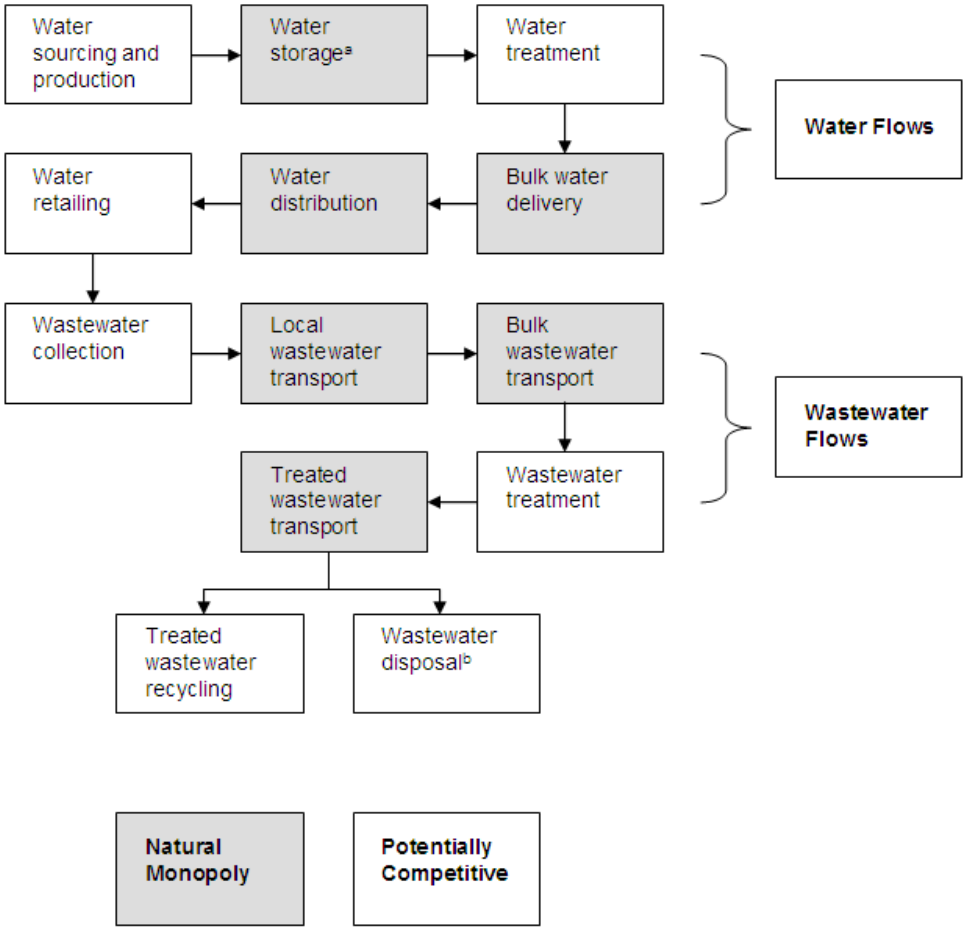
8 See Tasman Asia Pacific 1997, *Third Party Access in the Water Industry: An assessment of the extent to which services provided by water facilities meet the criteria for declaration of access*, Final report prepared for the National Competition Council, September, available at www.ncc.gov.au/pdf/PIReWrTa-001.pdf.

9 Urban services are provided in regional towns and in metropolitan Melbourne. These services involve: distributing treated water to households, commercial and industrial customers (and related services like harvesting, storing and treating raw water); collecting, treating and disposing of sewage and further treating sewage for recycling and reuse purposes; and a range of retail customer service functions. See section 1.3.1 for details on the provision of urban water services in Victoria.

10 Water storage facilities differ significantly in size and function and may either exhibit natural monopoly characteristics or be potentially competitive. Large dams will be natural monopolies when they cannot be efficiently duplicated and the marginal cost of storing additional water is low due to excess capacity. Small local storages that form an integral part of the water transport network will be inseparable from that natural monopoly facility. The provision of other water storages is likely to be potentially competitive. Storage services are discussed further in chapter 3.

procurement, sewerage collection, water and sewerage treatment, and retail services—are potentially competitive.

Figure 1.1 **Urban water and sewerage supply chain**
Natural monopoly and potentially competitive services



a The extent to which a water storage will exhibit natural monopoly or potentially competitive characteristics depends on the nature of the storage facility. **b** Wastewater disposal may include either disposal of treated wastewater to the environment through an outfall sewer, or sale of treated wastewater to a third party (that plans to use it or further treat it for sale as recycled water).

Source: Based on figure 1.1 and associated discussion in Tasman Asia Pacific 1997, *Third Party Access in the Water Industry: An assessment of the extent to which services provided by water facilities meet the criteria for declaration of access,* Final report prepared for the National Competition Council, September.

In contrast to the urban supply chain shown in figure 1.1, the rural supply chain does not typically include wastewater flows as sewerage services are not generally provided by rural water businesses. In addition, raw water may not be treated prior

to supply for irrigation purposes. The rural supply chain is, therefore, a truncated version of the urban supply chain.[11] Rural bulk water transport infrastructure (such as pipelines and irrigation channels) and associated storage facilities will exhibit natural monopoly characteristics, while other rural water services will be potentially competitive.

Figure 1.1 highlights that each of the potentially competitive components of the supply chain need to use the natural monopoly infrastructure services to serve end-use customers and source wholesale product. The ability to use, or gain access to, the relevant infrastructure services is a necessary condition for effective competition in the potentially competitive markets within the supply chain.

To compete effectively with an incumbent service provider, a new business would have to use the natural monopoly infrastructure operated by the incumbent to deliver water and sewerage services to its customers. This is because the cost to a new business of delivering water and sewerage services would be prohibitive if it had to build its own (duplicate) infrastructure compared to sharing use of the existing infrastructure. Higher costs of providing services would result in the new business having to charge higher prices than the incumbent business; the new business would, therefore, be unable to compete with the incumbent business.

It would also be wasteful from the community's perspective to have resources used in duplicating infrastructure when existing infrastructure could have been used. For example, without arrangements to share the use of infrastructure, a new business planning to provide water and sewerage services to customers in the metropolitan Melbourne area would be faced with duplicating at least part of the network of underground water and sewerage pipes. Not only would duplication be very costly, it would create significant inconvenience to residents and businesses in those areas where streets were dug up to install a duplicate pipe network.

Competition is not an end in itself. Enabling businesses to compete in providing water and sewerage services has the potential to improve community wellbeing by promoting:

- a more efficient allocation of resources in the water industry so that resources are used where they are most highly valued by the community (this is known as allocative efficiency)
- efficiency and productivity improvements that reduce the costs of providing water and sewerage services using existing inputs, processes and technologies (productive efficiency)
- longer term efficiency and productivity improvements resulting from innovations in water sourcing, water and sewerage treatment processes and technologies,

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[11] Rural services mainly involve the supply of raw water (and associated services like water storage facilities) to irrigators, private diverters and stock and domestic water users (on farms). Drainage services are supplied (to deal with run-off, generally for environmental reasons) but sewerage services are not provided. Rural farmers manage their own sewage via septic tanks on their properties. These tanks would require approval through local government planning processes and would be maintained by private contractors. See section 1.3.1 for details on the provision of rural water services in Victoria.

service delivery methods, and customer service provision (dynamic efficiency) and

- greater customer choice, with innovative water and sewerage services that better reflect customer needs and preferences.[12]

1.2.2 Purpose of an access regime

An access regime is a set of legislative and regulatory arrangements that establish a right for new businesses to negotiate with an infrastructure operator to share the use of natural monopoly infrastructure. An access regime includes a framework to facilitate those negotiations, such as negotiation protocols and guidance on reasonable terms and conditions for access, and provides for arbitration to resolve disputes when agreement cannot be negotiated.

Without an access regime, a business proposing to offer water or sewerage services could try to negotiate with the incumbent business to agree on arrangements to allow it to share the existing infrastructure operated by the incumbent. Private negotiations may, however, face a number of difficulties.

First, the incumbent could have an incentive not to agree to provide access, knowing that the new business intends to compete with it for a share of its customers. Vertically integrated infrastructure operators in particular have an incentive to limit or discourage access to protect their position in potentially competitive upstream or downstream markets. Incumbent businesses generally derive substantial market power from their ownership of essential infrastructure.

Second, where an industry is characterised by a large incumbent business with detailed technical and market information, on one side, and small potential entrants with limited technical and market information and experience, on the other side, negotiations may not take place on an equal basis. On the information available to the Commission, it seems likely that some opportunities for providing innovative water and sewerage services will suit small, specialised businesses seeking to enter the industry.

Third, private negotiations can require significant time and resources, particularly when neither side has much experience in such negotiations or no clear framework exists to guide those negotiations. When disputes arise, this can add further significant cost and delay to the negotiation process.

Developing an access regime would address these issues by providing a clear framework for negotiations. An access regime would establish a legal right for businesses seeking access to negotiate reasonable terms and conditions of access with an incumbent business operating specified natural monopoly infrastructure. An incumbent business would not be able to use its market power to

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[12] In relation to improved allocative and productive efficiencies, Coliban Water noted, in its submission to the issues paper, that its customers could benefit from reduced congestion in the existing sewerage system and recovery of additional revenues from under-utilised assets. All submissions are listed in appendix C and are available on the Commission's website www.esc.vic.gov.au.

refuse access or to set terms and conditions that created an unreasonable barrier to access.

In addition, establishing a framework for access negotiations would, by placing obligations on the parties to share relevant information, allow them to negotiate on a more equal basis and also reduce the time and costs involved in reaching an access agreement. A clear framework to guide negotiations would also help to reduce the likelihood of disputes. If a dispute did arise, dispute resolution mechanisms would be available to resolve the dispute in a timely and cost-effective manner.

1.3 Examples of service provision requiring the sharing of natural monopoly infrastructure

This section describes some potential examples of water and sewerage service provision by new providers, some of which require access to infrastructure services (that is, arrangements for sharing the use of infrastructure) and some that could proceed without infrastructure access. The examples have been formulated in the context of Victoria's current industry structure (outlined below).

This section clarifies what is meant by access to infrastructure and highlights what types of activities could be facilitated by an access regime.

1.3.1 Current industry structure

Currently, the existing publicly-owned water businesses provide water and sewerage services to their customers using infrastructure facilities that they own and operate. A simplified illustration of an urban supply system for water and sewerage services is shown in figure 1.2.

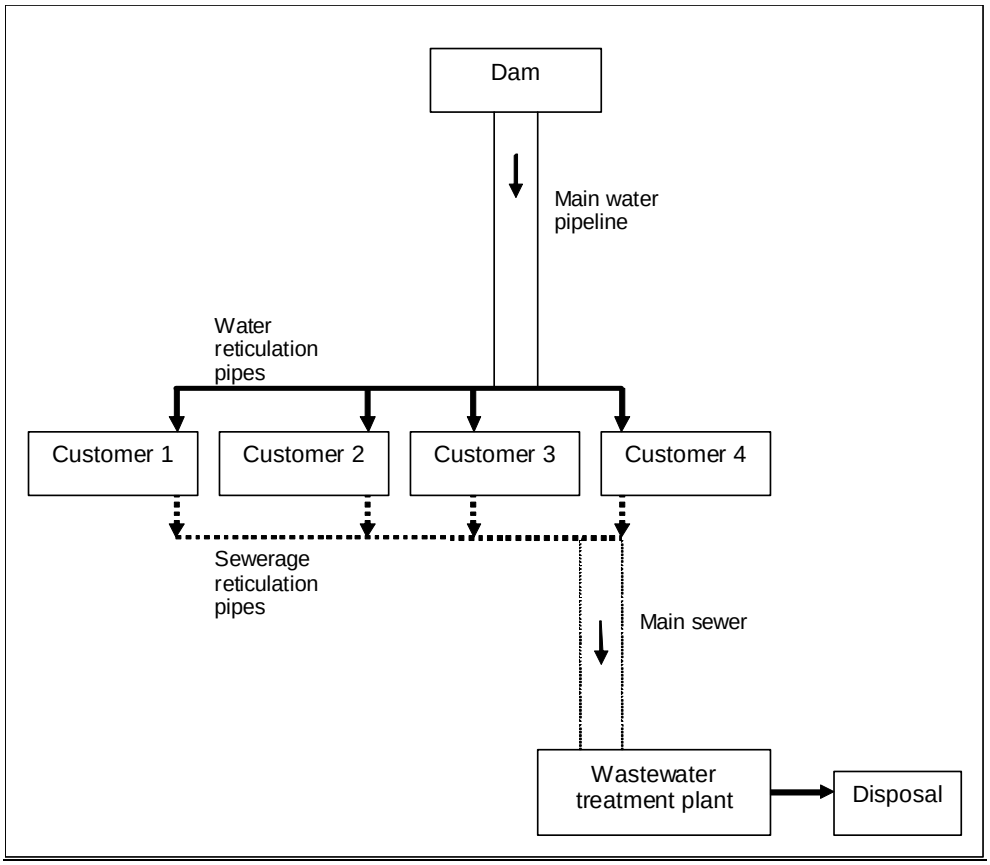
Water sourced from the dam is transported (moved) along the main water pipeline. When the pipeline reaches the town or city, it branches off into a network of water reticulation pipes that transport the water from the main water pipe to customers' premises (household, industrial or commercial customers). Customers' wastewater is discharged into sewerage reticulation pipes that transport the sewage to the main sewer. From the main sewer, the sewage is transported to a wastewater treatment plant, where it is treated to the standard required for discharge into the environment (set by the Environment Protection Authority). Currently these services are all provided by Victoria's publicly-owned water businesses.

In metropolitan Melbourne, the main water and sewerage pipelines are operated by Melbourne Water, which also owns and operates Melbourne's dams. Using this infrastructure, Melbourne Water provides wholesale services to the three metropolitan retailers (City West Water, South East Water and Yarra Valley Water) and to several regional businesses. These services include:

- harvesting, storage and treatment of raw water supplies
- transporting bulk water supplies
- operating the bulk sewerage network and treating the majority of sewage and

- managing rivers and creeks and major drainage systems in the Port Phillip and Westernport regions (local councils provide local drainage services).

Figure 1.2 **Simple diagram of water and sewerage service provision by an existing water business**



The three metropolitan retailers own and operate the water and sewerage reticulation pipes in the metropolitan areas in their locations. In supplying water and sewerage services in the metropolitan area, the functions of the retailers include:

- distributing and supplying water to retail customers
- operating the sewerage network from customers' premises through to the trunk (main) sewer network
- providing trade waste services to commercial and industrial customers and
- operating some small sewage treatment plants from which recycled water may be provided.

Each metropolitan retailer services a specific geographic area and does not compete directly with the other retailers for customers in the Melbourne area. (Their relative performance is reported on to allow 'competition by comparison'.)

In regional Victoria, the regional water businesses provide water and sewerage services within geographically defined areas. Each business occupies a monopoly position in providing specified services within its defined service area. Some regional businesses provide mainly urban services to regional cities and towns. Other regional businesses (often called rural businesses) provide predominantly rural water services to customers in regional areas. Other regional water businesses provide both urban and rural services.

In contrast to the metropolitan businesses, the regional businesses are generally vertically integrated. Each business operates the storages, main water and sewerage pipelines, water and sewerage reticulation pipes, and treatment plants in its respective service area. Rural services provided by regional water businesses may be provided via channels rather than pipelines. Wastewater services are not provided to rural customers so there are no sewerage pipelines in rural areas.

Urban services provided by regional water businesses include:

- harvesting water and operating and managing headworks (although some regional urban businesses purchase water from rural water businesses or from Melbourne Water)
- treating water
- distributing water to households and industrial customers
- collecting, treating and disposing of sewage and further treating sewage for recycling and reuse purposes and
- a range of retail customer service functions, including meter reading, billing and payment, and handling call centre enquiries and complaints.

Rural services provided by regional water businesses include:

- supplying water for irrigation, private diverters and stock and domestic water users
- providing irrigation drainage services
- sourcing bulk entitlements
- operating storage facilities and the infrastructure of irrigation districts
- constructing and maintaining delivery and irrigation drainage services
- licensing groundwater and surface water extraction and
- dealing with customer issues such as billing, payment collection and complaints.

1.3.2 Innovation in water and sewerage service provision

In the potentially competitive segments of the supply chain for water and sewerage services, there is a range of water and sewerage services that could be provided by other businesses in competition with the incumbent water business. Many of these services could not be provided efficiently and cost-effectively without the use of natural monopoly infrastructure operated by the existing water businesses. The

provision of other services would not require access to natural monopoly infrastructure. Potentially competitive services could be provided either by private businesses entering the water industry or by existing water businesses currently restricted to operate within other specified service areas.

The Commission is aware of a number of innovative methods of providing water and sewerage services (which substitute for the services provided by the existing water businesses), for example:

- In Sydney, Orica extracts contaminated groundwater from the Botany Sands Aquifer for treatment at its groundwater treatment plant. The plant provides high quality recycled water for Orica's own use as well as selling recycled water to other industrial, commercial and some residential (non-potable) users in the Botany and surrounding areas.
- In Victoria, a number of small local operators treat wastewater and supply recycled water to golf courses and sporting fields.
- Some industrial users have grouped together to develop small rainwater capture facilities to supply water for their own use.
- A number of small scale sewer mining projects are operating around Australia, including at Sydney Olympic Park, Flemington racecourse, the Pennant Hills golf course sewer mining facility in Sydney, and Southwell Park in the Australian Capital Territory.
- Coliban Water's and Central Highlands Water's submissions to the inquiry described trials currently underway to enable some customers, including councils and sporting groups, to purchase water from northern Victoria and use the Goldfields Superpipe and other publicly-owned water infrastructure to transport the water to them.

Most of these innovative arrangements are limited in scope and, except for the final example, do not involve the use of publicly owned infrastructure. They suggest, however, that there is a demand for innovative water and sewerage services and that there are private operators potentially interested in supplying such services. Facilitating access would be expected to promote further innovation in the potentially competitive segments of the market by allowing new water and sewerage service providers to offer services that require the use of natural monopoly infrastructure.

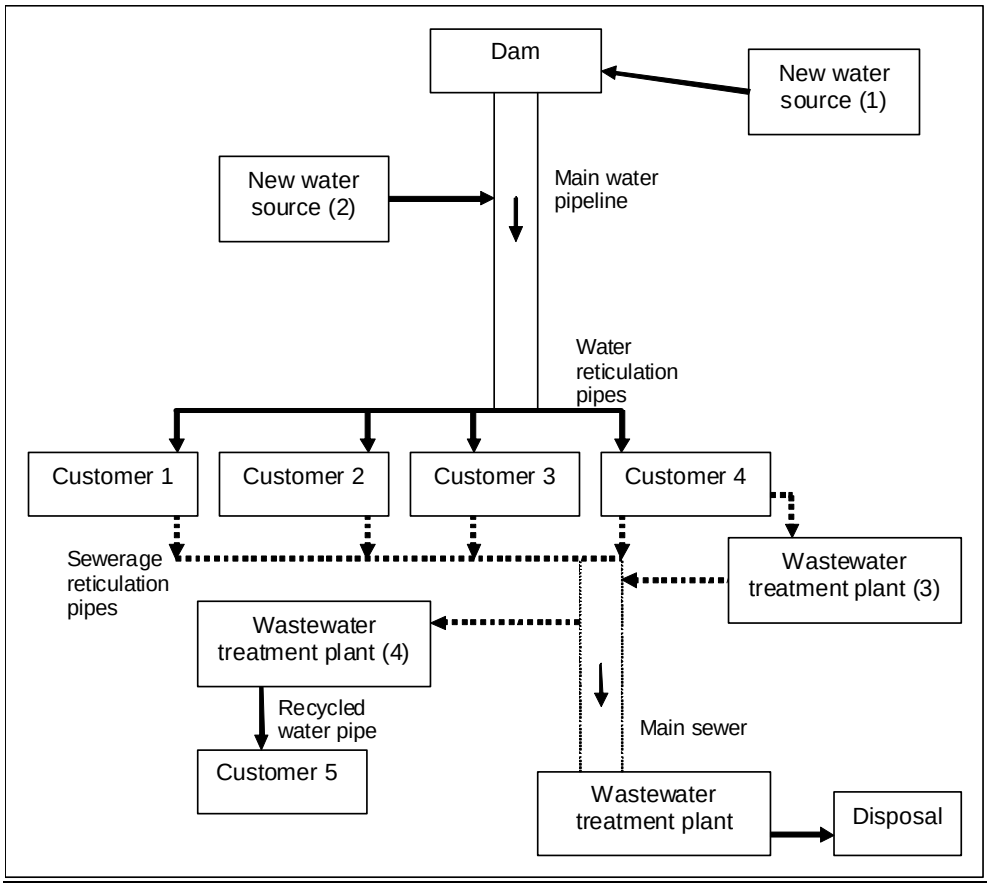
1.3.3 Some examples of infrastructure access

To clarify the types of activities requiring access to infrastructure and those that do not require infrastructure access, figure 1.3 illustrates some examples of activities that might involve the provision of water or sewerage services by businesses other than the existing water business in a particular supply area. To simplify the explanation, it is assumed that the incumbent water business owns and operates all the existing infrastructure, including the dam, the pipelines and the treatment plant. It provides all water and sewerage services to all existing customers, shown as customers 1 to 4 in the diagram.

Example 1: Water services

In the first example, Business A establishes a new source of water (1) or (2), such as a desalination plant or a new aquifer (as shown in figure 1.3 below).

Figure 1.3 **Simple diagram of water and sewerage service provision with participation by other businesses**



The first option for Business A does not require access to natural monopoly infrastructure. Business A sells the water to the incumbent water business, which distributes the water to its customers through the pipelines that it operates. Business A constructs a pipe to transport the water from its water source to an interconnection point with the water business' infrastructure, either into the main water pipeline (in the case of water source (1)) or into the water business' dam (in the case of water source (2)).

Since Business A does not use any of the water business' infrastructure, it does not need to negotiate access arrangements with the water business. It would only need to negotiate a contract for the sale of the water and arrangements governing

the quality of the water and the interconnection into the main water pipeline or dam.

The second option illustrates a situation where Business A needs to negotiate access to the incumbent water business' natural monopoly infrastructure. Under this option, Business A wants to sell the water directly to customers, instead of to the water business. It needs to share the use of the main water pipeline and the water reticulation pipe network (and possibly to the storage provided by the water business' dam) to be able to deliver the water to its retail customers when they want it. It would therefore need access to that infrastructure before it could deliver water services directly to customers.

Three main advantages arise from allowing Business A to share the use of the natural monopoly infrastructure:

- When Business A has the choice of selling directly to end-use customers, a market exists for Business A's water. Without a market for its water, Business A would have no option but to sell to the single buyer (the incumbent water business) and would risk being offered an uneconomically low price on a 'take-it-or-leave-it' basis. This risk would discourage Business A (and other potential entrants to the water industry) from developing a new water source. In contrast, the existence of a market, and a market-determined price, would promote investment by Business A (and other new entrants) in developing new, cost-effective sources of water. Development of these new water sources would improve the efficiency and reliability of water supply.
- The possibility of competition from new entrants to the water industry would create a strong incentive for the incumbent water business to improve the efficiency of its operations and to develop innovative, cost-effective ways of meeting customers' demands. This would also improve efficiency and reliability in the supply of water.
- Customers would be able to choose the water provider offering the service that best meets their individual needs and preferences.

Example 2: Wastewater treatment

The second example illustrates provision of a sewerage service to a retail customer by a business other than the incumbent water business, where access to the water business' infrastructure is not required.

In figure 1.3, Business B constructs a new wastewater treatment plant (3) under contract with an industrial customer (customer 4 in the diagram) to provide sewerage services because the customer's wastewater does not meet the water business' trade waste acceptance standards.[13] Business B builds a sewerage pipeline to take the wastewater from the customer's premises to its treatment plant (which is able to treat the customer's wastewater). After treating the wastewater to

[13] The water businesses set acceptance standards for trade waste that can be discharged into their sewers. These standards cover chemical, biological, radiological, bacteriological and physical characteristics of the trade waste. They reflect environmental requirements and technical requirements related to the capacity of each treatment plant.

meet the water business' trade waste acceptance standards, it discharges the treated wastewater into the water business' main sewer via a sewerage reticulation pipe from its premises. Business B is therefore a customer of the water business and pays it for sewerage services.

The water business transports Business B's wastewater through its main sewer to its own treatment plant where it treats it to the standard required for discharge into the environment.

Example 3: Sewerage services

In the first case described under this example, there is no access to the water business' infrastructure. Business C constructs a new wastewater treatment plant (4), shown in figure 1.3, and builds a pipeline connecting its treatment plant to the main sewer. It extracts sewage from the main sewer under a commercial agreement with the water business. It treats the sewage and sells the treated water to a new recycled water customer (which may be an irrigator or a factory and is shown as customer 5 in the diagram). It delivers the recycled water to customer 5 using a recycled water pipe that it constructs and operates. It does not use any of the incumbent water business' pipes to transport (move) the sewage to its treatment plant or to take the recycled water to its customer.

Extraction of sewage from the water business' sewer is known as sewer mining.[14] The incumbent water business transports sewage from customers 1 to 4 along the sewerage reticulation network and then the main sewer, all owned and operated by it, to its treatment plant. Business C pays the incumbent water business a price for purchasing sewage, which it extracts from the main sewer. The sewage is a resource that Business C buys and uses to produce the recycled water that it sells to its customer (customer 5).

In the second case described under this example, access to the water business' infrastructure is needed. Instead of purchasing sewage from the water business, Business C offers to provide retail sewerage services to customers 1 and 2. In this case, Business C has to negotiate access with the water business to use its sewerage reticulation network and its main sewer. Access to this infrastructure is needed to move the sewage from the premises of customers 1 and 2 to Business C's interconnection point with the main sewer.

Business C transports the sewage extracted from the main sewer along its own (interconnecting) pipe to its treatment plant (4). The sewage remaining in the main sewer is transported along the main sewer to the incumbent business' treatment plant.

In this case, Business C needs to agree on access arrangements with the water business, including rules governing the interconnection, the amounts taken out of the sewer, and the price it pays the water business for sharing the use of the sewerage network (the access price).

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[14] Sewer mining guidelines are currently being developed by an industry working group, with input from the Department of Sustainability and Environment. Sewer mining issues are briefly discussed in section 9.3.

Since the sewage from Business C's customers (customers 1 and 2) has been mixed in with the sewage from customers 3 and 4, Business C obviously cannot ensure it takes only the sewage discharged by its own customers. Instead, it extracts an amount of sewage equivalent to the amount discharged by its customers. Any differential in the quality of the sewage discharged into the sewerage system by Business C's customers compared to the quality of the sewage taken out by Business C has to be taken into account in determining the access price.

The access price would have to reflect not only the cost of providing the sewage transport service (and any related costs), but also any cost differential in treating the sewage discharged by Business C's customers compared to the average cost of treating the sewage discharged by the entire customer base. For example, if Business C's customers discharge sewage that is more expensive to treat, because their pollution loads are higher than average, the additional treatment costs incurred by the water business should be passed on to Business C.

There are three main advantages from allowing Business C to share the use of the natural monopoly infrastructure:

- If Business C can provide retail sewerage services to customers more efficiently and cheaply than the incumbent water business can, customers will benefit. Alternatively, Business C might provide a higher standard of service, such as more environmentally sustainable discharge practices, for which some customers may be willing to pay a higher charge.
- The possibility of competition from new entrants to the water industry would create a strong incentive for the incumbent water business to improve the efficiency of its operations and to develop innovative, cost-effective ways of meeting customers' demands. This would improve the efficiency of sewerage service provision.
- Customers would be able to choose the sewerage service provider offering a service that best meets their individual needs and preferences.

1.3.4 'Access' to resources vs 'access' to infrastructure

The three examples described above highlight that the term 'access', as used in the context of an access regime, refers to sharing the use of infrastructure facilities. It does not refer to:

- producing water (or recycled water) for sale to water customers as a water service provider
- being supplied with water (or recycled water) as a water customer
- discharging sewage as a sewerage customer or
- receiving sewage (or wastewater) as sewerage service provider, sewer miner or treatment plant operator.

Water, wastewater and recycled water are resources. Infrastructure facilities are required to transport these resources from one point to another or to store them for a certain period of time; these facilities include water and sewerage pipes and storage facilities, such as dams. Other infrastructure facilities are used to produce or treat these resources; examples of these facilities include wastewater treatment

plants, desalination plants, and pumping facilities. As noted in section 1.2.1, access is only required to infrastructure facilities that are natural monopolies.

Businesses proposing to provide water or sewerage services will generally need water and wastewater resources to be able to provide those services. For example, a business proposing to supply water services to customers will require a source of water, as well as access to water pipelines (or channels in rural areas) to deliver the water to its customers. It could purchase water from a water business or other water supplier (such as a desalination plant operator) or it could supply water from its own water source, such as an aquifer. If the business was proposing to supply recycled water to customers, it would need a source of wastewater, such as sewage or stormwater, to produce the recycled water provided to its customers.

If businesses are unable to obtain the resources needed to provide water and sewerage services, they will not be able to make full use of the opportunities opened up by an access regime. Chapter 9 identifies some legislative and regulatory impediments to businesses being able to obtain water and wastewater resources. These impediments to obtaining resources would need to be addressed to obtain the full benefits of an access regime.

1.3.5 Further examples of infrastructure access

Appendix D provides more examples of potential activities in the water industry, highlighting which would require access to natural monopoly infrastructure and which can occur without such access. Since facilitating access is expected to generate new and innovative ways of providing water and sewerage services, the examples given in appendix D, especially those involving access, are not exhaustive.

Finally, it is important to note that access to infrastructure may be sought by water businesses proposing to offer services that require the use of infrastructure facilities owned by another business. It should also be noted that, while the examples described in section 1.3.3 all refer to sharing the use of a publicly-owned water business' natural monopoly infrastructure, access could conceivably be needed to privately-owned infrastructure, where the infrastructure exhibited natural monopoly characteristics and was required to enable other businesses (which could be publicly or privately-owned) to provide water and sewerage infrastructure services. A theoretical example of such access is described in appendix D. An actual example is described in box 1.1.

Box 1.1 **Eastern Irrigation Scheme**

The Eastern Irrigation Scheme is a joint project between Water Infrastructure Group and Melbourne Water. Under the partnership, Water Infrastructure Group designed and built a Class A treatment plant to supply recycled water. It also designed and built the 60 km pipeline network that distributes Class A recycled water to 80 customers in a 170 square km area around Cranbourne.

The Eastern Irrigation Scheme, operating under the brand TopAq, supplies recycled water to customers for horticultural, recreational and industrial uses. Recycled water is also supplied to South East Water for on-sale to its recycled water customers in third pipe residential developments. South East Water shares the use of Water Infrastructure Group's recycled water pipeline network to deliver the water to its customers.

Source: Water Infrastructure Group 2009, *Eastern Irrigation Scheme*, www.topaq.com.au.

1.4 Access regimes in other industries and jurisdictions

In Australia, access regimes have been implemented in the water, gas, electricity, rail, telecommunications, and grain handling and storage industries. Access arrangements have also been developed for ports and airports. Overseas, access regimes have been established for various network-based utility industries, particularly telecommunications, gas and electricity.

Generally, access regimes have been implemented in the context of broader reforms designed to boost innovation and efficiency in the industry.

New South Wales is the first Australian state to establish an access regime for the water industry. Other Australian governments, including the South Australian, Western Australian and Queensland Governments, are considering the future development of access regimes for water industry infrastructure. The United Kingdom has established a limited access regime for water industry infrastructure and is undertaking further reforms to extend the opportunities for competition and broader participation in the water sector. Scotland has also established access arrangements in the context of introducing retail competition in its water sector.

More detailed information about access regimes in New South Wales', the United Kingdom's and Scotland's water sectors and in other Australian industries is provided in appendix I in volume III of the final report.

1.5 Structure of this volume

Volume II of the Commission's report sets out its detailed analysis and explains the reasoning underpinning its recommendations. Chapter 2 of this volume describes the Commission's approach in conducting this inquiry and developing its recommendations. Chapters 3–9 set out the Commission's detailed analysis and recommendations:

- Chapter 3 makes recommendations on the coverage (or scope) of an access regime, that is, its geographical coverage and the types of infrastructure services subject to the regime. It recommends a procedure for identifying particular infrastructure services that would be declared as covered by the access regime.
- Chapter 4 describes the recommended features of a negotiation framework for access requests, including dispute resolution and appeal mechanisms.
- Chapter 5 compares alternative access pricing methodologies and recommends when a retail-minus approach should be applied and when a cost of service approach should be applied.
- Guidelines for accounting ring-fencing, and a staged process for implementing ring-fencing for particular infrastructure services and functional separation of some water businesses, are discussed in chapter 6.
- Chapter 7 makes recommendations on how the existing legislative and regulatory provisions relating to customer protection, water quality, public health and safety, and environmental protection should be extended to new water and sewerage service providers. It recommends establishing licensing of water and sewerage service providers, including infrastructure service providers.
- In chapter 8, the Commission discusses the regulation of a state-based access regime. It recommends that it should act as the regulator of a Victorian access regime, including arbitrating in access disputes.
- Chapter 9 identifies potential barriers to competition that the Government should consider addressing to support the effective operation of an access regime. It also identifies system coordination and management issues that would need to be addressed.

Finally, chapter 10 outlines a staged implementation process for establishing an access regime.

2 COMMISSION'S APPROACH TO THIS INQUIRY

In conducting this inquiry and undertaking its analysis, the Commission has been guided by:

- the terms of reference (included at appendix A), which set out the Government's objectives and outline the scope of the inquiry
- the Commission's legislative objectives and the principles it must apply in regulating industries and advising the Government on industry regulation (see appendix B for details)
- stakeholder comments obtained from the public consultation process (see appendix C for details)
- the principles contained in the National Competition Principles Agreement, including the clause 6 criteria for obtaining certification of a state-based access regime (included at appendix F), and the Competition and Infrastructure Reform Agreement (included at appendix G), and
- experiences in other jurisdictions and other industries where access regimes have been established (appendix I describes the key features of a number of other access regimes).

This chapter explains what the terms of reference required the Commission to investigate and make recommendations on, and what issues were excluded from the scope of its inquiry. In addition, it summarises the overarching considerations underpinning the Commission's recommendations on how a state-based access regime should be developed for the Victorian water industry.

Stakeholder comments on the Commission's draft recommendations are discussed in subsequent chapters of this volume of the report. Where relevant, lessons from other access regimes are also referred to in the analysis in those chapters.

2.1 Scope of the inquiry

The terms of reference for this inquiry are wide-ranging in scope. The state-based access regime is intended to cover water and sewerage infrastructure across the State. The terms of reference required the Commission to make recommendations on:

- which water and sewerage infrastructure services should be subject to access
- who will be eligible to seek access
- an appropriate negotiation framework and dispute resolution mechanism

- the terms and conditions of access, including safety requirements, the allocation of capacity among competing users, interoperability issues, and service quality issues
- a methodology for access pricing and accounting ring fencing
- information publication and reporting requirements on businesses
- the appropriate division of responsibilities for network operation, maintenance and expansion
- implementation issues, including transitional arrangements, and
- the appropriate role of the Commission as regulator.

The terms of reference also required the Commission to ensure that the recommended arrangements will not discourage new investment in infrastructure, including greenfields investments, or pose an impediment to interstate access. It was also required to ensure that the recommended arrangements would allow existing businesses and new entrants to comply with legislative and regulatory obligations relating to resource management, the environment, water quality, and health and safety.

The terms of reference stated that the Commission's recommendations must be consistent with National Competition Policy, including the principles in clause 6 of the Competition Principles Agreement (included at appendix E), and with the relevant sections of the *Essential Services Commission Act 2001* (ESC Act), including the Commission's objectives in section 8 of the Act and Part 3A relating to third party access regimes (both included at appendix B). The Commission was also required to have regard to the Victorian Government's commitment to public ownership of water businesses set out in the *Constitution Act 1975*.

In making its recommendations, the terms of reference required the Commission to be cognisant of other work programs taking place in Victoria's water sector, including:

- development of arrangements for optimising system management of the expanded water grid and new water sources to ensure the desired security of supply is achieved at least cost
- expansion and increased interconnectivity of the Victorian Water Grid and clarification of responsibilities for its management and coordination
- consideration of market-based mechanisms
- clarification of rights to alternative water sources and
- development of objectives and key principles of water sensitive urban design.

In conducting the inquiry, the Commission was able to examine access regimes in other industries and state-based access regimes for water and sewerage services in other states. It could make recommendations on implementing and obtaining certification for the recommended access regime and on any appropriate transitional arrangements and any technical requirements, guidelines or regulations required to support the regime. It could also recommend when a future review of an access regime should occur.

In addition, the Commission could comment on potential barriers to effective implementation of a state-based access regime. While the Commission has identified some arrangements that could form barriers, and noted some options for reducing those barriers (see chapter 9), it was not asked to make recommendations on measures for addressing such barriers. The Commission has not, therefore, undertaken a comprehensive identification or assessment of possible complementary measures that could be implemented in conjunction with developing a state-based access regime.

The Commission expects that appropriate complementary measures will be developed by the Government following its consideration of the Commission's report. It notes that some complementary measures are already being considered in the context of the other work programs taking place in Victoria's water sector.

The terms of reference listed the Government's objectives in developing an access regime for the water industry (see section 1.1.2 of chapter 1 in this volume). These objectives focus on promoting efficiency and innovation in the water industry while maintaining existing standards in health and safety, water quality, and resource and environmental management. The Commission has been guided by the Government's objectives in developing its recommendations.

It is important to recognise that the terms of reference directed the Commission to make recommendations on how to develop a state-based access regime for water and sewerage infrastructure services, not whether an access regime should be developed. The Commission has not, therefore, undertaken a cost-benefit analysis of a state-based access regime or canvassed stakeholder views on whether an access regime should be developed.

This should not be taken to imply that the Commission has disregarded the costs and benefits associated with developing an access regime. One of the Commission's legislated objectives in regulating the water industry is that, wherever possible, it must ensure that the costs of regulation do not exceed the benefits (see appendix B). An overarching concern for the Commission has, therefore, been to minimise the costs of implementing a regime while promoting the greatest benefits to the community from facilitating access and broader participation in the industry.

2.2 Benefits from a state-based access regime

Facilitating access to natural monopoly infrastructure can improve community well-being by encouraging innovation, increasing efficiency in water and sewerage provision, and better meeting customers' needs and preferences (see chapter 1).

Broad provisions to facilitate access arrangements already exist at the national level (see appendix E for a description of the existing regulatory framework). Under the National Competition Principles Agreement, [15] all Australian governments agreed to a national access regime for third party access to infrastructure services.

[15] Council of Australian Governments 1995, *Competition Principles Agreement,* 11 April 1995 (as amended to 13 April 2007).

The National Access Regime was established through amendments to the *Trade Practices Act 1974* (TPA). The regime applies to services provided by significant infrastructure where it would not be economically feasible to duplicate the facility (that is, the facility is a natural monopoly) and the use of those services is necessary to permit effective competition in related markets.

The main purpose of establishing a state-based access regime for an industry, instead of relying on the national access provisions, is to provide greater certainty, clarity and transparency for access seekers and infrastructure operators. By tailoring the regulatory arrangements to the specific circumstances of the industry and the state, a state-based access regime can provide streamlined arrangements for negotiating access agreements, or obtaining arbitration of a dispute, that reduce costs for both infrastructure operators and businesses seeking access. The Western Australian Economic Regulation Authority (ERA) noted that:

> *The development of a State-based regime, in which the general terms and conditions of access are clear to access seekers in advance, could reduce considerably the risks and delays in obtaining access.*[16]

In this context, the Commission has been mindful of the NCC's comment that:

> *… a state or territory access regime that merely replicates the negotiate/arbitrate approach already available under the general provisions of Part IIIA of the TPA would appear to offer little benefit while arguably adding to cost and uncertainty.*[17]

An important consideration for the Commission in undertaking its inquiry has, therefore, been to provide the Government with the information needed to develop a comprehensive access regime that establishes clear processes customised to the specific circumstances of the Victorian water sector. In the Commission's view, such a regime would generate benefits for Victorians that outweigh the costs associated with the regime. Such a regime would reduce the costs, delays and risks to both access seekers and infrastructure providers in negotiating access arrangements for water and sewerage infrastructure services.

2.3 Certification of a state-based access regime

Under Part IIIA of the TPA, a state can apply to the NCC to have a state-based access regime declared as 'effective' for the purposes of the Act. The certification process is activated when the Premier applies to the NCC for assessment of the effectiveness of the state-based regime. The NCC then makes a recommendation to the relevant Commonwealth Minister (the Minister for Competition Policy and Consumer Affairs), who decides whether to grant certification.

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16 Economic Regulation Authority 2008, *Inquiry on Competition in the Water and Wastewater Services Sector: Final Report*, June, p. 67.

17 National Competition Council 2009, *Water Industry Competition Act 2006 (NSW): Application for certification of the NSW water industry infrastructure services access regime*, Final recommendation, 11 May, p. 7, available at www.ncc gov.au.

Once a state-based access regime has been certified as effective under the TPA, the regime forms the regulatory basis for access requests. Access seekers cannot apply for declaration of infrastructure services under the National Access Regime if they are covered by a certified state-based regime.

The major advantage of certification is ensuring that access is regulated under a single regime. This improves certainty about how access will be regulated, facilitates a consistent approach, and reduces regulatory risk for infrastructure providers and access seekers.

While applying for certification is not mandatory, the Victorian Government has committed, under clause 2.9(b) of the Council of Australian Governments' (COAG) Competition and Infrastructure Reform Agreement, to seek certification of any state-based access regime. The terms of reference for this inquiry confirmed the Government's intention to apply for certification of an access regime for the water sector.

In conducting this inquiry, therefore, the Commission has taken into account the NCC's guidance on the certification criteria. The Commission's analysis and recommendations aim to provide the Government with the information needed to develop an access regime that will satisfy the requirements for certification.

2.4 Staged implementation of an access regime

Recognising the extensive work program required to establish an appropriate state-based access regime, the Commission's draft report recommended that the Government adopt a staged approach to implementing a state-based access regime. It remains the Commission's view that this approach is the best way to minimise implementation costs while avoiding unnecessary delay in opening up greater opportunities for participation in the water sector. It will thereby ensure that the benefits from implementing an access regime outweigh the costs.

Many submissions to the Commission's issues paper expressed concern that the costs of implementing an access regime should not exceed its expected benefits. To minimise costs, many submissions advocated a cautious and staged approach to implementation. There has been strong support in submissions to the Commission's draft report for a staged implementation process. [18]

In the initial stage, arrangements would be put in place to clarify which infrastructure services will be subject to access and to set out a clear and transparent framework for negotiations (backed up by dispute resolution mechanisms) between infrastructure providers (that is, the water businesses) and businesses seeking access to infrastructure. By facilitating access, these initial arrangements will ensure that the benefits from innovation and broader participation in the water industry are not delayed while the access regime is further developed and refined.

In subsequent stages, the initial arrangements will be built upon and refined as knowledge about, and experience in, providing access increases and participation

[18] Submissions can be viewed on the Commission's website www.esc.vic.gov.au.

in the Victorian water industry becomes more diverse. This will ensure that the resulting regime is comprehensive, clear and transparent, and tailored to conditions in Victoria's water sector.

An extensive process involving more detailed analysis, stakeholder consultation, and detailed review of existing legislation and regulations will be needed to identify and implement all the measures needed to establish an access regime. A staged implementation period will allow sufficient time for the Commission to develop and issue guidance and pricing principles. It will allow time for the Government to put in place all legislation and regulations required to support the regime, including licensing arrangements. It will allow the water businesses time to understand fully their obligations under the regime and to put the appropriate arrangements in place. Staged implementation will also allow for effective stakeholder participation in consultation on developing the detailed measures to be implemented as part of establishing an access regime.

After the implementation process is completed, and all supporting measures are in place, the Government would be in a position to apply for certification of the regime.

The staged implementation process recommended by the Commission is discussed in chapter 10.

3 DEFINING INFRASTRUCTURE SERVICES SUBJECT TO AN ACCESS REGIME

The terms of reference for this inquiry required the Commission to make recommendations on which infrastructure services in the Victorian water sector should be subject to (or covered by) a state-based access regime. In broad terms, these will be services provided by natural monopoly infrastructure facilities that are not economically feasible to duplicate. New water and sewerage service providers would need to share the use of these facilities to be able to efficiently provide water and sewerage services to their customers. Defining which infrastructure services would satisfy these conditions is an essential step in establishing an access regime.

It is important to recognise that an access regime only applies to infrastructure services; it does not apply to water or wastewater resources, such as the water carried in pipelines or the sewage carried in sewers (see section 1.3.4). The Commission recognises that arrangements to allow water industry participants to obtain water or wastewater resources may be needed to support the operation of an access regime for the water industry. Issues associated with the rights to own and trade these resources are discussed in chapter 9.

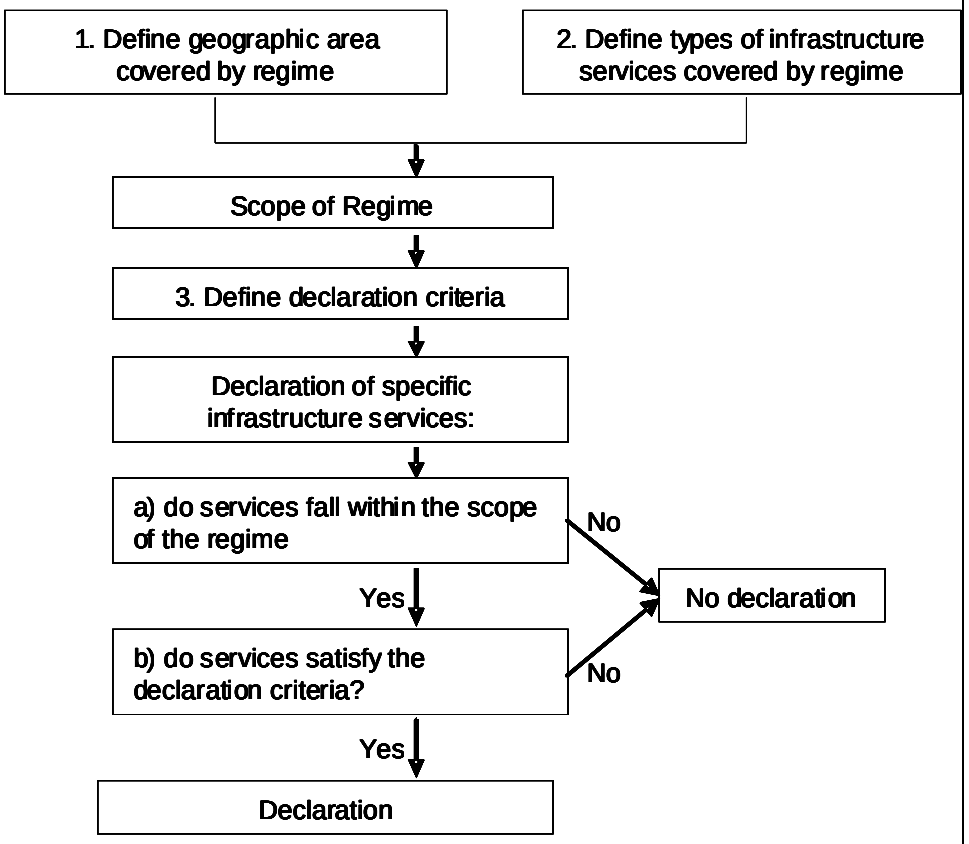
This chapter sets out the Commission's recommendations on the general coverage of a state-based access regime, as well as a procedure for identifying or declaring specific infrastructure services as being subject to the provisions of the regime.

3.1 Defining the coverage of a state-based access regime

It will be necessary to define clearly the infrastructure services subject to a Victorian access regime to provide certainty and clarity to industry participants and potential new entrants. There are three steps in defining a regime's coverage.

First, the regime's geographical boundaries need to be specified. Second, the generic types of infrastructure services that are subject to the regime must be defined. These two steps define the scope of the regime. The third step is to identify specific infrastructure facilities that fall within the regime's scope and satisfy certain criteria (the declaration criteria). The process of confirming that a particular infrastructure service satisfies those criteria is known as declaration of the service. These steps are illustrated in box 3.1.

Box 3.1 **Defining coverage and declaring infrastructure services**



Australian governments have established a set of declaration criteria for determining the infrastructure services to be included in access regimes under the National Competition Policy. These criteria are included in clause 6 of the Competition Principles Agreement (see appendix F). For the purposes of the national access regime, s. 44H(4) in Part IIIA of the *Trade Practices Act* 1974 (TPA) defines the declaration criteria as:

> *(a) that access (or increased access) to the service would promote a material increase in competition in at least one market (whether or not in Australia), other than the market for the service;*
>
> *(b) that it would be uneconomical for anyone to develop another facility to provide the service;*
>
> *(c) that the facility is of national significance, having regard to:*
>
> > *(i) the size of the facility; or*

(ii) the importance of the facility to constitutional trade or commerce; or

(iii) the importance of the facility to the national economy;

(d) that access to the service can be provided without undue risk to human health or safety;

(e) that access to the service is not already the subject of an effective access regime;

(f) that access (or increased access) to the service would not be contrary to the public interest.

Since the Victorian Government intends to seek certification of a state-based access regime, the declaration criteria set out in the legislation establishing the regime should be similar to, or at least consistent with, these declaration criteria set out in the TPA. In the context of a state-based regime, the criteria denote that an infrastructure facility providing services that are subject to the regime would be:

- necessary to permit effective competition in related markets—Businesses providing services in upstream or downstream markets can only compete effectively if they can share the use of the infrastructure.
- not economically feasible to duplicate—This is the definition of a natural monopoly. It means that, within the likely range of reasonably foreseeable demand for the service, the cost of providing the service (such as transporting water or sewage) is lower if it is provided by a single infrastructure facility (such as a single water or sewerage pipeline network).
- significant—Significance may be measured in relation to the nation, the state or to a particular region.
- able to be used safely by an access seeker—Access should be granted only where appropriate regulation can ensure that health and safety requirements can be met.

The declaration criteria also provide a framework for defining the scope of an access regime. The Commission highlighted, in its draft report, that any infrastructure services that did not fall within the scope of a certified state-based access regime would be covered by the national access provisions under the TPA if they met the declaration criteria.

3.2 Geographical coverage of the regime

The Commission's draft report recommended that the entire State of Victoria should be covered by a state-based access regime. This recommendation reflected the Commission's conclusion that covering the entire State would give access seekers and infrastructure operators certainty about the regime's scope. In reaching this conclusion, the Commission considered two key issues.

First, limiting the scope of a state-based access regime to less than the entire State would generate uncertainty and potentially additional costs for businesses proposing to provide water and sewerage services in areas not covered by the access regime. This could, for example, occur in the New South Wales water

industry access where the state-based access regime covers only part of the State.[19] When an access seeker is unable to negotiate access to infrastructure services in an area not covered by the regime, it has to make two applications under the regime just to establish a legal right to negotiate with the infrastructure operator within the framework established by the regime (see box 3.2). The National Competition Council (NCC) identified this as a potential concern in its assessment of the New South Wales Government's application for certification.

Box 3.2 Geographical coverage of the New South Wales water industry access regime

In New South Wales, the coverage of the access regime is confined to water and sewerage infrastructure that falls within a scheduled geographical area, as specified in the *Water Industry Competition Act 2006* (NSW). Currently the only scheduled areas are the areas of operation of Sydney Water and Hunter Water.

An access seeker proposing to provide a water or sewerage service that requires the use of natural monopoly infrastructure located outside of the scheduled area could try to negotiate a private access arrangement with the relevant infrastructure operator. In the event that these negotiations were unsuccessful, the access seeker would have to apply for the Premier to extend the coverage of the regime to add the relevant geographical area. If this application was successful, the access seeker could then apply for declaration of the services provided by the infrastructure facility.

The access seeker would be granted a legal right to negotiate access terms and conditions with the infrastructure operator, within the provisions of the access regime only after its two applications were approved.

Source: Independent Pricing and Regulatory Tribunal, *WICA Access Fact Sheets*, available at www.ipart.nsw.gov.au; National Competition Council 2009, *Water Industry Competition Act 2006 (NSW): Application for certification of the NSW water industry infrastructure services access regime*, Final recommendation, 11 May, available at www.ncc.gov.au.

In contrast, under the National Gas Law, all pipelines were either declared upon the commencement of the gas access regime or defined as falling within the scope of the regime. The National Gas Law therefore provides certainty for participants in the gas industry about the extent of the gas access regime's coverage. The Commission considers this approach is preferable to limiting the geographical coverage of a Victorian access regime.

Second, the Commission considered the implications of recommending state-wide coverage for infrastructure facilities where interstate issues may arise. The Competition Principles Agreement requires that where more than one state-based regime applies to certain infrastructure facilities, the regimes should be consistent

[19] Outside the areas of operation of Sydney Water and Hunter Water, water and sewerage services are provided by local councils.

or a single process should apply for seeking access to the infrastructure services provided by those facilities. The Council of Australian Governments' Competition and Infrastructure Reform Agreement (included at appendix G) is also relevant. Under clause 2.1 of the Agreement, the federal, state and territory governments agreed to 'establish a simpler and consistent national approach to economic regulation of significant infrastructure'.

In covering the entire State of Victoria, interstate issues could arise in respect of infrastructure facilities located in the Murray-Darling Basin, where trading has created a single rural water market that crosses state borders. In addition, capacity in River Murray storages is apportioned between Victoria, New South Wales and South Australia under the Murray-Darling Basin Agreement.[20] Of these storages, Dartmouth Dam is fully located within Victoria and would therefore be subject to a state-wide Victorian access regime.

In its draft report, the Commission noted that the relevant State Governments, including the Victorian Government, have agreed that consistent regulatory arrangements should be put in place for the Murray-Darling Basin through a national scheme. However, while a national water industry access regime could be established in the future, no specific national access arrangements have as yet been established for the industry beyond the general access provisions under the TPA.

In regard to consistency with other state-based access regimes, the Commission noted, in its draft report, that the Murray-Darling Basin is not included within the scheduled geographic area covered by New South Wales' access regime and that no other State has established a state-based access regime for its water industry. Since then, the South Australian Government has announced (in July 2009) that it will establish a third party access regime for its water industry as part of its *Water for Good* plan.[21] The South Australian Government intends to begin developing an access regime in 2010 with completion expected in 2015. No further information about the design of the proposed South Australian regime is available at this time.

As the first state-based access regime potentially to apply in the Murray Darling Basin, and in the absence of further detail about proposed regimes in other jurisdictions, it is not possible to address matters of consistency at this time. In designing their respective access regimes, there would be benefits from other jurisdictions giving consideration to how their schemes would interact with the Victorian regime. All jurisdictions should be mindful of keeping transaction costs as low as possible for access seekers making applications across access regimes in different jurisdictions.

If the Basin were to subsequently become (or be proposed to become) subject to another state-based access regime, the Victorian Government should, at that time, consider whether an inter-governmental agreement should be made with the

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20 For more detail on storage sharing arrangements, see Goulburn-Murray Water 2009, *Sharing River Murray Water*, available at www.g-mwater.com.au.

21 Government of South Australia 2009, *Water for Good: A plan to ensure our water future to 2050*, June, p. 171, available at www.waterforgood.sa.gov.au/the-plan.

relevant State Government to ensure that a single process applied for seeking access to infrastructure services.

No submissions or further information were received, in response to the draft report, on the geographical scope of an access regime. The Commission therefore confirms its recommendation that the entire state of Victoria be covered by a state-based access regime.

Recommendation 3.1

That the entire state of Victoria be covered by a state-based access regime.

Matters for further consideration

Should the Murray-Darling Basin become (or be proposed to become) subject to another state-based access regime, the Victorian Government should, at that time, consider whether an inter-governmental agreement should be made with the relevant State Government to ensure that a single process applied for seeking access to infrastructure services.

3.3 Types of infrastructure services covered by the regime

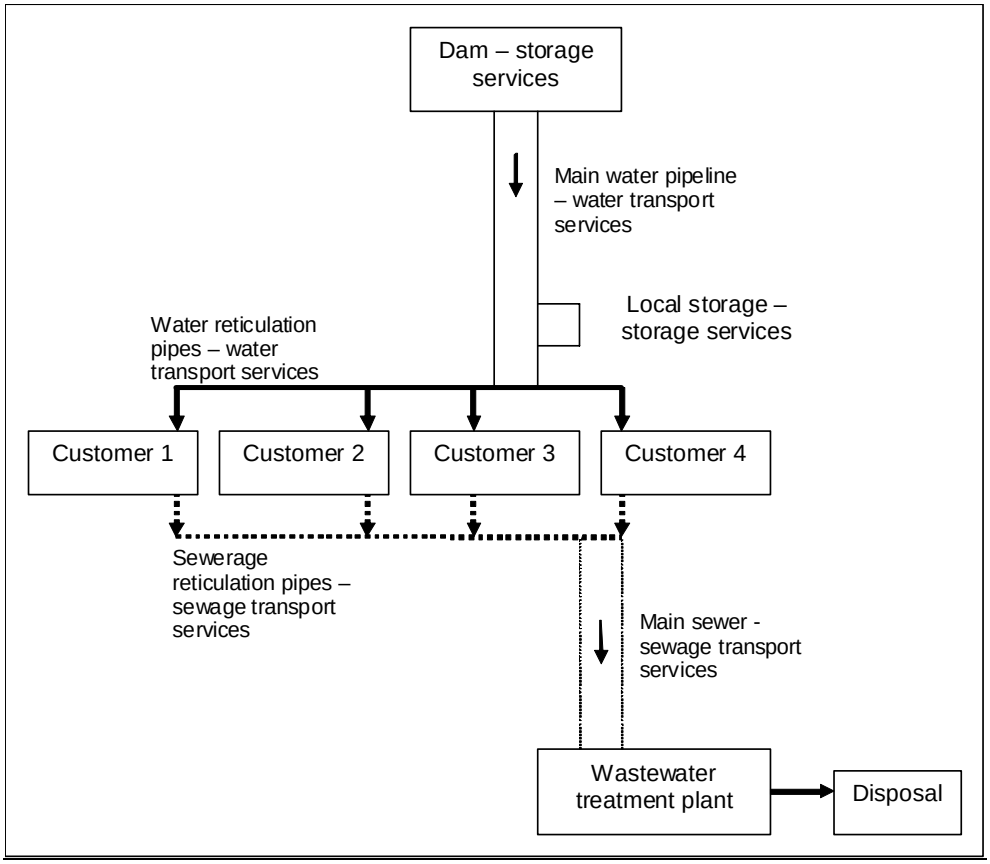
In addition to its geographical boundaries, the scope of an access regime is defined by the generic types of infrastructure services subject to the regime. These types of services are identified by reference to the declaration criteria discussed in section 3.1.

Figure 3.1 illustrates a simple water and sewerage network to show, in very broad terms, the types of natural monopoly infrastructure facilities in the water sector. It also identifies the main type of service provided by each facility. The Commission considers that the generic types of infrastructure services that meet the declaration criteria—in terms of being provided by natural monopoly facilities and necessary to provide water or sewerage services in related markets—include:

- the water transport services provided by main (trunk) and reticulation water pipes (and facilities associated with those pipes)
- the sewage transport services provided by main (trunk) and reticulation sewerage pipes (and facilities associated with those pipes) and
- storage services provided by storage facilities for water and sewage, such as local storages that are integral to the pipeline networks.

These types of infrastructure services are discussed in more detail in the rest of this section.

Figure 3.1 **Simple diagram of water and sewerage infrastructure services**



Note: This diagram is for an urban water and sewerage system. In rural areas, channels (instead of pipelines) may be used to transport water and in some rural areas there may only be a water network.

3.3.1 Water and sewage transport services

Water transport services (also known as water conveyance services) refer simply to the process of moving water from one place to another, generally through a pipeline or, in rural areas, a channel or waterway. For example, water businesses transport water from storage facilities (such as dams) and treatment plants (such as a recycled water plant or a desalination plant) along pipelines to their customers. Similarly, sewage transport services (also known as sewage conveyance services) refer to the process of moving sewage through sewerage pipes from one place, such as customers' premises, to another, such as a treatment plant. (These examples are illustrated very simply in figure 3.1.)

Water and sewage reticulation is the transport of water or sewage along small local pipelines that branch off the main (or trunk) water pipeline or the main sewer. Examples are the transport of water along the pipes connecting a customer's premises into the main water pipeline and the transport of sewage along the pipes

connecting from a customer's premises into the main sewer (as shown in figure 3.1).

Water and sewerage pipelines (and similarly rural channels and waterways) have natural monopoly characteristics and are generally not economically feasible to duplicate. As discussed in sections 1.2 and 1.3.3, access to the transport services provided by these infrastructure facilities is necessary to permit broader participation in providing water or sewerage services in related markets. Southern Rural Water noted, in its submission to the issues paper, that it is currently sharing the use of water infrastructure owned and operated by Melbourne Water, City West Water and Western Water to transport water from its drought reserves in the Thomson Reservoir to irrigators in Bacchus Marsh.

In its draft report, the Commission recommended that the water and sewerage transport services provided by water industry infrastructure be subject to a state-based access regime. It proposed that the definition of water and sewerage transport services covered by the regime could be modelled on the definition included in New South Wales' water industry access regime. The coverage provisions in the *Water Industry Competition Act 2006* (NSW) define infrastructure services subject to the regime as being:

> *the storage, conveyance or reticulation of water or sewage by means of water industry infrastructure … but:*
>
> *(a) does not include the storage of water behind a dam wall, and*
>
> *(b) does not include:*
>
> *(i) the filtering, treating or processing of water or sewage, or*
>
> *(ii) the use of a production process, or*
>
> *(iii) the use of intellectual property, or*
>
> *(iv) the supply of goods (including the supply of water or sewage),*
>
> *except to the extent to which it is a subsidiary but inseparable aspect of the storage, conveyance or reticulation of water or sewage.*

The definition includes small storages that are an integral part of providing transport services but excludes dams from the regime's coverage. Melbourne Water supported the inclusion of service reservoirs, which are used to optimise operation and are an integral part of providing transport services. Dams are discussed further in section 3.3.3.

Services associated with filtering, treating and processing water and sewage, or producing water or recycled water, are not generally included in New South Wales' coverage definition. The infrastructure required to provide these services, such as treatment plants and desalination plants, do not generally exhibit natural monopoly characteristics and do not therefore meet the declaration criteria.

The Commission recognises that some filtering, treatment or processing may be undertaken as an integral part of transporting water. For example, where an access seeker injects water into a supply network upstream of a water storage facility, water treatment is likely to occur as the water leaves the storage facility. In

general, it will be too costly, or even physically impossible, to avoid treating the water being transported for the access seeker. In such situations, the treatment service will be inseparable from the transport service.

In the draft report, the Commission recommended therefore that services associated with filtering, treating or processing water and sewage or producing water or recycled water should be excluded from the definition of infrastructure services covered by a Victorian access regime, except where they are subsidiary but inseparable to providing transport services. The Victorian definition would be similar in this regard to the New South Wales' definition.

Melbourne Water's submission to the draft report supported this approach. It noted that, in the case of its water distribution network, many of its service reservoirs and smaller treatment plants, such as chlorination facilities, are an integrated part of the network. Similarly, its sewerage transfer network includes subsidiary, but integral, facilities such as odour control treatment plants and ventilation stacks.

City West Water's submission, however, objected to excluding treatment services on the grounds that the chemical composition of an access seeker's water could interact unfavourably with the incumbent's water (despite meeting standards set under the Australian Drinking Water Quality Guidelines). In such circumstances, an infrastructure operator could negotiate contractual standards for chemical composition as part of the access seeker's terms and conditions for providing access (see section 4.2.4). The access seeker could then negotiate a commercial arrangement with the infrastructure operator to treat its water to the contracted standard. Alternatively, it could ensure its water met the contracted standard prior to injection into the infrastructure operator's network, either by treating the water itself or by purchasing treatment services from another treatment provider.

More generally, in regard to treatment services that are not integral to providing transport services, treatment plant operators could enter into contracts to sell treatment services to various customers, including access seekers. Yarra Valley Water suggested, in its submission to the draft report, that new service providers in the water sector could buy rights to sewage treatment capacity at the Eastern and Western Sewage Treatment plants. The plant operator's decision whether to offer these services, and the terms and conditions for providing services, would be made on commercial grounds. Terms and conditions would be negotiated between treatment plant operators and their customers.

Recommendation 3.2

That water and sewerage transport services provided by water industry infrastructure be covered by a state-based access regime. The definition of water and sewerage transport services would include services, such as storage services, that are subsidiary but inseparable to providing transport services. It would exclude: the filtering, treating or processing of water or sewage; the use of a production process; the use of intellectual property; and the supply of goods, including the supply of water or sewage; except to the extent that these services are an inseparable part of providing transport services.

3.3.2 Metering

Water and sewage flows through transport infrastructure must be measured for operational and billing purposes. Metering occurs at a number of different points in water and sewerage networks. Meters at the headworks measure the quantities of bulk water supplied to wholesale customers. In-system meters measure water flows and sewage flows within the water and sewerage networks at various interconnection points. Meters would have to be installed at interconnection points with access seekers' infrastructure, for example, at water injection points or sewage off-take points.[22] Retail meters measure water usage by customers at the retail level to allow the water retailer to bill customers on the basis of usage.

In its draft report, the Commission recommended that headworks meters and in-system meters—which are integral to providing water and sewage transport services—should be covered by a Victorian access regime. The infrastructure operator would be responsible for providing these metering devices as part of its infrastructure facilities. Submissions supported this recommendation.

Recommendation 3.3

That the metering services provided by devices that are an integral part of the water and sewerage transport infrastructure be included in the definition of infrastructure services covered by a state-based access regime.

In relation to retail meters, the Commission sought feedback on whether these meters should either be:

- subject to an access regime and therefore provided by infrastructure operators, or
- considered part of the potentially competitive retail segment of the water supply chain (described in section 1.2.1) and therefore provided by retail service providers (or the retail unit of the existing water businesses).

Allocating responsibility for providing retail meters to retail water businesses (or the retail business units of functionally separated, vertically integrated businesses) could create an incentive for retailers to find efficiencies in providing metering services, which could be passed on in lower retail water charges to customers.

Alternatively, a new retail service provider might offer to install a different type of water meter to provide a different quality of service to its customers. For example, in the energy industry, the nature of metering has changed with the introduction of PowerSmart Home smart meters.[23] In Victoria, approximately 2.5 million 'smart

[22] See figure 1.3 in chapter 1 for a simple illustration of the points where a pipe operated by an access seeker could interconnect with the main water pipeline or main sewer operated by a water business.

[23] These smart meters record how much electricity is used in half hour periods and have an internal clock to record the time of day and date when the electricity is used. This

meters' will be installed over a 4 year period from 2009.[24] In April 2009, the New South Wales Government announced a trial of smart water meters in 468 homes in northern Sydney.[25]

In Melbourne, smart meters are currently used to monitor water usage by the top 200 water using businesses in South East Water's and Yarra Valley Water's supply areas. In March 2007, South East Water commenced a 12-month trial of smart meters for electricity, gas and water usage by 50 households. While significant reductions were achieved in electricity and gas usage, water savings were smaller; these savings were achieved, however, in addition to reductions in water use already achieved under Stage 3A water restrictions.[26]

Separating retail meters from the provision of infrastructure services would also allow businesses providing retail sewerage services the option to install sewage meters and charge for sewerage services on the basis of actual sewage volumes discharged. Currently the metropolitan Melbourne retailers estimate sewage discharges by residential customers because these discharges are not metered.

Central Highlands' submission to the draft report stated that, while it understood the arguments for excluding retail meters from an access regime, it expressed concern about potentially significant cost imposts on customers. Some participants at the public hearing on the draft report opposed allocating responsibility for retail meters to retail businesses because of the potential costs to customers of changing their meters when switching to competing water service provider (in the event that retail competition was permitted in the water sector). Such costs could form a barrier to switching and therefore a barrier to new retailers entering the water sector.

In their joint submission to the draft report, the Consumer Utilities Advocacy Group (CUAC), Consumer Action Law Centre (CALC) and Victorian Council of Social Service (VCOSS) strongly supported excluding retail meters from the coverage of an access regime because doing so would reduce the likelihood that installation of smart meters for all customers would become mandatory. Their submission expressed 'significant concerns that the introduction of smart water meters will result in costs that far outweigh the benefits' (p. 4) and advocated a comprehensive analysis of the costs and benefits of smart meters and extensive public consultation.

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information enables customers to monitor their energy use more effectively and helps them either to reduce their usage or to reduce their bills by using some power at off-peak times. Traditional mechanical electricity meters are only able to measure total electricity usage. See Energy Australia, *Introducing PowerSmart home*, available at www.energy.com.au.

24 For more information, see the Department of Primary Industry's website www.dpi.vic.gov.au/dpi/dpinenergy.nsf.

25 P. Costa 2009, *Trial of smart meters puts water efficiency at a fingertip*, Media release, Minister for Water, 30 April, available at www.sydneywater.com.au.

26 B. Wetherall 2009, 'Improving water efficiency through smart metering at South East Water', Paper presented to the OzWater'09 conference organised by the Australian Water Association, Melbourne, 16-18 March.

The Commission notes that, if retail meters were provided by retail businesses (or retail business units), customers could potentially have a choice about whether to install a smart meter, depending on their assessment of the costs and benefits to them. This would particularly be the case if retailers were able to compete in supplying services to retail customers; retailers would then have a greater incentive to offer services that met their customers' needs and preferences. Deloitte noted, in its consultancy report on functional separation, that some customers might be willing to pay for 'premium' meters, such as smart meters, if such services were offered by retailers.[27]

In its submission to the draft report, South East Water stated that responsibility for retail meters should be allocated to the infrastructure operator because there are significant economies of scale in providing meters to customers. It did not, however, provide any data on the magnitude of these economies. The Commission notes that meters are currently installed in new developments, including infill developments, servicing relatively small numbers of customers; this suggests that economies of scale are unlikely to be substantial at present.

South East Water also stated that there are economies of scale in having a single process for meter reading within a particular geographic area. It submitted that 'questions of ownership and access to meter data need to be considered' (p. 5).

The Commission considers that meter provision, meter reading and access to meter data are separate issues. If retail meters were owned by retail businesses, economies of scale in meter reading could still be obtained through competitive outsourcing of meter reading (where a single business provided meter reading services to a number of retailers). Many water businesses currently outsource meter reading to utility maintenance providers. Rules about the provision of meter data could be put in place to ensure it is available to retailers, infrastructure operators and a Grid Manager, as required.

The Commission recognises that there are arguments for and against both options for retail meter provision. Most of the benefits from allocating retail meters to retailers (and consequently excluding them from the coverage of an access regime) would be obtained if the Government decided to allow retail competition. If retail competition does not eventuate, economies of scale in meter provision may form an argument for allocating retail meters to the relevant infrastructure operator (and including them in the definition of infrastructure services covered by an access regime).

The Commission has concluded that the treatment of retail meters under an access regime should be considered by the Government in the context of its policy program for the water sector and other relevant policies.

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[27] Deloitte 2009, *Functional separation in the Victorian water industry*, Consultancy report prepared for the Essential Services Commission, September, p. 19, available at www.esc.vic.gov.au.

Matters for further consideration

The allocation of responsibility for providing retail meters should be considered by the Government in the context of establishing an access regime, its policy program for the water sector and other relevant policies.

3.3.3 Water storage services

Water storages, such as dams and reservoirs, are an integral part of the water supply chain, allowing water to be collected when it is available (such as from rainfall and run-off or when it is produced by a desalination plant or recycling plant) and delivered to customers when it is needed. Access seekers may need access to storage services to be able to supply water efficiently to their customers.

In its draft report, the Commission recommended that the storage services provided by large infrastructure facilities like dams should be covered by a state-based access regime. The Commission reached this conclusion after weighing up a number of considerations.

First, the storage services provided by large dams are likely to satisfy the declaration criteria under the national access provisions established by the TPA:

- Large dams are uneconomical to duplicate and environmental concerns are a significant obstacle (and cost barrier) to the construction of further large dams.
- Many existing dams have excess capacity at least in the short term.
- New businesses are likely to require storage services to be able to source and supply water effectively and thereby compete in competitive segments of the water sector.
- Large dams are of state and/or regional significance.
- Access to the storage services provided by large dams can be provided without undue risk to human health and safety.

Second, while not downplaying the important role of dam capacity in contributing to security of water supply, the Commission stated, in its draft report, that there may be scope to use spare capacity to provide short term storage services. Providing such services would improve efficiency by making use of under-utilised infrastructure and allow the infrastructure operators (the existing water businesses) to earn a return on the spare capacity in the storages.

In its submission to the draft report, VicWater (the peak industry association for the Victorian water businesses) agreed that short term access could be made available in some circumstances but it noted that:

> *this should be a commercial decision made by the infrastructure operator, who must weigh up the benefits of providing access against the operational impact of utilising dam capacity.* (p. 5)

VicWater's submission, and a number of submissions by water businesses, stated that a business' decision on sharing the use of storage capacity should be based on a case-by-case assessment of risk compared with the commercial return to the business. Barwon Water's submission to the draft report stated:

> *While short term access could be made available in some circumstances, the risks associated with doing this, as well as the benefits should be weighed up at the time, with the ultimate decision to be at the discretion of the water business and be based on case-by-case assessment rather than have the dams covered by the access regime.* (p. 1)

While the Commission accepts that operational and risk concerns should be taken into account in deciding whether (and on what terms) to provide access, it does not agree that these concerns justify excluding the storage services provided by large dams from the definition of infrastructure services subject to an access regime. Since an access regime will be based, in the first instance, on negotiations between access seekers and infrastructure operators, operational issues, including the risks associated with providing access, would be taken into account in reaching an access agreement.

VicWater and several water businesses also submitted that spare capacity in dams and other large storages should be kept as a buffer against drought to provide security of supply against future year's shortages. Many submissions highlighted the seasonal variability in capacity available within the water storage system and the difficulties in predicting future spare capacity, citing rapid unpredictable filling of some dams during sudden rainfall events. Central Highlands Water stated, in its submission to the draft report, that 'where the access seeker brings in additional water, there may be an increased risk that the dam will overflow during a period of unexpectedly high inflows'. (p. 3)

As the Commission noted in its draft report, the water businesses undertake extensive forecasting of seasonal supplies and demands, guided by longer range inflow forecasts. These forecasts would provide them with the information needed to manage the risks involved in allowing access to their storage infrastructure. Access agreements would in all likelihood specify risk sharing rules in relation to spills.

Central Highlands Water's submission to the draft report highlighted two risk sharing options for mitigating risks associated with providing access to storage services. First, an access seeker might agree that, in the event of a spill, its water would be assumed to have spilled first; under such an agreement, the access seeker would bear all of the risk associated with sharing the use of the storage facility. Under such an arrangement, the access seeker might have an incentive to pay for the dam wall to be raised to reduce the risk of spillage. Second, the price charged for access to storage services could incorporate a price premium reflecting the additional commercial risks associated with providing access.

Another option for allocating risks could be to establish 'spillable water accounts' (SWAs) for access seekers (see box 3.3). SWAs would allow access seekers to access spare capacity in a dam or other storage facility. In the event of a storage spilling, the first water to be lost will be that owned by the access seeker (or other

holder of a SWA). The access seeker would, therefore, bear all of the risk of spillage associated with sharing the use of spare capacity in the storage facility.[28]

Box 3.3 Spillable water accounts

In Victoria's regulated systems, where river flow is regulated through the operation of large dams and weirs, water is allocated by granting capacity shares in system storage to water businesses through bulk entitlements. The capacity shares provide a share of the storage capacity, a share of inflows, the right to take water, an obligation to provide passing flows (that is, environmental flows) and an obligation to supply customers and primary entitlement holders in the system.

The existing arrangements do not allow new participants to obtain storage capacity shares. An alternative mechanism to providing access to capacity in dams would be to allow access to unused storage capacity (known as available capacity) held by water business through its capacity share.

Providing access to available capacity would be similar to the 'spillable water account' (SWA) proposed in the review of carryover rules for the Northern Region Sustainable Water Strategy. SWAs would allow the holders of water entitlements granted by water shares to store water above the maximum level of their entitlement while there was available capacity in the storage. Water in the SWA would be lost to entitlement holders when storages physically spill, reflecting the principle that storages at capacity are fully utilised to support existing entitlements.

Such arrangements would be similar to the arrangements for using spare capacity that apply to the Thomson Dam and Upper Yarra Reservoir. The environmental reserve bulk entitlements for these storages allow the environmental reserve to store water above its capacity share in each storage but the additional water is the first to spill if the storage spills.

Source: Department of Sustainability and Environment (DSE) 2009, *Draft Northern Region Sustainable Water Strategy*, Melbourne, p. 30; DSE 2009, *A proposal for future carryover entitlements*, Melbourne; both available on DSE's website www.dse.vic.gov.au.

In its submission to the draft report, Barwon Water stated that risk sharing arrangements could be appropriate in other industries but argued that risk sharing arrangements should not be adopted in respect of an essential service like water. The Commission notes, however, that the water businesses currently manage a range of risks. Where water businesses share capacity in dams, arrangements have been developed to manage and allocate the risks associated with those

[28] Information could be collected by, or provided to, the access seeker to assist it in forecasting and managing the risk of losing water as a result of the storage spilling. Information provided to the access seeker could include, for example, information about a planned release of water into the storage from another storage facility or a treatment facility or the timing and expected quantity of an injection of desalinated water into the storage by a holder of a capacity share in that storage.

arrangements.[29] In the context of providing access to storage services, infrastructure operators could adopt appropriate measures to minimise and allocate risk.[30]

Third, the Commission considered whether tradable storage capacity shares could provide an alternative means of providing access to the storage services provided by dams and other large storage facilities. Such capacity shares would allow new water service providers to purchase access to storage services, either permanently or on a temporary basis (similar to water shares). The Productivity Commission suggested that the available capacity in storages (mostly dams) could be managed by defining shares of dam capacity (not the water contained in the dam) and inflows and outflows (which would include deductions for evaporation and seepage losses).[31] A market for these storage capacity shares could then be established.

In its submission to the issues paper, Southern Rural Water commented that storage capacity in large dams is currently owned by the various parties with bulk entitlements in the system (including the water businesses and power generators). It noted that it has been allocated a share of the water storage capacity in the Thomson reservoir in respect of its irrigation requirements. Melbourne Water commented, in its submission to the draft report, that storage services are potentially competitive and that entitlements to the inflows and capacity in large dams have already been defined and allocated through the bulk entitlements system.

The Commission notes that the existing arrangements for allocating storage capacity in dams do not appear to allow new participants in the water sector to purchase a share in the storage capacity of those dams. Under the current arrangements, therefore, new water service providers would have to negotiate access to storage capacity if storage services were required to provide water services to their customers. To allow them to do so, the storage services provided by large natural monopoly storage infrastructure should be subject to an access regime.

If, in future, an effective system of tradable storage capacity shares was developed in the Victorian water sector, this would not preclude the inclusion of storage

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29 For example, Melbourne Water, Southern Rural Water and the environmental reserve share capacity in the Thomson Dam; Central Highlands Water and Barwon Water share capacity in Lal Lal Reservoir; Coliban Water and Goulburn-Murray Water share capacity in Lake Eppalock; Goulburn-Murray Water and AGL Hydro have agreed risk sharing arrangements in relation to storage in Lake Eildon; River Murray storage capacities are shared between Victoria and New South Wales.

30 In determining the amount of capacity available in a dam or other storage facility, technical constraints and functions other than storage would have to be taken into account. For example, available capacity might be less than physically available in storage facilities that perform flood protection functions. In such cases, the available storage capacity might be limited to below 100 per cent of the physical capacity (either all year or during certain seasons) to minimise the risk of downstream flooding of towns in the event of a spill. A 'spill' might then be defined as exceeding the 'safe' capacity of the storage facility.

31 Productivity Commission 2006, *Rural Water Use and the Environment: The Role of Market Mechanisms*, Research report, Melbourne.

services within the coverage of an access regime (either now or in the future). Where alternative arrangements exist for sharing the use of natural monopoly infrastructure, the services provided by that infrastructure would not meet the declaration criteria under an access regime (see section 3.1). Access arrangements would not be necessary to permit effective competition in related markets because tradable storage capacity shares would permit new water service providers to compete effectively in markets for water supply services.[32]

Finally, the Commission noted, in its draft report, that excluding services provided by natural monopoly infrastructure from the definition of services subject to a state-based access regime could allow access seekers to apply for declaration under the TPA if those services satisfied the declaration criteria. As noted at the beginning of this section, the Commission considers that storage services provided by large dams are likely to satisfy the declaration criteria under the national access provisions established by the TPA. The Commission concluded that making storage services subject to a Victorian access regime would improve certainty for infrastructure operators and other participants in the water sector about how any requests for access to those services would be assessed.

Recommendation 3.4

That the storage services provided by large infrastructure facilities like dams and reservoirs be subject to a state-based access regime.

3.3.4 Rural water transport services

In rural areas, water services relating to irrigation uses have been unbundled and water trading has been introduced. Delivery shares, which can be purchased on the market, potentially provide a mechanism for new water suppliers to purchase a right to use water transport services provided by the relevant rural water business.

The Commission's draft report noted that, to some extent, tradeable delivery shares may already form an effective mechanism for providing access to rural water transport services.[33] However, the draft report highlighted some potential limitations of tradable delivery shares. The existing arrangements relate to the delivery of water purchased from the relevant rural business. It is not clear whether a business that developed a new water source (such as an aquifer or a desalination plant) would be able to inject that water into the rural business' delivery system and use purchased delivery shares to move the water from its water source to its customers. In addition, the current restriction that links a

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[32] If any storage services were declared prior to the implementation of system of tradable storage capacity shares, an application to revoke the declaration could be made on the grounds that the services no longer met the declaration criteria (see section 3.4.3).

[33] An exception is the Wimmera Mallee pipeline, where unbundling of entitlements and the introduction of water trading have not been implemented in respect of domestic and stock services.

delivery share to land may prevent access to rural transport infrastructure to landholders.

The Commission sought stakeholder feedback on whether the existing arrangements for tradable delivery shares are an effective alternative to access arrangements. Goulburn-Murray Water responded that, while unbundling has occurred for all irrigation districts and most regulated rivers, water districts (as defined under the Water Act) do not yet have unbundled entitlements. It saw merit in examining the extension of unbundling to rural water districts. The Commission notes that the Department of Sustainability and Environment, in consultation with GWMWater and other stakeholders, is developing a plan to establish tradable water entitlements and unbundling in respect of GWMWater's domestic and stock services.

In its draft report, the Commission concluded that rural water transport services should be subject to a state-based regime. If, in future, existing impediments restricting the use of rural water delivery (transport) infrastructure were removed, this would not prevent rural transport services being included within the coverage of an access regime. As noted in section 3.3.3, where alternative arrangements exist for sharing the use of natural monopoly infrastructure, the services provided by that infrastructure would not meet the declaration criteria under an access regime (see section 3.1). Access arrangements would not be necessary to permit effective competition in related markets because if tradable delivery shares were sufficient to permit new rural water service providers to compete effectively in rural markets for water supply services.[34]

Further, making rural transport services subject to an access regime could promote consistency between the access pricing principles and the principles used in setting rural delivery charges. In addition, terms and conditions relating to injections into water transport networks and network management arrangements could be applied, as appropriate, to rural water transport networks.

The Commission did not receive any submissions opposing the inclusion of rural water transport services within the coverage of an access regime. It confirms its draft recommendation that these services should be subject to a state-based access regime.

Recommendation 3.5

That rural water transport services be subject to a state-based access regime

[34] If any rural transport services were declared prior to reform of tradable delivery shares, an application to revoke the declaration could be made on the grounds that the services no longer met the declaration criteria (see section 3.4.3).

3.4 Declaration of infrastructure services

The Commission sees value in declaring specific infrastructure services as being subject to a state-based access regime from the commencement of the regime (that is, when the legislation establishing the regime takes effect). Declaring specific infrastructure services from the outset would improve certainty and clarity for industry participants and potential new entrants. It would also reduce the time and costs associated with obtaining access to the declared services.

For specific infrastructure facilities that have not been declared, businesses seeking access would have to apply for a coverage declaration to establish a right to share the use of that infrastructure if initial negotiations with the infrastructure operator were not successful. This would result in the process of obtaining access being longer, more costly and more risky for an access seeker than if the service was declared. Box 3.4 describes the process of applying for a coverage declaration in New South Wales.

Box 3.4 Declaration under the New South Wales water industry access regime

Under the New South Wales access regime for water and sewerage infrastructure services, a coverage declaration is a ruling made by the relevant Minister (the Premier) that a particular service is covered by the access regime.

Once the Minister makes a coverage declaration for specific infrastructure services, an access seeker obtains a right to negotiate access to those services with binding arbitration available in the event of an access dispute.

No infrastructure services have, as yet, been declared under the New South Wales regime, except for those declared under the TPA as a result of the Services Sydney declaration application. These services, which were declared from the commencement of the regime, are the sewage interconnection and transport services provided by Sydney Water's Bondi, Malabar and North Head reticulation networks.

For other infrastructure services, an access seeker can try to negotiate with the infrastructure operator for access to specific services. If these negotiations are unsuccessful, the access seeker can apply for declaration of the infrastructure services for which access is sought. A coverage declaration application would be lodged with IPART, together with the application fee of $2500. Applications for declaration may also be made by an infrastructure operator or the Minister.

After receiving a declaration application, IPART assesses the application, undertakes public consultation on it and recommends to the Minister whether a coverage declaration should be made. The Minister may either make the declaration or not make a declaration for the service. IPART's report, the Minister's decision and the reasons for the decision are published.

Source: Independent Pricing and Regulatory Tribunal 2008, *WICA Access Fact Sheet No. 2: The access regime—coverage, revocation and binding non coverage declarations and access undertakings*, available at ipart.nsw.gov.au.

In its submission to the issues paper, South East Water expressed the view that a regime similar to the New South Wales regime could leave 'uncertainty about the potential for declaration of future assets and uncertainty around the status of key existing assets' (p. 17).

In its final decision recommending certification of the New South Wales access regime, the NCC questioned whether the regime added refinement or certainty to the national access provisions available under the TPA. It noted that some other access regimes, such as those in the electricity sector, 'apply the relevant regulation to virtually all transmission and distribution infrastructure without requiring case by case declaration or coverage decisions'.[35] It initially suggested that the New South Wales water industry access regime:

> *… could, for example, have declared all water infrastructure services operated by Sydney Water and Hunter Water to be covered, thereby enabling access seekers to proceed to negotiate access terms and conditions with the service provider and have recourse to dispute arbitration processes, without being first required to apply to the Premier for the service to be coverage declared.* [36]

The Commission does not recommend that all Victorian water industry infrastructure services should be declared as covered by a state-based access regime for several reasons. First, it considers that declaring all water and sewerage infrastructure services would impose unnecessary costs on the water businesses and their customers. The businesses would, for example, be required to implement accounting ring fencing (see chapter 6) for all of their infrastructure services even though the likelihood of an access application would be very low for some infrastructure services. A submission by a private utilities service provider, Jemena, goes further—it opposed the declaration of any services before they were subject to a declaration application, referring to the costs involved.

Second, there is significantly greater diversity in water industry infrastructure facilities than there is, for example, in electricity or gas infrastructure. Further, the infrastructure facilities providing services that are subject to an access regime will be significantly more diverse, in both size and nature, in Victoria where the access regime is recommended to cover the entire State than in New South Wales where the regime's coverage is limited to Sydney Water's and Hunter Water's areas of operation.

The Commission considers that it is unlikely that all Victorian water and sewerage infrastructure services would meet the declaration criteria, particularly the significance and public interest tests. Infrastructure services provided by small facilities in localised or regional areas, for example, may not meet the significance

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35 National Competition Council 2009, *Water Industry Competition Act 2006 (NSW): Application for certification of the NSW water industry infrastructure services access regime*, Final recommendation, 11 May, p. 7 available at www.ncc.gov.au.

36 National Competition Council 2009, *Water Industry Competition Act 2006 (NSW): Application for certification of the NSW water industry infrastructure services access regime*, Draft recommendation, 2 April, p. 7 available at www.ncc.gov.au., p. 6.

criteria. For some infrastructure services, the costs of providing access could exceed the expected benefits such that the public interest would not be met by requiring access. This situation could occur, for example, where costly measures would be needed to ensure that providing access to services did not compromise essential technical, operational or safety requirements. Identifying the services that would not meet the declaration criteria, and excluding them from a general coverage declaration, would be likely to involve substantial cost and time.

A third reason for not declaring all Victorian water and sewerage infrastructure services as covered from the outset is that, over time, technological changes or policy changes could result in some services no longer meeting the declaration criteria. Such changes could then require a review of all services to determine which services should be removed from the list of declared services.

In the draft report, the Commission proposed a process for identifying specific infrastructure services that could be suitable to declare from the commencement of an access regime. The Commission considers that declaring, from the commencement of an access regime, those services that would both meet the declaration criteria and be most likely to be subject to access applications would achieve an appropriate balance between: giving infrastructure operators, access seekers and other market participants certainty about the application of the regime; and minimising the costs of establishing the regime.

Recommendation 3.6

That the Government declares specified infrastructure services as being covered by the regime from the date when the legislation establishing the regime takes effect. In addition to satisfying the declaration criteria, these services will either have access arrangements in place or will have been assessed, during the implementation process, as likely to be subject to an access application.

Recommendation 3.7

That the Government establish a process for making coverage declarations for specific infrastructure services. An appropriate process should be established during the implementation period in consultation with the water businesses and other stakeholders. The process should not impose unreasonable costs on any of the parties or take an unreasonable length of time.

Further certainty about the specific infrastructure services that are subject to access would be obtained by making provision for infrastructure providers to make voluntary access undertakings, similar to the provisions included in the national access regime under the TPA. Undertakings are discussed further in section 4.2.5.

Submissions to the inquiry have already nominated specific infrastructure services that would be expected to satisfy the declaration criteria. Melbourne Water put forward its bulk water and sewerage pipeline networks and noted that it already shares the use of its water network under privately negotiated arrangements,

including access arrangements with Southern Rural Water. Central Highlands Water and Coliban Water identified the Goldfields Superpipe as meeting the declaration criteria and noted that access arrangements for the pipeline are currently being tested.

3.4.1 Access to infrastructure services with capacity constraints

Capacity constraints were raised as an issue in some submissions and by some participants at the second public hearing. For example, while identifying the Goldfields Superpipe as likely to meet the declaration criteria, Coliban Water submitted that, at present, the pipeline is fully utilised supplying water to Bendigo and has no spare capacity to provide services to access seekers.

Gippsland Water's submission highlighted that the water businesses will be required to assess capacity constraints in providing infrastructure services covered by an access regime and that the availability of spare capacity will vary across the day and the seasons, depending on what flow rates are deemed acceptable.

Where an infrastructure facility is operating at full capacity, and there is sufficient unmet demand (either currently or expected in the future), duplication of the infrastructure facility may be economical. In this case, it would not meet the declaration criteria. Where duplication would not be economical but augmentation of the facility is possible, the infrastructure operator may be required to extend, or permit the extension of the facility, provided that:

- augmentation or extension was technically and economically feasible and consistent with the safe and reliable operation of the facility
- the infrastructure owner's legitimate business interests in the facility were protected, and
- the access seeker's terms of access, such as the access price, reflected the parties' costs relating to the augmentation or extension and their economic benefits from it.[37]

In other cases, an infrastructure facility may be operating at full capacity only at certain times of the day or week, or during certain times of the year (for example, reflecting seasonal demands). An access agreement could specify terms and conditions that either set out times when access can occur or make access contingent on capacity being available. In such circumstances, the access price should be set to reflect any constraints on the availability of access or risks that access may not be available when required by the access seeker. Alternatively, access prices could be used to allocate capacity among competing users of the infrastructure services.

Pricing options for allocating capacity are discussed in section 5.4.3. Options could include measures to protect existing customers (such as by guaranteeing a portion of capacity to them or prescribing a minimum standard of service to retail customers).

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[37] These provisions for augmentation or extension are consistent with the principles set out in clause 6(4)(j) of the Competition Principles Agreement.

Central Highlands Water noted, in its submission to the draft report, that for some types of infrastructure facility, capacity can be expanded by 'working the pumps harder' (p. 5). Doing so would significantly shorten asset lives unless increased maintenance was undertaken. In either case, the infrastructure operator would incur additional costs from increasing capacity in this way, either from higher maintenance costs or higher capital costs from replacing the asset sooner than originally planned. Higher pumping costs could also be incurred. These additional costs would have to be taken into account in determining an appropriate access price (see chapter 5).

3.4.2 Non-coverage declarations—greenfields investments

In recommending on the design of an access regime for the Victorian water sector, the Commission is required to ensure that an access regime will not discourage new infrastructure investments (also known as greenfields investments).

The Commission's draft report noted that some access regimes include provisions allowing non-coverage declarations to be made for the services provided by greenfields investments (see box 3.5). Typically the purpose of a non-coverage declaration is to give an infrastructure operator certainty that its infrastructure would not be expected to satisfy the declaration criteria for a certain period. A non-coverage declaration does not, and should not, provide immunity from declaration in order to allow a business to earn monopoly profits to recoup the cost of its investment.

To assist it in reaching a finding on the best way to maintain incentives for efficient long term investment in water and sewerage infrastructure, the Commission sought stakeholder feedback on the nature of any additional investment risk expected to result from the establishment of a state-based access regime.

South East Water's submission to the draft report stated that access arrangements should give the owners of existing infrastructure and new investments 'certainty that they will earn sufficient income from these assets' (p. 4). It stated further that 'an inefficient solution will be reached if there is a risk that any new assets will be rendered stranded within a short period of time' (p. 4). It suggested that greenfield investments should be exempt from access applications for up to 15 years as this would allow a reasonable time for infrastructure owners to recoup their investment.

In the Commission's view, infrastructure owners should not be protected from the consequences of poor investment decisions. New investments are likely to become 'stranded' (that is, be left unused or cease being used) only if they are built in the wrong location or in a way that does not meet customers' needs. In contrast, the owners of efficient infrastructure investments would benefit from providing services to access seekers because higher demand for those services would improve the returns on their investments (and significantly reduce any risk of 'stranding').

Box 3.5 **Non-coverage declarations**

Non-coverage declarations exempt new infrastructure facilities from being the subject to an access regime for a specified period of time. They are intended to provide certainty to investors, reduce regulatory risk and encourage long-term investment.

Under the national gas access regime, for example, an infrastructure service operator can, before a new (greenfields) pipeline is commissioned, apply to the NCC for a 15-year no-coverage determination. If the application is approved, the pipeline will not be subject to the access regime for 15 years after being commissioned. Known as the greenfields pipeline incentive, a no-coverage determination effectively provides for an 'access holiday'.

In the New South Wales water industry access regime, infrastructure owners can apply for a binding non-coverage declaration that exempts new infrastructure facilities from the application of the regime for up to 10 years. Such declarations may be made for proposed infrastructure that has not been constructed at the time of the application (that is, greenfields investments) and infrastructure that has been de-commissioned or is being used to provide services other than water and sewerage services (or associated services).

Non-coverage declarations can only be made for infrastructure that is not expected to meet the declaration criteria during the non-coverage period.

The Minister may revoke a non-coverage declaration at the request of the infrastructure operator. A non-coverage declaration will cease to apply if the infrastructure is modified significantly during the period (such as by being extended or increased in capacity) or if it begins to meet the declaration criteria.

Source: Australian Energy Regulator 2009, *Access arrangement guideline*, available at www.aer.gov.au; Independent Pricing and Regulatory Tribunal 2008, *WICA Access Fact Sheet No. 2: The access regime—coverage, revocation and binding non coverage declarations and access undertakings*, available at ipart.nsw.gov.au.

Submissions by Coliban Water and Central Highlands Water suggested that an access regime would increase the risk of 'hold-up' in relation to new investments. Hold-up risk can occur when a business makes a significant investment in a 'sunk' investment[38] (such as a trunk water pipeline) to satisfy demand from an access seeker to use the services provided by that infrastructure (for example to supply water services to a greenfields development). Once the investment was made, and the costs are therefore 'sunk', the access seeker could refuse to make a reasonable contribution towards the fixed costs of the investment, in the knowledge that the asset owner (the infrastructure operator) cannot use the asset for any other purpose. As long as the access seeker pays the infrastructure operator's

[38] A sunk investment refers to an investment in an asset that cannot be relocated or redeployed to another use if there is no longer a demand to use it for the purpose for which it was made.

variable costs, and makes some contribution towards fixed costs, the infrastructure operator is 'locked in'.

Hold-up risk can be avoided or minimised in two ways.[39] First, the access seeker could make a corresponding 'sunk' investment that made it equally dependent on the infrastructure operator. For example, if the access seeker was a developer (of a greenfields residential or industrial estate), it would be making a substantial investment in constructing the new development and would need to access the services provided by the infrastructure operator in order to recoup its investment costs. Second, the infrastructure operator and access seeker could enter into a binding contract on the terms and conditions of providing the service before the infrastructure operator made the investment. If the access seeker refused to agree to reasonable terms and conditions, including the price to be paid for the service, the infrastructure operator would not undertake investment.

The Commission does not see any legal or practical obstacles to an infrastructure operator making a legally binding contract with an access seeker on the terms and conditions of access, including the access price, before it commits to a greenfields investment. The contract would ensure that prices would reflect an appropriate return on the investment, removing the risk of hold-up.

An infrastructure operator and an access seeker could also enter into a contract to undertake the investment as a joint venture or partnership, provided appropriate ring fencing arrangements were put in place (see chapter 6). In its submission to the draft report, Central Highlands Water suggested that a retailer might want to enter into a partnership arrangement with an infrastructure owner to guarantee security of supply (p. 6). If, as part of its contribution to the asset's fixed costs, the retailer was effectively paying a higher price for the asset to reduce the risk of not receiving the service, that would give it priority over access seekers paying a lower price, in the event of capacity constraints.

On the basis of the information provided in submissions to the inquiry and its own analysis, the Commission has made three findings. First, it has concluded that an access regime is unlikely to create additional investment risks in relation to greenfields investments. On the contrary, for some new infrastructure investments, higher demand for infrastructure services, consequent on facilitating access, will improve the returns and reduce the risks expected on those investments.

Second, access prices would incorporate a rate of return reflecting the risk associated with investments needed to provide the infrastructure services in question. A rate of return is currently calculated for use in determining water and sewerage prices more generally.[40]

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39 A third way involves the infrastructure operator purchasing the access seeker (where, for example, it was a retailer planning to service a new development) to become vertically integrated. There would then be no risk of hold-up but the situation would no longer involve access. The regional Victorian water businesses are vertically integrated and all of the water businesses are publicly-owned.

40 For more information, see Essential Services Commission 2009, *Metropolitan Melbourne Water Price Review 2009-13—Final Decision*, June, chapter 6.

Third, the Commission considers that non-coverage declarations do not significantly improve certainty for infrastructure operators and investors. Since they would only be granted for infrastructure services that would not meet the declaration criteria, these services would not have been declared even without a non-coverage declaration. Certainty would, in the Commission's view, be more effectively promoted by setting out clear guidance on the declaration criteria and how they would be applied in assessing declaration applications. The Commission proposes to develop such guidance during the implementation period, in consultation with stakeholders.

The Commission has concluded that there is no need to include provisions for non-coverage declarations in a state-based access regime.

3.4.3 Review of declarations

The Commission's draft report recommended that a state-based access regime include a process to provide for case-by-case review of coverage declarations. The process should allow for revocation of declarations where the declared infrastructure services no longer satisfy the declaration criteria and to declare services provided by new or existing infrastructure that meet the declaration criteria. Most access regimes include arrangements for reviewing coverage declarations, including revoking existing declarations and making additional coverage declarations.

These processes could be activated when new infrastructure facilities are constructed, come into operation or are modified significantly, or when circumstances have changed such that the services provided by an infrastructure facility no longer meet the declaration criteria.

The New South Wales water industry access regime, for example, sets out a process for case-by-case declaration of specific infrastructure services or revocation of coverage declarations for specific services. A similar process applies for non-coverage declarations. The processes include public consultation. The national gas access regime includes similar provisions.

The Commission did not receive any submissions opposing its draft recommendation.

Recommendation 3.8

That a process is established to provide for case-by-case review of coverage declarations. The process should allow for revocation of declarations where the declared infrastructure services no longer satisfy the declaration criteria and to declare services provided by new or existing infrastructure that meet the declaration criteria. During the implementation period for the regime, similar processes should be established for access commitments by the businesses.

3.5 Certification criteria

In the terms of reference for this inquiry, the Victorian Government indicated that it intends to seek certification from the National Competition Council (NCC) of the state-based access regime it establishes for water and sewerage infrastructure services. In developing its recommendations on the coverage of a Victorian access regime, the Commission has, therefore, been mindful of the certification criteria set out in the Competition Principles Agreement and the NCC's comments on the coverage provisions included in New South Wales' water industry access regime.

In its final decision on New South Wales' application for certification, the NCC highlighted that a state-based regime should provide more certainty than the TPA regulations and be tailored to the specific conditions of the industry. In particular, the scope of the regime's coverage should be clear from the outset. In respect of New South Wales' regime, the NCC was critical of the two-stage process that businesses seeking to negotiate access to infrastructure may have to undertake: first, to have the area in which the infrastructure is located covered by the regime; and second, to have the right to negotiate access to a particular infrastructure facility provided through formal declaration of that facility.

The Commission considers that its recommendations address the NCC's concerns about providing greater certainty than is currently available under the provisions of the national access regime. First, it has recommended that the entire State of Victoria be covered by a state-based access regime.

Second, it has recommended a broad definition of the types of infrastructure services subject to a regime. The definition is intended to encompass the range of natural monopoly infrastructure in the water sector and reduce uncertainty about whether an infrastructure service would fall within the scope of the Victorian access regime or the national access regime.

Third, it has recommended that specific infrastructure services be declared as covered by the regime from its commencement. These infrastructure services would either have access arrangements in place or will have been assessed as likely to be subject to an access application. Declaring these services would improve certainty for infrastructure operators about the coverage of their key assets and facilitate access seekers' negotiations for access to those services.

In addition, the Commission intends to develop, in consultation with stakeholders, guidance on the declaration criteria and how they would be applied in assessing declaration applications. This guidance will assist infrastructure operators and potential access seekers to determine whether an infrastructure service is likely to be made subject to a coverage declaration. Finally, the Commission intends to establish clear and transparent processes for coverage declaration applications and case-by-case review of coverage declarations.

3.6 Implementation process

As noted in this chapter (and discussed further in chapter 10), the Commission has recommended that, during the implementation period, the water businesses should identify specific infrastructure services that meet the declaration criteria and are

likely to be subject to an access request. During the implementation period for the regime, water businesses would be required to make access commitments in respect of these infrastructure services. The access commitments would set out a framework for access seekers to negotiate access to specified services and indicate likely terms and conditions for access, including the method to be used in calculating access prices.

As well as providing a basis for declaring infrastructure services from the commencement of an access regime, access commitments would provide greater certainty for potential access seekers during the implementation period about the likely terms and conditions for obtaining access to specific infrastructure services, as well as the general approach to access applications that would be adopted in respect of other infrastructure services.

The Commission considers that there should be flexibility during the implementation period to add access commitments for other infrastructure facilities that were not initially nominated or to revoke an access commitment to reflect a significant change in circumstances.

During the initial stage of the implementation period, the Commission would develop guidance on the declaration criteria and how they should be applied to identify specific infrastructure services for which access commitments should be made. In broad terms, the businesses would take into account the following factors in assessing whether to nominate infrastructure services:

First, the infrastructure services should fall within the geographical scope and definition of the types of services covered by the regime (discussed in sections 3.2 and 3.3).

Second, the infrastructure service should satisfy the significance criterion. Significance at a state or regional level can be measured in a number of ways:

- size or physical capacity
- size and nature of the markets serviced by the infrastructure, which may be affected by the geographic area serviced, distance covered (for example, by a pipeline) and interconnection with infrastructure facilities in other parts of the state (for example, through a water grid)
- volume or value of water or sewage carried by the infrastructure
- the facility's contribution to trade within the state and interstate
- its importance to providing services in other significant markets and
- the cost of the infrastructure.[41]

During the implementation period for the regime, the process to provide for case-by-case review of coverage declarations will be established. It will provide flexibility to add access commitments for infrastructure facilities that were not

[41] These significance criteria are identified in Independent Pricing and Regulatory Tribunal 2008, *The NSW Water Industry Access Regime: Part 3 of the Water Industry Competition Act 2006: Application template for coverage declaration*, available at www.ipart.nsw.gov.au/water/.

initially nominated or to revoke an access commitment to reflect a significant change in circumstances.

The timing and further details of the different stages of the implementation period are set out in chapter 10.

4 NEGOTIATION FRAMEWORK AND DISPUTE RESOLUTION

Under the Competition Principles Agreement, the negotiate/arbitrate model forms the basis of an access regime as it allows participants to negotiate access on mutually beneficial terms and conditions that suit their particular circumstances. An access regime for water and sewerage infrastructure services is likely to require specific regulatory arrangements to facilitate effective negotiations.

Well designed negotiation and dispute resolution processes will promote efficient outcomes by enabling access seekers and infrastructure operators to negotiate on an equal footing within a transparent and certain framework. Therefore, the Commission has made recommendations on an appropriate negotiation framework and dispute resolution processes.

4.1 Features of an effective negotiation framework

The basic premise of the negotiate/arbitrate model is that access seekers should, in the first instance, try to negotiate access arrangements with the infrastructure operator. The main aims of establishing a negotiation framework are to:

- reduce the costs and time required to assess the feasibility of obtaining access to existing infrastructure and to apply for access (from the access seeker's point of view), to assess the application (from the infrastructure operator's point of view), and to reach agreement on access terms and conditions (for both the access seeker and infrastructure operator)
- ensure access seekers have sufficient information and bargaining power to be able to negotiate reasonable access terms and conditions with the infrastructure operator
- provide flexibility to the access seeker and infrastructure provider to negotiate terms and conditions suited to their particular circumstances and
- provide for dispute resolution when agreement cannot be reached through negotiation.

Submissions and other feedback to the Commission generally supported a negotiate/arbitrate model. In its submission to the draft report, the Victorian Water Industry Association (VicWater) supported a strong emphasis on private negotiation as a good starting point for access applications. There was also general agreement in submissions that the negotiation arrangements should provide for dispute resolution through binding arbitration.

The Competition Principles Agreement provides guidance on the key features of a negotiation framework for an access regime. The framework should:

- establish a legal right for parties to negotiate access and a process for enforcing this right (such as through binding arbitration)
- require infrastructure operators to use all reasonable endeavours to accommodate access seekers' requirements, including providing the information needed to allow them to negotiate effectively, and
- ensure that access outcomes balance a range of factors, including the legitimate business interests of infrastructure owners, the efficient use of infrastructure, and community benefits from competitive outcomes.[42]

Syncline Energy expressed concern at the first public hearing that in some cases infrastructure operators would have a vested interest in not negotiating access when it would allow a new entrant to compete with it for customers in related markets, as competition could reduce its market power and revenue base. This is particularly relevant for vertically integrated businesses, which is generally the situation in regional Victoria. The Commission considers that establishing a clear right for access seekers to negotiate access on reasonable terms and conditions, supported by a transparent negotiation and dispute resolution framework, would address this concern.

Recommendation 4.1.1

That the Government establishes a right for access seekers to negotiate access to infrastructure services subject to the state-based access regime and require infrastructure service providers to use all reasonable endeavours to accommodate access seekers' requirements.

Additional provisions may be required when negotiation and power asymmetries between access seekers and infrastructure operators are significant. The Commission considers that this could be the case for some access seekers. Some businesses seeking access in the Victorian water industry are likely to be significantly smaller than the existing water businesses, particularly the metropolitan Melbourne businesses.[43] Access seekers may also have less detailed technical and market knowledge and experience in the water sector than the incumbent water businesses.

Additional measures could include independent regulatory guidance on pricing principles (see chapter 5), indicative tariffs or reasonable price boundaries, and the release of appropriate information to the market such as information on longer term

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42 See clauses 6(4)(a)-(c), (e)-(i), and (m)-(o) of the Competition Principles Agreement (included at appendix F).

43 Access seekers are likely to be 'small' in terms of their activities within the water industry and the size of their initial investments in entering the market for water and/or sewerage service provision. They may be large existing businesses in other industries, such as gas or electricity.

industry conditions, costs, the expected demand supply balance and excess capacity (see section 9.1.2).

In other access regimes, the level of prescription and amount of detail in regulatory arrangements vary across industries. All negotiation frameworks establish a legal right for potential access seekers to negotiate access and dispute resolution mechanisms. Some access regimes require infrastructure operators to publish standard terms and conditions, such as the Victorian grain access regime and the national gas access regime (see appendix I for a description of the key features of other access regimes).

The New South Wales water access regime is based on a negotiate/arbitrate model. In recommending on the establishment of the regime, the Independent Pricing and Regulatory Tribunal (IPART) advocated a non-prescriptive approach on the basis 'that the current level of demand for access is unclear, and there is little knowledge about the optimal content and structure of the access framework'.[44] The New South Wales access regime establishes a negotiation framework that comprises negotiation protocols, guidelines and a dispute resolution mechanism. The negotiation protocols establish minimum requirements for information provision by infrastructure providers and access seekers, disclosure of general information, and timeframes for the application process and negotiations.

The initial experience of the water access regime in the United Kingdom is that negotiated access to water infrastructure has not been sufficiently transparent and that access negotiations between an access seeker and the incumbent water business have frequently been protracted. In a report assessing the outcomes of the access regime, the Office of Water (Ofwat) identified a number of obstacles to reaching agreement including some terms and conditions (such as the duration of the agreement), Ofwat's limited powers to formally determine terms of an agreement and a lack of clarity in Ofwat's guidance.[45] Ofwat has since published guidance papers on its access codes to speed up and improve the transparency of the negotiation process. For example, Ofwat's guidance sets out standard provisions to be included in an infrastructure operator's access agreements.

The Commission considers it important in determining the level of prescription to take account of compliance costs. The negotiation process should not be too cumbersome and costly for participants. Too little prescription can, however, result in a process that is long and drawn out, particularly where the incumbent business is vertically integrated and has an incentive to refuse access to its infrastructure.

The Commission considers that New South Wales' approach (referred to above and discussed further in section 4.2) to establishing negotiation protocols is practical, as it provides an appropriate level of prescription without being overly burdensome for participants. The Commission further considers that the measures

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44 Independent Pricing and Regulatory Tribunal, *Investigation into Water and Wastewater Service Provision in the Greater Sydney Region: Final Report*, October 2005.

45 Ofwat 2007, *Outcomes of Ofwat's internal review of market competition in the water sector*, April, available at www.ofwat.gov.uk.

included in the New South Wales regime (including guidance, minimum information requirements and indicative timeframes) will facilitate the negotiation process.

The Commission's recommendations on establishing appropriate negotiation protocols for an access regime are discussed in section 4.2. The recommended dispute resolution and appeals mechanisms are set out in section 4.3 and 4.4. Section 4.5 sets out the Commission's view on how the recommended framework is expected to satisfy the requirements for certification. Implementation of the negotiation framework and dispute resolution processes is discussed in section 4.6.

4.2 Negotiation protocols

In general, negotiation protocols set out the rules governing access negotiations, such as minimum requirements for information provision, application requirements and a dispute resolution process. They can also specify timeframes, application costs and other charges, rules for prioritising access (commonly known as queuing rules), and procedures for negotiating the terms and conditions of access agreements. The protocols improve the certainty and transparency of the negotiation process and can reduce time delays and associated costs.

Most water businesses indicated support, at the public hearings and in submissions, for negotiation rules such as timeframes, a process to monitor the progress of access applications, information provision and pricing principles.

The Commission has concluded that negotiation protocols should be included in the negotiation framework for an access regime. Flexibility should be provided by allowing a water business and access seeker to agree to vary the negotiation provisions to suit the particular circumstances of an access request, as allowed for in the New South Wales access regime. This is particularly relevant for non-standard applications, where additional information may be needed to assess an application or special terms and conditions may be needed to govern access.

In its submission to the draft report, Melbourne Water provided an example of when the applicant or incumbent business may need flexibility. National and state guidance on drinking water standards was generally not developed taking into account water quality from alternative types of water, such as stormwater, ground water and recycled water. Therefore, access requests relating to such sources may take longer to assess and negotiate.

Where the infrastructure operator and an access seeker cannot agree on an alternative timeframe, either party could approach the Commission to provide guidance to assist them in reaching agreement or ask the Commission to arbitrate.

Some of the matters to be included in negotiation protocols, such as information requirements and application processes, are discussed below. The protocols will require each party to negotiate in good faith and require the infrastructure provider to use all reasonable endeavours to accommodate the access seeker's requirements.

4.2.1 Information provision

Access seekers require a certain level of information to decide whether to invest the time and resources required to apply for access. Access seekers will not be able to negotiate effectively if they lack sufficient information to assess whether a proposal involving access is feasible and commercially viable. Infrastructure operators will also require information about the access seeker's requirements and the purpose of the access request to assess the feasibility and costs involved in providing access and to negotiate access arrangements.

Three types of information will need to be provided: general information; information provided by the infrastructure operator; and information provided by the access seeker.

General information

In addition to information specific to the infrastructure in respect of which access is sought, access seekers will need more general information about:

- regulatory and legislative obligations, including licensing requirements
- any guidelines on negotiation processes, dispute resolution, ring fencing and pricing principles
- a copy of the negotiation protocols
- step by step instructions on how to obtain access to declared services and
- information about dispute resolution mechanisms.

Establishing a 'one-stop-shop' for this type of information would reduce costs to potential access seekers. For example, IPART publishes information on its website, including fact sheets explaining the key features of the access regime, information about the regulatory framework, negotiation protocols, and guides dealing with licences, access applications and arbitration. The Commission considers that similar information relating to a Victorian access regime should be published in a single place, such as on the Commission's website.

In addition, when considering possible commercial opportunities, access seekers will require information relating to resource planning for the Victorian water sector, including, for example, demand and supply information. For a discussion of the type of information required, see section 9.1.2.

Information to be provided by the infrastructure operator

Potential access seekers must be able to quantify all the costs associated with proposals requiring access, so that they can accurately assess the expected commercial returns from such proposals. Negotiation protocols should require infrastructure operators to make relevant information available to the access seeker.

The Commission recommends that, at the request of an access seeker, an initial information pack be provided by an infrastructure operator and include at least the following information:

- a copy of the access commitment or undertaking (if one has been made)

- a list of the services provided by the infrastructure operator
- a contact for the infrastructure operator
- a description of the methods the infrastructure operator will use to assess, and make a decision on, a request for access to infrastructure services
- a copy of documentation explaining how costs have been allocated to particular types of services (see chapter 6)
- an access application form
- a copy of any proposed access agreement, such a 'standard agreement' (if applicable), and
- information about where further information can be obtained, for example, the 'one-stop-shop' recommended above.

Compiling this information into an initial information pack will reduce the search costs for potential access seekers. Infrastructure operators may incur some one-off costs associated with compiling the information. However, these costs are expected to be low as much of the information is already published. In its submission to the draft report, Melbourne Water stated that it already publishes information to inform and assist access seekers in making an access application. Published information includes bulk supply agreements and the unbundled prices charged to retailers.

The Commission envisages that the water businesses would develop this information during the implementation period (see chapter 10). Once the information pack was prepared, providing it to access seekers on request should not be overly onerous or costly. The Commission suggests that businesses should review and update packs annually or when a significant change occurs in the information included in the information pack. The Commission does not anticipate that the listed information items would change significantly over the short to medium term.

A number of water businesses expressed concern, both at the public hearings and in submissions to the draft report, about the cost of potential vexatious applications. Providing the initial information pack to potential access seekers will not be an expensive exercise. To progress further, potential access seekers would need to submit a formal application for access and pay an application fee (see section 4.2.3). Where an access seeker requested more detailed information, the information would be compiled by the infrastructure provider at the access seeker's expense. In making an application for access, an applicant would be required to provide relatively detailed information to the infrastructure operator about the nature of the access request and the types of services required. The Commission considers that the application requirements and costs would deter vexatious applications.

Infrastructure operators are less likely to receive applications from poorly informed access seekers when information is readily available in a 'one-stop-shop'. Information about the regulatory and legislative obligations (including licensing requirements) that would apply to water and sewerage service providers, and the costs and processes involved in applying for access, would assist a potential access seeker to assess the feasibility and commercial viability of its proposal. This

would reduce the likelihood that infrastructure operators will incur costs in assessing applications that are withdrawn when the access seeker finds out what would be involved in proceeding with its proposal.

Several water businesses expressed concern that information provided in the initial information pack could be used by access seekers with malicious intent. In its submissions to the draft report, Gippsland Water suggested that development of the negotiation protocols should be guided by the Sustainability Vulnerability Risk Assessment Guidelines. These Guidelines were released by the Department of Sustainability and Environment to provide guidance to operators/owners of significant infrastructure on risk assessment and identifying critical infrastructure. Following enactment of the *Terrorism Act 2005 (Cwth)*, state and territory governments are required to identify and maintain a database listing all critical infrastructure in their jurisdictions.

It appears to the Commission that the guidelines themselves do not prevent an infrastructure operator providing access to critical infrastructure or disclosing information about those assets. However, for infrastructure that is deemed to be high risk or critical, additional requirements may be incorporated in the terms and conditions of an access agreement as required.

Gippsland Water also suggested that a pre-licensing security, due diligence and/or background check should be undertaken by the regulator before the access seeker applies for access or licence (see chapter 7 for a discussion of licensing arrangements). Barwon Water's submission to the draft report also suggested that there should be a process in place to screen access seekers prior to information being provided.

The Commission considers that screening is unnecessary as the initial information pack will be comprised of high level and generic information, the majority of which is already in the public domain. For example, the location of significant infrastructure (such as dams, treatment facilities and spillways) can easily be located using Google Earth. In addition, the Commission's price review documents, consultants' reports and performance reports are publicly available and provide detailed information about new and planned infrastructure and augmentations and other information about the water businesses' assets. The businesses' Water Plans and other documents providing similar information about assets and capital works programs are available on their websites.

If an access seeker requested more detailed information about the asset relevant to the potential access request, they would be required to provide a written explanation about the infrastructure services required and the nature of their proposed use of those services. The infrastructure operator would only provide information that was directly relevant to providing the infrastructure services in question. A precedent for providing this type of information to third parties already exists. Water businesses regularly provide detailed technical information to developers regarding the design requirements of relevant assets (such as pipelines) and interconnection points for new developments.

Information to be provided by the access seeker

Infrastructure operators will require information from access seekers in order to properly assess an access application and to negotiate access arrangements. The Commission recommends that this information should include at a minimum:

- a list of the infrastructure assets to which the access application relates
- a detailed description of the purpose of the access request (for example, access to the transport services provided by a pipeline to transport desalinated water to an industrial customer)
- the terms, nature and extent of access requested
- supporting information to enable the infrastructure provider to assess and respond to the access application and
- the name and contact details of a contact person for the access application.

Recommendation 4.2

That the regulator of a state-based access regime provides general information required by access seekers and establishes minimum requirements for the type of information that infrastructure operators must make available to access seekers and that access seekers must provide to infrastructure operators.

4.2.2 Application and negotiation process

Guidelines should be developed to ensure the application and negotiation process is certain and transparent and the process is completed within a reasonable timeframe.

The Commission recommends that negotiation protocols should set out a standard process for applications and negotiations. The New South Wales water access regime, for example, establishes negotiation protocols that set out timeframes for each step of the negotiation process (see box 4.1). Negotiation protocols would have to be complied with by access seekers and infrastructure operators.

In its submission to the draft report, Barwon Water suggested that negotiation protocols should include timeframes with which access seekers should have to comply. The Commission considers that this is reasonable. It also considers that access seekers and infrastructure operators should be able to agree to suspend access applications to allow access seekers to obtain the relevant licence/s required to provide the proposed water or sewerage services or for access seekers or infrastructure operators to obtain additional information or undertake further assessment (for example, in the case of non-standard applications).

Box 4.1 **Negotiating under the NSW access regime**

The New South Wales access regime sets out a staged application and negotiation process, with timelines for each stage.

First, the access seeker requests an information pack from the infrastructure operator. The infrastructure operator has 14 days to provide the information pack. If an access seeker decides to proceed with an access application after receiving relevant information from the infrastructure operator, it must then submit a formal application to the infrastructure operator.

The access application must include sufficient information to enable the infrastructure operator to undertake a preliminary assessment of the application. The infrastructure operator must provide its preliminary assessment to the access seeker within 28 days of receiving an access application. The assessment must include: a statement about the availability of the infrastructure specified in the access application; full details of the infrastructure service requested; access terms and conditions; the proposed price or pricing methodology; details of the infrastructure operator's operating protocols; and relevant system operations and planning information.

If the access seeker decides to proceed, the parties must then agree on a timeframe for negotiations, which must not exceed 90 days.

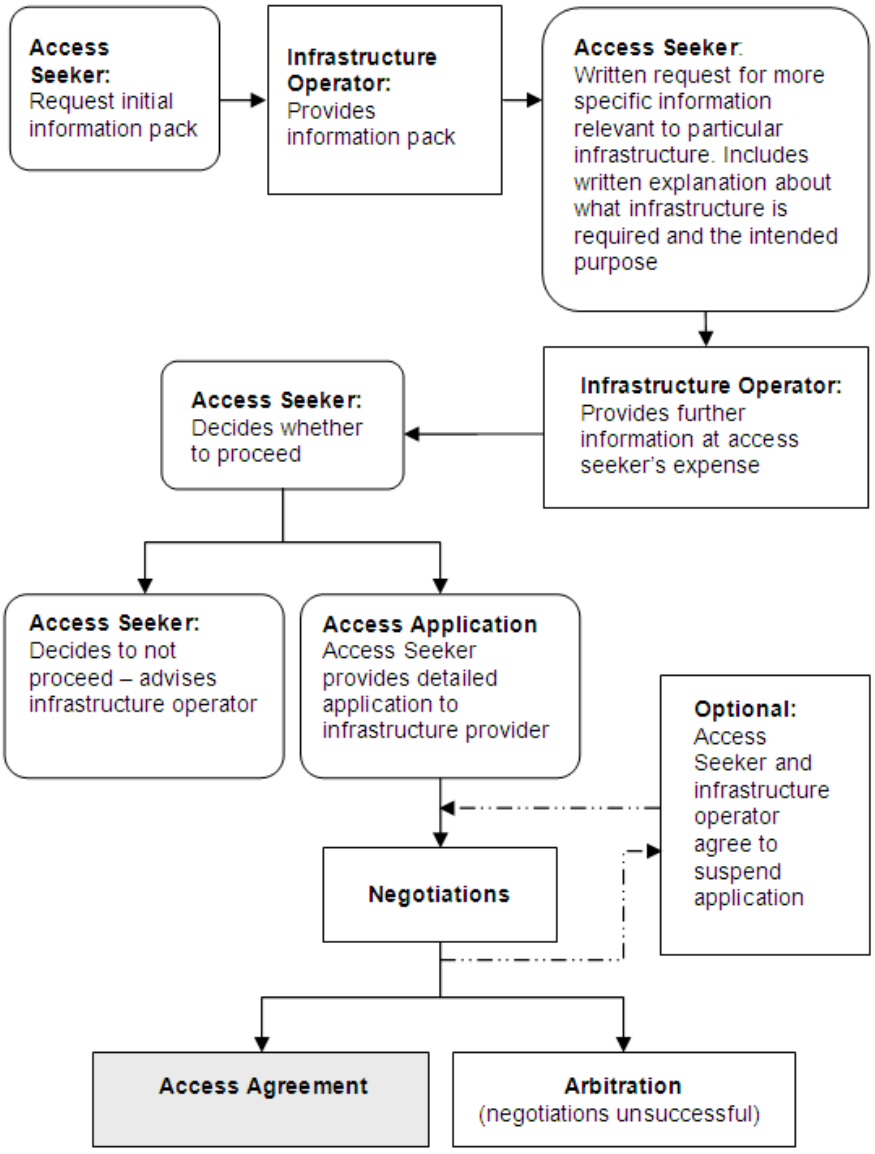
Source: IPART 2007, *Negotiation Protocols,* available at www.ipart.nsw.gov.au.

Figure 4.1 illustrates the Commission's recommended access application process. The Commission considers that an access seeker should have flexibility to choose the sequence of its applications for access and any required licence(s), such that it could:

- negotiate with the infrastructure operator before applying for, or being granted, a licence
- reach agreement with the infrastructure operator to suspend negotiations or the application process while it applies for a licence or
- apply for a licence and then apply for access.

Some water businesses expressed the view that access seekers should have to obtain the required licence(s) prior to commencing access negotiations, arguing that this would 'screen' access applicants. Melbourne Water submitted, in response to the draft report, that access seekers should demonstrate that they have satisfied the relevant licensing requirements before negotiations are finalised.

Figure 4.11. Access application process



The Commission considers that requiring potential access seekers to be licensed before applying for access would create an unnecessary obstacle for access seekers. It is important that the access application process be sufficiently flexible to encourage access requests. For example, an access seeker may prefer to negotiate with the infrastructure operator to determine whether access is feasible and commercially viable before incurring the cost of applying for a licence. After an access seeker has determined that access is possible and that the project is

viable, the access seeker and infrastructure operator could agree to suspend negotiations while the access seeker applied for a licence.

Recommendation 4.3

That the Government requires infrastructure operators and access seekers to comply with the negotiation protocols to be developed by the Commission, in consultation with stakeholders.

4.2.3 Application fees and charges

The water businesses submitted that access seekers should meet the costs they would incur in assessing access applications. In New South Wales, IPART has set an application fee of $2500 that must be lodged with the infrastructure operator with an access application. The negotiation protocols provide that each party is responsible for its own negotiation costs and any joint negotiation costs are apportioned equally.

As noted in section 4.2.1, access seekers may request additional information from the infrastructure operator. The Commission considers it would be appropriate for the access seeker to be responsible for the costs of any additional information it requests from the infrastructure operator.

Under the Victorian rail access regime, an infrastructure operator may charge a fee for providing detailed information required by the access seeker. It must itemise the fee upon the request of the access seeker.[46]

The Commission recommends that the regulator of the Victorian water industry access regime should determine appropriate fees and charges relating to access applications. Fees should reflect costs and not form an unreasonable barrier to access requests. Where the charges proposed by the infrastructure operator for providing additional information appear unreasonable, the access seeker may apply to an arbitrator to resolve the dispute.

Recommendation 4.4

That fees and charges relating to access applications be determined by the regulator. These fees and charges would reflect costs.

[46] Under the rail access regime in Victoria, an infrastructure operator may charge an access seeker a fee for the provision of an information pack and any additional information requested. The fee for the information pack must not exceed $1000. The fee may be refunded if an access agreement is reached.

4.2.4 Terms and conditions

Under the negotiate/arbitrate model, the access seeker and infrastructure operator would negotiate terms and conditions of access that relate specifically to the infrastructure facility that is subject to access. Access terms and conditions commonly relate to service standards, operational requirements and network management, such as:

- aspects of water quality (including aesthetic aspects such as taste and colour), pressure requirements at interconnection points (injection and off-take points), and average and peak flow rates
- sewerage and trade waste composition and volumes at injection points
- metering and measurement of water quality, water pressure and flow rates, including responsibilities for meters and measurement equipment
- information requirements for system planning and operations
- required asset performance and arrangements for reviewing asset performance
- procedures for agreeing scheduled or planned maintenance, including notification and arrangements applying in the event of interruption ('unplanned' maintenance) or reduced service, including notification and compensation
- time of infrastructure use and management of capacity constraints (which may be seasonal or time of day)
- communication protocols, such as who to contact in the event of a leak
- penalties and compensation for technical and operational breaches
- allocation of system losses
- other general and legal arrangements, such as the duration of the agreement and procedures for varying the agreement, and
- emergency procedures and incident management plans for health and safety issues and/or risks to supply system integrity, including notification of access seekers' customers.

More general terms and conditions of access applying to water and sewerage service providers, such as those relating to customer protection, health and safety, water quality and environmental protection, would be included in legislation, licence conditions or codes of conduct (see chapter 7).

Box 4.21. **Standard agreements**

There may be value in developing a 'standard' agreement that would feature definitions, communication protocols, duration of the agreement, ongoing access payment terms and any other relevant terms and conditions that are found to be relatively standard. It could be included in the information 'one-stop-shop' featured on the regulator's website.

A standard agreement may be helpful to potential access seekers by providing more clarity about what to reasonably expect from an access agreement. The standard agreement could be used as the basis for an access agreement if found to be appropriate by the access seeker and infrastructure operator. Alternatively, the parties could develop their own agreement.

A standard agreement was designed by the Australian Rail Track Corporation as part of the business' voluntary undertaking (approved by the ACCC on 30 June 2008). The water competition regime in Scotland features a standard agreement and the United Kingdom's access regime provides for a number of standard terms and conditions to be included in access agreements. IPART suggested that if there was a substantial demand for access to water or sewerage infrastructure, then it may move to codify the negotiation protocols.

The Commission considers that stakeholders should be consulted on the value of a standard agreement and its design.

4.2.5 1.Access undertakings

Under Part IIIA of the *Trade Practices Act 1974* (TPA), infrastructure operators can submit a voluntary undertaking to the regulator (the ACCC) for approval (see appendix E). Once approved, the services covered by that undertaking are immune from declaration.

An access undertaking has the primary purpose of giving infrastructure operators some certainty about the terms and conditions on which access will be made available. In particular, it allows infrastructure operators considering new infrastructure investments (greenfields developments) to determine these matters before committing to the investment. While access undertakings must comply with criteria set out by the state-based access regime, the infrastructure operator has greater flexibility to determine the terms and conditions of access.

Potential access seekers would also have greater certainty about the terms and conditions for access to the infrastructure services subject to the undertaking. This information would assist them in assessing the feasibility and commercial viability of proposals requiring access to those infrastructure services. Access seekers and infrastructure operators could still negotiate on specific matters.

The Commission recommends that infrastructure operators should be able to make access undertakings under a state-based access regime. Undertakings would require approval by the regulator of the access regime.

Recommendation 4.5

That a state-based access regime should include provisions to allow infrastructure operators to submit voluntary access undertakings setting out the terms and conditions on which access will be made available to the infrastructure service(s) subject to the relevant undertaking. The regulator would assess the undertaking for consistency with the general provisions of the access regime and approve or reject the undertaking.

4.3 Dispute resolution

It is important for an access regime to be supported by a dispute resolution mechanism when negotiations are unsuccessful. Typically, Australian access regimes provide for binding arbitration by an independent regulator. There was general agreement from stakeholders that the negotiation framework for a Victorian water industry access regime should provide for dispute resolution through binding arbitration with rights of appeal.

4.3.1 Dispute resolution options

Generally, dispute resolution mechanisms will provide for an escalating process, moving through higher level negotiations to mediation and finally to arbitration. Mediation has the advantage of assisting the infrastructure operator and access seeker to reach a negotiated agreement, where possible, under the guidance of an expert mediator. In contrast, arbitration imposes a final decision on the two parties.

In its voluntary access undertaking (made under Part IIIA of the TPA), the Australian Rail Track Corporation nominated a hierarchy of dispute resolution steps, including:

- negotiation (including escalation to senior management and chief executive officers)
- mediation
- arbitration and
- appeal (merits based review or judicial review).[47]

The ACCC identified a number of alternative approaches to arbitration for the national telecommunications access regime, including wherever possible:

- determination by an expert, agreed by the parties
- a direction by the ACCC to attend a conciliation or mediation conference and
- the issuing of an advisory opinion by the ACCC to facilitate commercial negotiations.

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[47] Australian Competition and Consumer Commission 2008, *Final Decision: Australian Rail Track Corporation Access Undertaking – Interstate Rail Network*, July, pp. 32–38.

IPART's negotiation protocols for the New South Wales water industry access regime describe a list of actions that would indicate to it that the parties have negotiated in good faith. Alternatives to arbitration, such as escalation of the dispute to senior management and mediation, are included in IPART's list.

The Commission considers that the dispute resolution mechanisms included in a Victorian water industry access regime should encourage the parties to try to resolve the dispute themselves through higher level negotiations (by senior management or chief executive officers/managing directors) and mediation before they seek arbitration of the dispute.

The Commission supports the adoption of an escalating dispute resolution process, supported by arbitration to provide a final and binding decision. Figure 4.2 illustrates the recommended dispute resolution process.

Either the access seeker or the infrastructure operator would be able to appeal the decision of the arbitrator. The arbitration process is described in section 4.3.2 and the appeal process is described in section 4.4.

4.3.2 Arbitration

If higher level private negotiations and mediation are not successful in resolving an access dispute, either the infrastructure operator or the access seeker should be able to apply for arbitration of the dispute, where an independent party makes a decision that is binding on them.

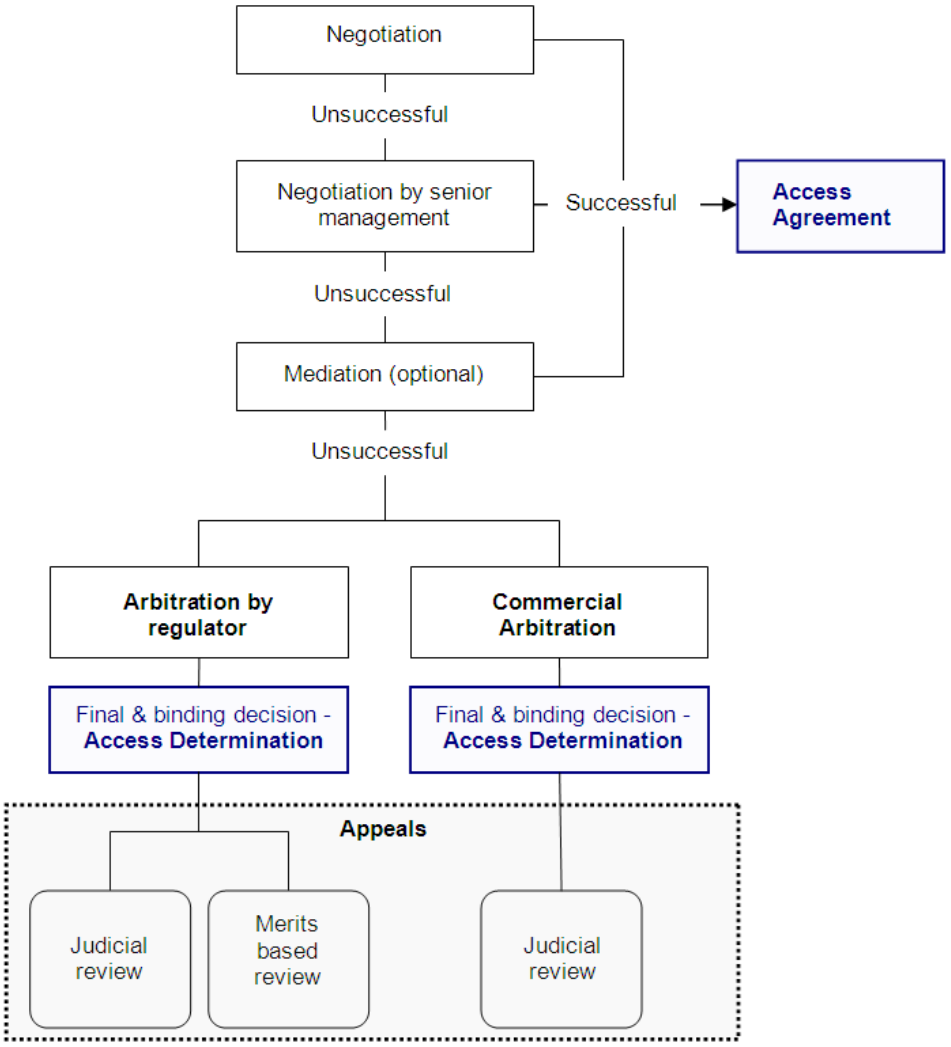
As shown in figure 4.2, the Commission recommends that infrastructure operators and access seekers have two arbitration options.

Arbitration could be undertaken by an independent regulator, which would have detailed knowledge of industry conditions and expertise in hearing access disputes and regulating the industry. For the water industry, the Commission considers that it should be appointed as the independent arbitrator. This approach is consistent with other Australian access regimes that operate under a negotiate/arbitrate model (see appendix I). The Commission is the independent regulator and arbitrator for the Victorian access regimes of rail, ports and grain handling services. IPART is the arbitrator for the New South Wales water access regime. The Commission's role as arbitrator is discussed further in section 8.3.

Appointing the independent regulator to arbitrate over access disputes will promote consistency in access decisions and pricing determinations and therefore greater certainty for access seekers, infrastructure providers and other stakeholders. This will engender public confidence in the system and its process.

Melbourne Water submitted to the draft report that the arbitrator should be supported by independent technical experts as appropriate. Where the dispute concerns a technical matter (for example, an engineering system design issue) and the Commission is nominated to hear the dispute, it could refer the matter to a more appropriate body to arbitrate (such as another regulator or a panel of experts). Alternatively, where the Commission is best placed to hear the dispute, it should have the ability to seek independent expert advice or advice from the relevant government agencies (such as the EPA, DHS, DSE and DTF).

Figure 4.21. **Hierarchy of dispute resolution steps**



Alternatively, the parties to the dispute could agree to nominate a private arbitrator under the *Commercial Arbitration Act 1984*, which also provides for a final and binding decision. In its submission to the issues paper, Yarra Valley Water supported the use of commercial arbitration, as applied in the national electricity access regime. Submissions to the draft report generally supported having the ability to choose between the Commission and a commercial arbitrator.

Where the parties could not agree on private arbitration, either party would be able to seek arbitration by the Commission. Participation by the other party in the arbitration process conducted by the Commission would be mandatory and the Commission's arbitration determination would be binding on both parties.

When the Commission arbitrated in a dispute, the parties would have recourse to two avenues of appeal: limited merits based review and judicial review. Decisions made by a private arbitrator would be subject only to judicial review.

4.4 Appeals

There are two potential avenues for appealing arbitration decisions—judicial review and merits review. Judicial review can only consider errors of law, that is, where the correct processes have not been followed or the law has been applied incorrectly. Judicial review of decisions made by a regulator or commercial arbitrator may be conducted by the Victorian Supreme Court on appeal.

In contrast, merits review allows an independent body (an appeal panel) to consider the merits or reasonableness of the original decision and to replace the decision with its own decision if warranted. A limited merits review would question whether the original decision was correct given the circumstances and the information available to the decision maker. Merits review provisions provide an incentive for regulators to make reasonable decisions, and to consider all relevant factors, by ensuring that they are accountable for their decisions.

The grounds for the appeal will determine whether it is heard as a judicial review or merits review.

Section 55 of the ESC Act provides for limited merits review of determinations made by the Commission. Merits reviews are conducted by an independent panel convened by the Victorian Civil and Administrative Tribunal (VCAT).[48] Box 4.3 describes the process by which an appeal panel is established through VCAT and the process followed in conducting the appeal.

Submissions supported provisions for limited merits review for arbitration determinations made by the Commission (as well as for other regulatory decisions relating to access). The Commission confirms its recommendation that access seekers and infrastructure operators have recourse to limited merits review as provided under the ESC Act.

Recommendation 4.6

That the Government establishes a dispute resolution mechanism, including binding arbitration by an independent arbitrator and appeals provisions. Arbitration decisions should be subject to judicial review and limited merits review.

[48] Requirements imposed on a regulated entity by the Commission in relation to providing information and Commission decisions to disclose information are also subject to appeal via limited merits review.

Box 4.3 **Appeal panels established through VCAT**

Once an appeal is lodged with the Registrar either by the Commission or the appellant, the Victorian Civil and Administrative Tribunal (VCAT) is required to establish an appeal panel within 7 working days.

In establishing the appeal panel, VCAT draws from a group of nominated panellists chosen because of their expertise in industry, commerce, economics, law or public administration. Panellists are nominated by the Victorian Governor in Council and the list of nominated panellists is managed by the Victorian Department of Treasury and Finance.

Under the *Essential Service Commission Act 2001*, the panel is to be made up of a chairperson (who has experience in conducting contested hearings) and two other members. At least one of those members must have experience in administrative law or the law of procedure and evidence, and at least one member must have technical or industry experience or knowledge relevant to the appeal.

The appeal panel is established through VCAT and is independent of the Commission. If there is a clear conflict of interest with a panel member, either the Commission or a party to the appeal may request that the panel member be replaced. In addition, an application can be made to the Supreme Court to dissolve the panel.

Once formed, the appeal panel has 30 business days to hear an appeal and reach a decision. An extension of up to 15 business days can be granted if required.

The decision of the appeal panel is final and binding. Generally, the appeal panel has the power to:

- set aside the determination and send it back to the Commission with recommendations on how it should be amended
- affirm the determination of the Commission or
- vary the determination of the Commission to correct the error.

Source: *Essential Services Commission Act 2001*, section 55.

4.5 Certification criteria

To satisfy the criteria for certification, a state-based access regime must establish a negotiation framework consistent with the principles set out in clauses 6(4)(a)-(c), (e)-(i), and (m)-(o) of Competition Principles Agreement. These principles describe the key features of the negotiation framework on which an access regime should be based. The NCC considers that, for most industries, the principles establish a

negotiate/arbitrate model as 'a cornerstone' of an access regime.[49] Under this model, access is determined on the basis of terms and conditions negotiated and agreed between the infrastructure operator and the access seeker, with formal arbitration as the principal mechanism for resolving disputes.

In assessing the negotiation framework established by an access regime, the NCC considers whether the regulatory arrangements establish an environment in which access seekers can negotiate effectively with infrastructure operators. Among other requirements, a regime must establish a legal right for parties to negotiate access and require infrastructure operators to use all reasonable endeavours to accommodate access seekers' requirements.

The NCC's guidance on the certification criteria states that, where information and market power asymmetries between infrastructure operators and access seekers are expected to be significant, the negotiation framework established by the regime is likely to require at least:

- a process through which access seekers can obtain information required to effectively negotiate terms of access and
- guidance on appropriate access prices or price boundaries, such as through independent and transparent regulatory processes or an effective competitive tendering process that establishes reference tariffs (access pricing issues are discussed in chapter 5).

As discussed in section 4.1, the Commission expects that, for at least some potential access seekers, there are likely to be significant information and market power asymmetries. The Commission has, therefore, recommended that, in addition to establishing a legal right for access seekers to negotiate with infrastructure operators, a state-based access regime should include additional provisions in negotiation protocols to facilitate those negotiations and place access seekers and infrastructure operators on a more equal footing (see section 4.2).

The clause 6 principles in the Competition Principles Agreement also require a state-based access regime to make provision for dispute resolution by an independent body. As discussed in section 4.3, the Commission has recommended that, when a dispute arises the access seeker and infrastructure operator should be able to obtain a final and binding decision either through arbitration by a commercial arbitrator chosen by agreement or through arbitration by the Commission.

While the clause 6 principles do not require the inclusion of merits review provisions, the NCC highlighted the absence of merits review provisions in the New South Wales water access regime as a potential weakness. Where merits review is provided, clause 6(5)(c) states that the provision should specify limited merits review.

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[49] National Competition Council 2002, *The National Access Regime: A Guide to Part IIIA of the Trade Practices Act 1974, Part A: Overview,* Commonwealth of Australia, available at www.ncc.gov.au, p. 15.

As discussed in section 4.4, the ESC Act provides for limited merits review of determinations made by the Commission. If the Commission were to be appointed arbitrator, its arbitration determinations would be subject to limited merits review.

The Commission considers that its recommendations are likely to assist the Government in developing a negotiation framework, including dispute resolution and appeals mechanisms, that are consistent with the certification criteria.

4.6 Implementation process

The Commission recommends that a state-based access regime be established through a staged implementation process (see chapter 10).

During the initial stage of the implementation period, a transparent framework for negotiations, supported by negotiation protocols and dispute resolution mechanisms, would be developed in consultation with stakeholders and other interested parties. These consultations are expected to include a workshop with the water businesses, industry representatives, consumer groups and other interested stakeholders to discuss technical issues associated with developing negotiation protocols. The Commission expects that it would release draft negotiation protocols for broader public comment and feedback before finalising the protocols.

5 ACCESS PRICING

The terms of reference for this inquiry required the Commission to make recommendations on a methodology for determining access prices. Access prices influence the extent to which new entrants are able to compete with an incumbent business in the potentially competitive elements of the water sector. As such, access pricing plays a key role in the effectiveness of an access regime in promoting competition.

As recommended in the draft report, negotiation between the access seeker and the infrastructure operator should be the first step in determining access prices. Stakeholders indicated strong support in submissions for negotiation to be the starting point in determining access prices. An access regime should provide a framework to ensure that access prices are cost reflective and do not permit monopoly profits or discriminatory pricing (except where it aids efficiency). An effective framework will include guidance to inform negotiations on access prices and processes for determining an access price when the infrastructure operator and access seeker cannot reach agreement.

This chapter sets out the Commission's recommendations on access pricing methodologies and related issues.

5.1 Access pricing principles

Access pricing principles should be formulated to allow new water and sewerage providers to participate effectively in the water sector while ensuring that infrastructure operators can recover the costs of providing access. They should also create incentives for businesses to operate efficiently.

Clause 6 of the Competition Principles Agreement contains principles for determining efficient access prices (see section 5.5). These principles require that access prices should provide water businesses with enough revenue to cover the costs of providing access. Different access seekers should be charged different access prices when the costs of providing access differ between users of the infrastructure, but access pricing should not otherwise discriminate between access seekers unless it aids efficiency. Access prices should also provide incentives to reduce costs or improve productivity.

The clause 6 pricing principles are included in the ESC Act. The Commission is required to ensure that these principles are met in all regulated industries where third party access regimes exist.

As discussed in chapter 4, the first step in determining the terms and conditions of access, including access prices, should be through negotiations between the infrastructure operator and the access seeker. Where access negotiations involve one or more relatively small access seekers and a large infrastructure operator,

asymmetries in information and bargaining power between the negotiating parties may be expected. In these cases, guidance in the form of indicative access prices or specifying the method to be used in determining access prices would reduce these asymmetries and facilitate negotiations. Even in situations where asymmetries in information are less likely (such as access negotiations between two water businesses), some certainty about access prices or the manner in which they are to be determined may reduce the costs and time involved in reaching agreement on an access price.

Further, in cases where an infrastructure operator and access seeker fail to reach agreement, the regulator/arbitrator may be required to make a determination on the access prices to apply. Certainty about how the regulator/arbitrator will make a ruling on access prices, including how they are calculated, will improve confidence in the regulatory framework. An access regime should therefore specify how access prices will be determined by the regulator in cases where the infrastructure operator and access seeker are unable to reach agreement.

The terms of reference for this inquiry state that one of the Government's objectives in establishing an access regime is to provide certainty to market participants about the terms and conditions (which includes access pricing) under which access will be provided

As such, provisions that provide certainty to infrastructure operators and access seekers, such as guidance on negotiating access prices, calculation methodologies and access pricing structures, should be a key feature of an access regime. These provisions should also provide for access prices that satisfy the Competition Principles Agreement so that the access regime can be certified.

5.2 Methodologies for determining access prices

The two key approaches to determining access prices are the cost of service approach and the retail minus approach.[50] Both approaches ensure that the infrastructure operator is able to generate sufficient revenue to cover the efficient cost of providing access to the relevant infrastructure without allowing it to generate monopoly profits. Both methodologies satisfy the pricing principles in clause 6 of the Competition Principles Agreement.

This section describes the two approaches and identifies important considerations for determining which methodology to apply in setting the price of access to particular infrastructure facilities.

5.2.1 Cost of service approach

Under the cost of service approach, access prices are determined by estimating the cost to an infrastructure operator of sharing with an access seeker the use of its infrastructure. Access prices will be set to allow the infrastructure operator to recover these costs.

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[50] Other approaches to determining the costs of providing services include econometric benchmarking and productivity indexing.

The cost of service approach is commonly known as the 'building block' approach and is currently used by the Commission to determine prices for water, sewerage and other services provided by the incumbent water businesses. In the case of water and sewerage services, the Commission uses this approach to determine prices for the 'bundled' service, which includes all elements of the service. For example, retail water prices pay for storage, treatment and delivery of water as well as customer service and retail functions (see figure 1.1 for a diagram of water and sewerage functions).

As a method for determining access prices, the cost of service approach has commonly been used in cases where the various service components have been unbundled. In the Victorian gas and electricity industries, for example, the cost of service approach has been used to calculate electricity distribution tariffs and gas access prices. This approach has been used in other jurisdictions in approving regulated prices for bundled water and sewerage services, including in New South Wales and the United Kingdom.

Figure 5.1 illustrates how the cost of service approach is applied to calculate access prices. Under the cost of service approach, the first step in determining the access price is to calculate the revenue required to provide the infrastructure service subject to access. The amount of revenue that the infrastructure operator needs to recover (known as the revenue requirement) reflects the efficient cost of providing access to the relevant infrastructure. As shown in figure 5.1, the major components of the revenue requirement are operating expenditure, regulatory depreciation and return on assets.[51]

Operating expenditure represents the ongoing costs incurred by the infrastructure operator to provide the service and maintain the infrastructure.

Regulatory depreciation and a return on assets are the means by which the infrastructure operator recovers its capital investments over time. When a capital investment is made by the infrastructure operator, the capital expenditure is incorporated into the business' regulatory asset base. Capital expenditure is returned to the infrastructure operator over the life of the relevant asset through regulatory depreciation. As it is returned to the infrastructure operator, regulatory depreciation is deducted from the regulatory asset base. A rate of return is applied to the balance of the regulatory asset base to provide the infrastructure operator with a return on assets, which covers the financing costs of past investments.

In the Victorian water industry, the regulatory asset base currently in place for each business represents the opening regulatory asset values as of 1 July 2004 (as required under the WIRO), adjusted for all subsequent net capital expenditure and regulatory depreciation. The rate of return provided to the water businesses is assessed during the Commission's periodic price reviews and represents the efficient financing cost for the industry, taking into account the prevailing financial market conditions at the time.

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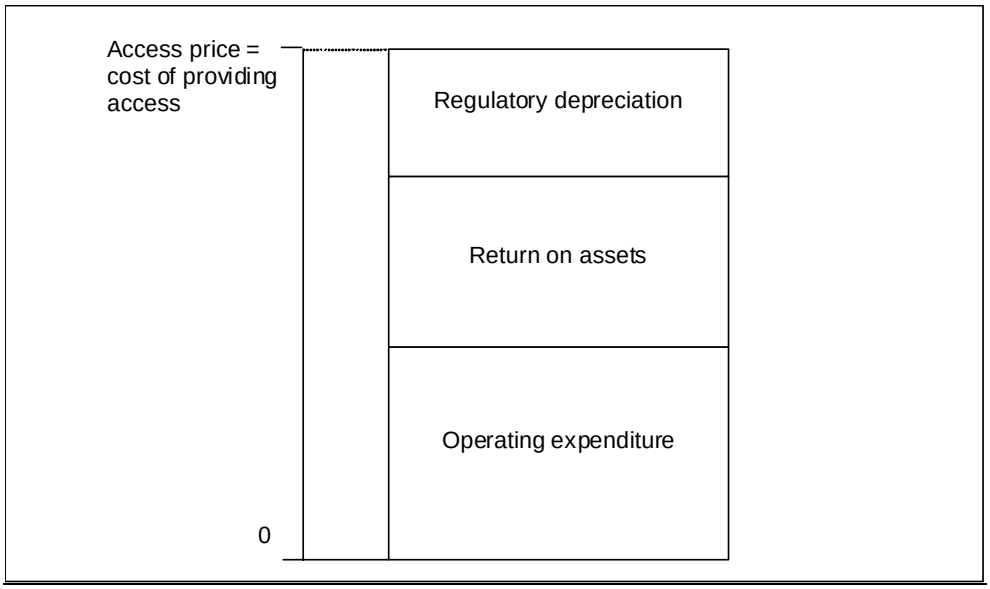
[51] Other items that may be included in the revenue requirement include tax liabilities or adjustments from previous years or regulatory periods.

Figure 5.1 Cost of service approach



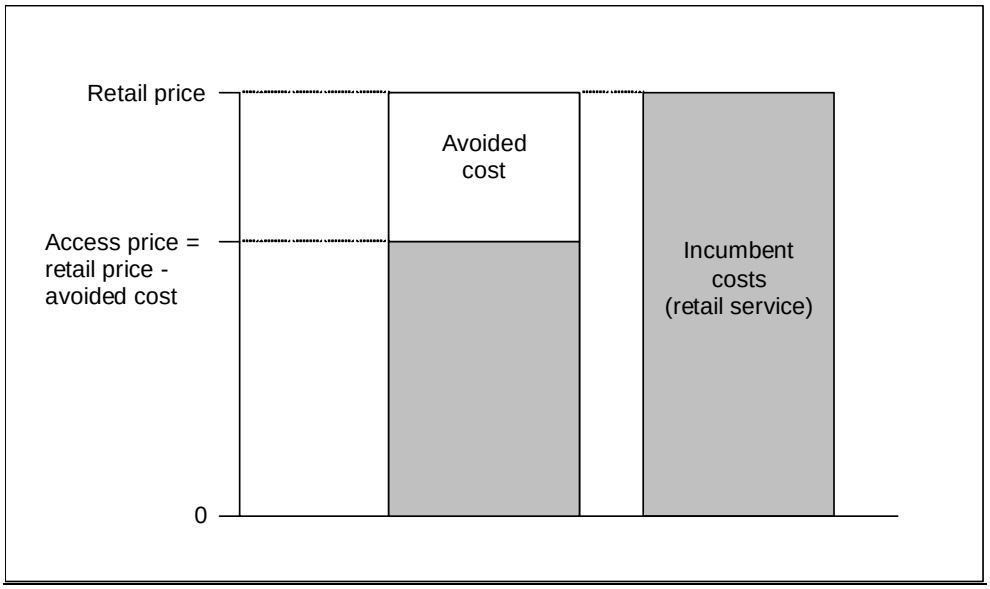
Currently each business has a single regulatory asset value, reflecting (for regulatory purposes) the value of all infrastructure used by the business to provide its full range of services. Separate asset values are not calculated for different infrastructure facilities, including natural monopoly facilities and facilities such as treatment plants that are not natural monopolies. To apply the cost of service approach to calculate access prices, it will be necessary to identify separate regulatory asset values for natural monopoly infrastructure facilities providing services to which access is required. Section 5.4.5 discusses the process for determining separate regulatory asset values.

5.2.2 Retail minus approach

The retail minus approach uses existing regulated retail prices as the basis for determining access prices. Under this approach, the access price is determined by taking the approved retail price for a bundled service and applying a discount to account for the services the access seeker does not require the infrastructure operator to provide to it. The discount on the retail price reflects the costs avoided (or potentially avoided) by the infrastructure operator in not having to provide those services to the access seeker. Figure 5.2 shows how the retail minus approach is used to calculate access prices.

Consider an example where the retail price of an incumbent water business is regulated and determined using a building block approach, as shown by the second bar in figure 5.2.

Figure 5.2 Retail minus approach - example



An access seeker may require the use of the infrastructure operator's network, but not the storage, treatment or retail services provided by the infrastructure operator. Under the retail minus approach, the discount applied to the bundled price (which covers all service components) would reflect the costs of providing the services that are not provided to the access seeker. The first bar in figure 5.2 shows how the access price is determined by deducting the total avoided cost from the regulated retail price.

In practice, the discount used in the retail minus approach can be calculated in a number of ways. First, the discount may represent the direct costs avoided by the infrastructure operator in not having to provide certain service components to the access seeker. The discount in this case represents the total short run marginal costs of the service components not provided. Alternatively, the discount under the retail minus approach may be calculated using avoidable cost, which represents the cost that the infrastructure operator could avoid in the longer term by not having to provide certain service components to the access seeker. The discount in this case represents the total long run marginal costs of the service components not provided.[52]

The discount method is a key issue associated with the retail minus approach, as the cost concept used to calculate the discount will result in different access prices. Depending on the definitions and calculation of the various costs used to determine access prices, the cost of service and retail minus approaches can result in the same or very similar access prices.

[52] The avoided or avoidable cost may either be based on the infrastructure operator's costs or the cost of a hypothetical new entrant. See Appendix H for further discussion.

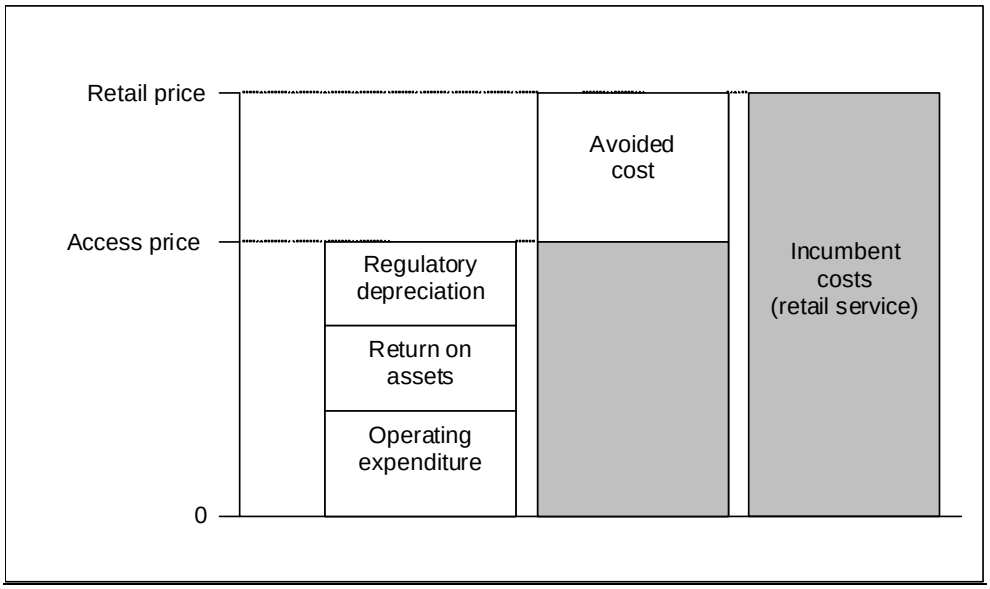
Appendix H illustrates how the cost of service and retail minus approaches would be applied to calculate access prices using a numerical example and provides a more detailed explanation of some of the technical concepts.

The retail minus approach has generally been used in cases where the retail price is regulated, where the service is bundled and where the infrastructure operator also provides upstream or downstream services associated with the infrastructure in question. An example of the application of the retail minus approach is the ACCC determination in respect of the access dispute between Sydney Water and Services Sydney.[53]

5.2.3 Comparison of pricing methodologies

Conceptually the cost of service and retail minus approaches are different ways of calculating the same access price. The calculation of access prices under the two approaches is compared in figure 5.3.

Figure 5.3 Equivalence of the cost of service and the retail minus approaches



The first bar shows the access price for an infrastructure service calculated using the cost of service approach (as discussed in section 5.2.1). The third bar shows the costs to the infrastructure operator (who is also the incumbent retail service provider) of providing the bundled retail service; these costs are calculated using the cost of service approach to determine the regulated retail price for the bundled service. The second bar shows how the retail minus approach determines the

[53] Australian Competition and Consumer Commission 2007, *ACCC determination—Sydney water access dispute*, News release, 19 July, available at www.accc.gov.au/content/ index.phtml/itemId/793017/fromItemId/2332.

access price by deducting the costs avoided by the infrastructure operator from the regulated retail price (as discussed in section 5.2.2). As shown in figure 5.3, the same access price is calculated under both approaches (a numerical illustrating this outcome is provided in appendix H).

While the two approaches are conceptually equivalent in respect of the access price, each approach has different advantages and disadvantages in practice. In practice, also, difficulties in accurately identifying all relevant costs may result in the two methods producing somewhat different price outcomes.

The retail minus approach is generally regarded as simpler and less costly to apply than the cost of service approach. It only needs to be applied when an access application is received. The cost of service approach is generally more information intensive than the retail minus approach and hence viewed as imposing a larger administrative burden. As the Commission currently regulates retail water and sewerage tariffs using a cost of service approach, the additional administrative costs of determining access prices using the same approach may not be significantly greater than using the retail minus approach.

An advantage of the cost of service approach is the clear relationship between access prices and the cost of providing access, which makes access prices easier to understand. A further advantage is that the Commission has been using the cost of service approach since 2005 and all water businesses and key stakeholders are familiar with it.

A potential disadvantage of the cost of service approach is the risk of 'cherry picking'. Cherry picking can occur when regulated retail prices are uniform across a service area or customer group but the costs of providing the service differ between customers (that is, prices reflect the average costs across the customer base but not the actual costs of servicing particular customers). When an access price is calculated using the cost of service approach, the price will reflect the actual cost of providing access. A new retail business (sharing the use of infrastructure to deliver services to its customers) would be able to set its retail price to reflect the actual costs of servicing particular customer groups. For customers who can be serviced at a cost that is lower than average, and therefore lower than the regulated retail price charged by the incumbent retail business, the access seeker would be able to undercut the incumbent by charging a lower price reflecting the costs of servicing those customers. It would, therefore, be able to win those customers from the incumbent business; this is cherry picking. The incumbent would eventually be left with those customers for whom the costs of providing retail services are higher than average.

The Commission notes the concerns raised by many stakeholders about cherry picking but contends that the cost of service approach does not necessarily result in cherry picking, even when retail prices exhibit postage stamp pricing. As noted by Melbourne Water in its submission to the draft report (p. 21), the cost of service approach, in combination with an averaging process to ensure that access prices and retail prices exhibit the same level of aggregation, will be as effective as the retail minus approach in preventing cherry picking.

Another potential disadvantage with using the cost of service approach is the need to separately identify expenditures associated with the infrastructure subject to the

access regime, including disaggregating the businesses' regulatory asset bases to separately identify an asset base for each infrastructure facility subject to access. This does not have to be done in order to apply the retail minus approach if the discount is based on the short run marginal cost of the avoided services. However, separate identification of regulatory asset values for specific service components may be required if the retail minus discount is based on avoidable cost.[54]

5.3 Determining which access pricing methodology to apply

In deciding which method to apply to determine access prices for a particular infrastructure facility, the advantages and disadvantages of each approach in relation to the particular infrastructure facility need to be considered. In addition, a number of practical considerations should be taken into account. In some circumstances, the cost of service approach is likely to be preferred or easier to apply. In other cases, the retail minus approach is preferable. In the draft report, the Commission recommended that the cost of service approach should be used in certain circumstances while the retail minus approach should be used in all other cases. This section discusses the Commission's recommendations.

5.3.1 Applying the retail minus approach

In the draft report, the Commission recommended that the retail minus approach generally be used to calculate access prices where the final retail price is regulated and the infrastructure operator provides services in the regulated retail market.

This draft recommendation reflected the Commission's conclusion that the administrative costs of applying the cost of service approach for all infrastructure services would be high and could result in the water business incurring unnecessary costs if few or no access requests for a particular service are received. In contrast, the retail minus approach is relatively easy to adopt in the presence of regulated retail prices and only needs to be applied when an access application is received. Further, it avoids concerns about cherry picking since access prices will be set at the same level of aggregation as the regulated retail prices.

The water businesses strongly supported the use of the retail minus approach, arguing that it is consistent with postage stamp pricing policies, does not preclude the gradual removal of pricing anomalies over time and discourages cherry picking. They also argued that it would be less costly and more practical than the cost of service approach.

The joint submission to the draft report by CUAC, CALC and VCOSS indicated support for the Commission's recommendation on applying the retail minus approach.

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[54] Separate identification of regulatory asset values will be required if the discount under the retail minus approach includes a return on and a return of investments. See appendix H for further discussion.

Many of the water businesses submitted to the draft report that more guidance is required for applying the retail minus approach, particularly the method for calculating the retail minus discount. The Commission proposes that pricing principles and detailed guidance will be developed during the implementation period in consultation with stakeholders (see section 5.6).

The Commission remains of the view that the retail minus approach is the most pragmatic solution, given the existing policy settings and the current regulatory framework for the Victorian water sector, and the current uncertainty about the nature and extent of future access requests. It therefore confirms its recommendation that the retail minus approach be used to calculate access prices in the majority of cases in the Victorian water industry.

5.3.2 Applying the cost of service approach

In the draft report, the Commission recommended applying the cost of service approach to determine access prices in two types of circumstances.

The first of these is where charges for the services provided by an infrastructure facility have already been already calculated using the cost of service approach. This is the case, for example, with Melbourne Water's water and sewerage pipelines, where it has separate charges for its bulk water and bulk sewerage transport services. These charges could be used as basis for determining access prices for the use of its water and sewerage transport services. The charges are approved by the Commission and are calculated using a cost of service approach.

The second situation is where access is provided to infrastructure services provided by a discrete infrastructure facility and the costs associated with this infrastructure can be readily identified, for example, where a regulatory asset value could be easily calculated. In these cases, the Commission considers that the administrative costs of calculating an access price using the cost of service approach are likely to be small. In addition, the cost of service approach would result in more cost reflective access prices. It suggested some examples of discrete infrastructure facilities, such as large pipelines like the Goldfields Superpipe, the Sugarloaf pipeline and the future Grampians–Hamilton pipeline.

Submissions by a number of water businesses and VicWater opposed the use of the cost of service approach for any service where a regulated retail price exists, as this could expose the regulated business to the risk of cherry picking. VicWater's submission to the draft report raised the example of a bulk pipeline and suggested that the use of cost of service approach could encourage access seekers to cherry pick customers close to the outlet of the pipeline.

In their joint submission to the draft report, CUAC, CALC and VCOSS expressed concern about using the cost of service approach and advocated further analysis by the Commission, in particular of the consumer impacts or benefits of this approach. It referred to the water businesses' concerns that the cost of service approach may result in cherry picking which would have negative impacts on consumers.

In responses to the draft report, Gippsland Water and the Coliban Water/Central Highlands Water joint submission highlighted the need to identify separate regulatory asset values for different service components as a disadvantage of the

cost of service approach. The issue of separate regulatory asset values was also raised by a number of stakeholders at the July public hearing.

In its submission to the draft report, Melbourne Water indicated its support for the cost of service approach for its infrastructure facilities, particularly as its regulated prices are already calculated on this basis. It suggested, however, that access prices should be calculated on a network level rather than for specific assets because it would reduce administration costs and reduce the potential for cherry picking.

Central Highlands Water's submission to the draft report argued that the retail minus approach should be used for the Goldfields Superpipe as opposed to the cost of service approach, because the final retail price for these services is regulated.

The Commission has considered the concerns raised by stakeholders about the cost of service approach. It considers that many of the concerns raised in submissions would be more likely to apply if the cost of service approach were to be adopted as the general approach to setting access prices, rather than in the limited circumstances recommended at this stage. It acknowledges that the cost of service approach, if applied on a case by case basis within the general distribution network where postage stamp retail prices exist, could create the potential for cherry picking. When applied to discrete infrastructure facilities such as bulk water or sewerage pipelines, the potential for cherry picking is much lower.

In the Commission's view, the main issue with using the cost of service approach as the standard method of calculating access prices would be the administrative costs of doing so, including the costs of calculating separate regulatory asset values.

The Commission has concluded that the use of the cost of service approach remains appropriate in certain, limited circumstances. Those circumstances are where the costs associated with providing an infrastructure service can be easily identified or where a price for providing infrastructure services has already been calculated using the cost of service approach.

Recommendation 5.1

That the cost of service approach is used to determine access prices in respect of infrastructure where the costs associated with providing an infrastructure service can be readily identified or where a price for infrastructure services has already been calculated using the cost of service approach (such as Melbourne Water's bulk water and sewerage charges).

Recommendation 5.2

That the retail minus approach is used to determine access prices in respect of infrastructure where a regulated retail price exists and the infrastructure operator provides services in the regulated retail market, except where the cost of service approach is to be used.

5.4 Other pricing issues

In response to the issues paper and draft report, stakeholders made submissions on a number of other pricing related issues. The terms of reference do not require the Commission to make recommendations on all of these matters. The Commission considers that these issues should be addressed further during the implementation period. Some initial comments are set out in this section.

5.4.1 Structure of access prices

In addition to providing infrastructure operators with sufficient revenue to cover the efficient costs of providing access, the Competition Principles Agreement requires that prices must allow multi-part pricing and price discrimination when they facilitate efficiency and provide incentives to reduce costs or otherwise improve productivity.

Economic efficiency requires that variable charges be set with reference to long run marginal (or incremental) cost. Prices set in this manner will send appropriate signals to customers about the costs of providing additional units of the service and to water businesses about efficient investments. Because of the high fixed costs inherent in the water industry, however, variable charges are generally not sufficient to cover the full cost of providing services.

For retail water and sewerage services, water businesses generally recover the revenue shortfall through fixed service charges. The combination of fixed service charges and variable services charges is commonly referred to as a two-part tariff.

Access prices are also likely to require a two-part tariff to send appropriate signals and recover the full cost of providing access. In this case, variable access prices should be calculated with reference to long run marginal cost and the fixed service charge for access should represent the access seeker's share of the fixed cost of the service to which access has been granted. Marginal cost pricing is consistent with both the cost of service approach and the retail minus approach (where the regulated retail price reflects long run marginal cost).

In its submission to the issues paper, VicWater argued that access prices should be based on incremental costs (long run marginal cost) to send accurate pricing signals about the cost of supplying infrastructure services, thereby promoting economic efficiency. In response to the draft report, it agreed with the recommendation that variable charges for access be based on incremental cost with remaining costs recovered through fixed charges. Melbourne Water also indicated its support for two-part tariffs for access prices.

Central Highlands Water noted, in its submission to the draft report, that the strict application of long run marginal cost pricing does not provide for the recovery of any portion of fixed costs from an access seeker. It argued that under a two-part tariff the variable access charge would recover long run marginal cost while the fixed component of the charge recovers some portion of the fixed costs, with the fixed charge being subject to negotiation between the access seeker and the infrastructure provider. It also argued that two-part access prices are consistent with Section 35C (b) (i) of the ESC Act, which provides for multi-part tariffs for access prices.

As discussed in section 5.6, the Commission recommends developing further guidance on access pricing, including guidance on tariff structures, during the implementation period.

5.4.2 Pricing of greenfields investments

The terms of reference for this inquiry require the Commission to make recommendations to ensure that an access regime does not inappropriately deter new investments in infrastructure. While access to infrastructure can increase competition and promote efficient investment in related markets, access prices need to be set so as not to discourage efficient investment in infrastructure that could potentially be made subject to an access regime. Further, the NCC has indicated that access prices should provide sufficient revenue to cover the efficient costs of providing access, including a return on and of assets, with the return on investment set 'commensurate with the risks involved'.[55]

As discussed in section 3.4.2, the additional risks of greenfields developments created as a result of an access regime can be addressed in two ways: exempting greenfields investment from access applications through non-coverage declarations (also known as access holidays), or reflecting any additional risks associated with greenfields investments in access prices.

The Commission has concluded that an access regime is unlikely to create additional investment risks in relation to greenfields investments and could, in fact, improve returns and reduce risks by increasing the potential demand for services provided by new (and existing) infrastructure facilities. For example, construction of a greenfields pipeline to transport water to a new housing development could prompt the development of a new industrial estate in the same area since access to the pipeline would enable water to be delivered to it. Coliban Water's submission to the issues paper noted that an access regime could enable the recovery of additional revenues from under-utilised assets.

Nevertheless, infrastructure investments are likely to have a higher degree of risk than investments in established areas because of greater uncertainty about demand, costs and other factors affecting returns. The Competition Principles Agreement includes provisions for reflecting commercial and regulatory risk in access prices (clause 6(5)(b)(i)). However, they also specify that the 'investment risks' from access should not include risks related to potential loss of market share in related markets. The Competition Principles Agreement explicitly excludes 'costs associated with losses arising from increased competition in upstream or downstream markets' (clause 6(4)(j)(ii)).

As discussed in section 5.6, the Commission recommends that, during the implementation period, water businesses develop access commitments, which will include pricing principles (consistent with the Commission's principles) and the process by which they will negotiate with access seekers on access prices. If a water business proposes to include a risk premium in access prices, it would need to specify this in its access commitments. The Commission would need to be

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[55] National Competition Council 2003, *op cit*., p. 58.

satisfied that including a risk premium is justified and that the additional risks are significant.

5.4.3 Capacity, augmentations and cost allocation

Capacity constraints, and how the cost of infrastructure augmentation would be allocated between an access seeker and the infrastructure operator, were raised as issues at the public hearing and in a number of submissions.

The Commission expects that in many cases, the additional network demand created by an access seeker would not create significant capacity issues. Where capacity constraints became an issue, a mechanism would need to be in place to determine how the scarce capacity was allocated. This could be done in a number of ways. Each method has advantages and disadvantages and the Commission suggests that further consideration be given to this issue during the implementation period.

One method for allocating a scarce recourse is an auction process. An auction is generally efficient, as the scarce resource is directed to the uses where the greatest benefits will be realised (by the users who attach the highest value to the service provided by the infrastructure facility). In the case of water infrastructure facilities in Victoria, an auction process may be more suited to allocating capacity in single large-scale pipelines, where capacity shares can be easily identified.

Another method is to allocate a portion of capacity to existing customers, or prescribe a minimum standard of service to retail customers, and to make any spare capacity above that available to all users, such as access seekers. The available spare capacity could be allocated through an auction or other means. This option could be adopted as a government policy decision to address concerns, expressed by some water businesses and customer groups, about the impact of access on the existing customer base. It could, however, lead to a less than efficient allocation of total capacity (with a loss of economic benefits), such as discouraging innovation and greater participation in the water sector.

If capacity constraints only occur periodically, such as in summer or at peak times during the day, an option would be to make access subject to capacity being available. In this scenario, the infrastructure operator would give priority to supplying its retail customers and the access seeker would wait until capacity became available. This is commonly referred to as queuing. Alternatively, peak pricing could be applied to allocate capacity among competing users of the infrastructure (or just among competing access seekers if the Government decided that existing users should be protected).

Conversely, off-peak pricing could be used to encourage the use of infrastructure during off-peak times. For example, where an access seeker only requires water at off-peak times, or where it is able to store water (either in its own storage facilities or by using storage services provided by a storage infrastructure operator), it may be willing to have water delivered at off-peak times when a water pipeline is under-utilised. In this case, an off-peak access price could be offered by the pipeline operator. The off-peak access price would have to recover at least the variable costs of providing the water transport service to the access seeker but the contribution towards the fixed costs of operating the pipeline would be lower than

that charged for peak use of the infrastructure service. The off-peak access price would therefore be lower than the peak access price.

A further issue arises when capacity constraints require augmentation of an infrastructure facility. The question was raised at the public hearing about how the costs of augmentation would be allocated between access seekers and the infrastructure operator.

Under the current regulatory framework for retail prices, capital costs are included in the water business' regulatory asset base and recovered from customers over time through retail prices. All customers, therefore, pay for asset augmentations. An argument could be made that, in setting access prices, augmentation costs should be allocated proportionally between access seekers and the existing customer base, according to their relative shares of the use of the infrastructure. This is because all customers, whether existing customers or access seekers, contribute to demand for the capacity of the infrastructure.

An alternative is to require access seekers to meet the costs of augmentations if it can be readily established that their demands are responsible for generating the need for augmentation and that only they will benefit from the additional capacity. It may be possible for an infrastructure operator to negotiate with access seekers on an appropriate sharing of augmentation costs. Requiring access seekers to meet all or most augmentation costs could, however, make infrastructure access too expensive and discourage some access seekers from participating in the water industry. This could, in turn, lead to a loss of economic efficiency from reduced innovation and stifle economic growth and regional development. In the Commission's view, the issue of who pays for asset augmentations should be given further consideration during the implementation period.

Central Highlands Water noted, in its submission to the draft report, that it is not clear how the retail minus approach would operate in cases where the access seeker's request requires significant augmentation. In these cases, the Commission considers that the cost of service approach would be applied. In deciding whether augmentation is commercially justified, an infrastructure operator would have to calculate the costs of providing infrastructure services from the augmented facility. The costs of providing these infrastructure services would therefore be readily identifiable. The capital costs associated with the augmentation would also be readily available and could be used to calculate a separate regulatory asset value for the augmented facility.

5.4.4 Access pricing when by-pass is possible

By-pass occurs when a potential access seeker constructs its own duplicate infrastructure to provide services to its customers, instead of sharing the use of the infrastructure operator's natural monopoly assets. By-pass will be efficient when the potential access seeker can provide the infrastructure services it requires more cheaply than the infrastructure operator could provide those services.

By-pass will be inefficient when the converse is true—that is, the infrastructure operator can provide the required infrastructure services more cheaply than the potential access seeker can by duplicating the infrastructure. Inefficient by-pass will occur when the access price exceeds both the cost to the potential access seeker

of providing the infrastructure services for itself and the long run marginal cost of providing the service to the access seeker.

As discussed in section 5.4.1, the access price will exceed the long run marginal cost of servicing customers when a two-part tariff structure applies. A two-part access price would include a variable access charge based on long run marginal cost plus a fixed service charge that represents the access seeker's share of the fixed cost of the service to which access has been granted.

In cases where by-pass by a potential access seeker is feasible, it may be efficient to discount the fixed charge to ensure that the access price charged to that access seeker is less than the access seeker's cost of providing the infrastructure services for itself. This would discourage inefficient by-pass. As long as the access seeker meets the infrastructure operator's long run marginal cost of providing the service, it is efficient for the service to be provided to that customer. This type of price discrimination is efficient and is permitted by clause 6(5)(b)(ii) of the Competition Principles Agreement.

The Commission considers that access pricing principles should permit infrastructure operators to vary their standard access prices where justified to discourage inefficient by-pass. The pricing principles would require the access seeker to pay a variable access charge representing long run marginal cost (that is, avoidable cost) but make a smaller (or no) contribution to fixed costs.

Allowing for this type of price discrimination would be consistent with the pricing principles included in all water businesses' current price determinations for calculating prices for services (particularly trade waste) where the nature of the service is unique to the customer and is most appropriately set on a case-by-case basis. One of these principles is that the total revenue received from each customer should be greater than the cost that would be avoided from ceasing to serve that customer, and (subject to meeting avoidable cost) less than the standalone cost of providing the service to the customer in the most efficient manner.

The Commission considers that a similar principle could be included in the access pricing principles. This would allow infrastructure operators and access seekers to negotiate access prices that do not exceed the cost to the access seeker of duplicating the infrastructure (the standalone cost), but still meet the long run marginal cost (the avoidable cost) of servicing that customer. As for case-by-case price calculations for unique services like trade waste, the Commission would monitor that such prices complied with the pricing principles and did not represent inefficient price discrimination.

5.4.5 Regulatory asset values

A number of submissions to the draft report and feedback at the July public hearing raised the issue of identifying regulatory asset values for individual assets or separate service components.

Gippsland Water suggested that the need to identify separate regulatory asset values for different assets is a limitation of the cost of service approach. Coliban Water and Central Highlands Water made a joint submission discussing the implications of the access regime for the Goldfields Superpipe. It noted that there

are multiple components of the Goldfields Superpipe with complex interconnections between it and other systems, making it difficult to separately identify costs and regulatory asset values for different systems and therefore difficult to apply the cost of service approach.

There are a number of methods for assigning regulatory asset values to individual assets or service components. First, for assets that have been constructed recently (from July 2004, for example), the capital expenditure incurred on that asset should not be difficult to identify. This, combined with some reasonable assumptions about regulatory depreciation, can be used to construct a separate regulatory asset value for that asset. Second, for older assets where past capital expenditure cannot readily be identified or assigned to a particular asset or service component, the Commission considers that a pro-rating process could be used to convert book values to regulatory asset values. Other options could be identified and considered further during the implementation period.

It should be noted that the need to identify separate regulatory asset values is not confined to the cost of service approach. Separate identification of regulatory asset values may still be required under the retail minus approach if the retail minus discount is based on avoidable cost (which includes a return on and of investment) instead of avoided cost. Further, in the ACCC's determination in the Services Sydney case, it determined that the retail minus approach be used but a building block approach be used to determine avoidable costs, which includes a rate of return and regulatory depreciation, which required separate identification of regulatory asset values for the different service components.

5.4.6 Annual adjustment of access prices

A number of submissions to the draft report questioned how access prices would be adjusted over time and discussed consistency with the adjustment process for retail prices.

Barwon Water suggested that further practical information is required for implementing access prices, including how access prices will be adjusted during a regulatory period and clarification of their relationship with price movements and the determination process for regulated retail prices. South East Water suggested that access prices should be adjusted at the same time as retail prices. Barwon Water and Coliban Water also raised the possibility of reviewing access prices during the Commission's price reviews for water and sewerage services.

The Commission agrees that there should be consistency in the adjustment procedures for both retail water and sewerage prices and access seekers. At this stage, the Commission recommends that when an access seeker and infrastructure operator negotiate terms and conditions for access, including prices, that they include appropriate provisions in their access agreement dealing with how access prices are to be adjusted during the term of the agreement. The Commission's guidance on access pricing could set out some options.

5.4.7 Consistency with current regulatory framework

In regulating retail prices, the Commission is principally guided by the Water Industry Regulatory Order 2003 (the WIRO). The WIRO sets out the prescribed

services for which the Commission is responsible for regulating prices. Currently the prescribed services include retail water services, retail sewerage services, storage operator and bulk water services, and bulk sewerage services. The WIRO contains the principles against which the Commission must assess prices. The WIRO principles are generally consistent with the pricing principles included in the Competition Principles Agreement.[56]

The WIRO is likely to require amendment as part of implementing an access regime. For example, the definition of prescribed services in the WIRO may need to be reviewed to ensure that the infrastructure services covered by an access regime are specifically included. The Commission envisages that the Government would review the WIRO during the implementation period when it puts in place the legislative and regulatory amendments required to establish the legal framework for the regime.

In their joint submission to the draft report, CUAC, CALC and VCOSS indicated support for a review of the WIRO to ensure that an access regime is effectively regulated. Their submission argued that the list of prescribed services is likely to need to be amended, but suggested that the regulatory principles should apply equally to access prices and retail prices and do not need to be changed.[57] It also highlighted the importance of public consultation in any review or amendments of the existing regulatory framework.

The Commission confirms its recommendation that the existing regulatory arrangements, including the WIRO, be reviewed by the Government to ensure that it is consistent with the access regime.

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56 The WIRO is available on the Commission's website www.esc.vic.gov.au.

57 The regulatory principles highlighted by CUAC, CALC and VCOSS were cost recovery by regulated entities; ensuring that customer interests, including low income and vulnerable customers, are taken into account; ensuring that regulated entities are provided with incentives to pursue efficiency improvements and promote the sustainable use of Victoria's water resources; and enabling customers or potential customers of the regulated entity to readily understand the prices charged for the prescribed services, or the manner in which such prices are to be calculated or otherwise determined.

Recommendation 5.3

That the Government reviews the Water Industry Regulatory Order 2003 to determine whether amendments are required to ensure an access regime can be effectively regulated.

Matters for further consideration

In formulating pricing principles and guidance on access pricing, the Commission will give further consideration, in consultation with the water businesses and other interested parties, on:

- the structure of access prices to ensure that access prices reflect cost, send appropriate price signals and recover the full cost of providing access to services
- the calculation of risks associated with new infrastructure investments, including greenfields investments
- mechanisms for allocating capacity when capacity constraints exist
- allowing price discrimination when it aids efficiency, for example, in setting access prices to deter inefficient by-pass
- methods for determining separate regulatory asset values for specific assets, namely infrastructure assets providing services subject to access, and
- mechanisms for adjusting any scheduled access prices during a regulatory period.

5.5 Certification criteria

The methodology for determining access prices will be required to meet a number of principles contained in clause 6 of the Competition Principles Agreement in order for the access regime to be certified. Clause 6(5)(b) requires that regulated access prices should be set so as to:

- generate expected revenue that is at least sufficient to meet the efficient costs of providing access to the regulated service, including a return on investment that reflects the regulatory and commercial risks involved
- allow multi-part pricing and price discrimination when it facilitates efficiency
- not allow a vertically integrated infrastructure operator to set terms and conditions that discriminate in favour of its downstream operations, except to the extent that the cost of providing access to other operators is higher, and
- provide incentives to reduce costs or otherwise improve productivity.

The Commission considers that its recommendations on access pricing are consistent with the principles required for certification. Both the cost of service and retail minus pricing methodologies will generate cost reflective access prices, which allow infrastructure operators to recover sufficient revenue to meet the costs of providing access. Both approaches will result in price signals that provide

access seekers and water businesses with incentives to reduce costs or otherwise improve productivity.

Future guidance on access prices is also likely to cover tariff structures, which will cover matters such as multi-part pricing. It is also likely to include pricing principles to promote non-discriminatory prices, which will be supported by the Commission's ring fencing framework.

5.6 Implementation process

The Commission will develop pricing principles and guidance on determining access prices, in consultation with stakeholders, during the implementation period (see chapter 10).

The Commission does not recommend that reference tariffs form part of the regulatory guidance on access prices in the initial stages of the implementation period. Reference tariffs or more detailed guidance on setting prices may be developed when the extent and nature of access requirements are better understood.

During the implementation period, access prices will need to be calculated outside of the price review process. The Commission considers that it may be worthwhile assessing access prices as part of the next price review in 2013 if the extent of access during the implementation period is sufficient to justify scheduled access prices. In the early stages of the access regime, however, the Commission recommends that pricing principles be adopted to enable access prices to be calculated when an application for access is received.

Matters for further consideration

In the context of the 2013 price review, the Commission will consider whether the extent of access during the implementation period is sufficient to justify determining scheduled access prices for specific infrastructure services.

6 RING FENCING

The terms of reference for this inquiry required the Commission to recommend an appropriate ring fencing methodology as part of developing an access regime.

Ring fencing is the process of separating certain services or functions from other services or functions provided (or undertaken) by a business. Separation can take various forms, including accounting separation, which requires separate financial accounts to be kept for different business units or functions, and functional separation, which requires certain functions or activities of the business to be operated as if they were independent of the rest of the business. This chapter discusses ring fencing options and the Commission's recommended approach for ring fencing in the Victorian water industry.

6.1 Purpose of ring fencing

The purpose of ring fencing is to ensure that the costs associated with providing the infrastructure services subject to access are clearly identified and exclude any costs that should be allocated to other services provided by the infrastructure operator. Clarity around these costs will promote the effective operation of an access regime in four main ways.

First, it will provide transparency in access pricing. This will improve certainty for market participants about how access prices have been set. It will also give access seekers confidence that access prices accurately reflect costs.

Second, it will promote confidence that access prices have been set on a non-discriminatory basis. Any discount or premium on the standard access price should reflect capacity management (such as peak or off-peak pricing; see section 5.4.3) or price discrimination that aids efficiency (such as discouraging inefficient by-pass; see section 5.4.4). No access price should be set at less than the efficient cost of providing the service in order to, for example, give a cost advantage to a business (or business unit) associated with the infrastructure operator relative to an access seeker proposing to compete with that business.

Third, access prices set on the basis of clear and accurate costs will provide efficient price signals to all customers of the infrastructure operator's services. These price signals will provide incentives for access seekers, as well as businesses (or business units) associated with an infrastructure operator, to operate efficiently, improve productivity (through innovation and investment), and charge cost-reflective prices for water and sewerage services to their own customers.

Fourth, clear identification and allocation of costs will improve infrastructure operators' incentives to operate efficiently, improve productivity and undertake efficient investments in new infrastructure and infrastructure augmentation.

These outcomes will contribute to the effective operation of an access regime and improve efficiency in the water sector more generally.

6.2 Ring fencing options

Effective ring fencing arrangements must require an infrastructure operator (or infrastructure facility owner) to at least:

- maintain a separate set of accounts for each service that is the subject of an access regime
- maintain a separate consolidated set of accounts for all of the activities undertaken by the business and
- allocate among particular services the costs of providing inputs that are shared by more than one service.

Box 6.1 outlines the various options for implementing ring fencing, according to the degree of separation required. They range from accounting separation to the most rigorous structural separation, where separately owned legal entities are created. The options represent a progression from the minimum level of ring fencing through increasingly rigorous levels of ring fencing through the adoption of more extensive measures to separate certain activities from the rest of the business' activities.

The costs and benefits of separation vary according to the degree of separation that is implemented. Accounting separation (also known as accounting ring fencing) is the least costly approach to implement because it involves only the separation of financial accounts. Conversely, it will also provide the least clarity and transparency of costs and the lowest level of certainty that access prices accurately reflect costs and have been set on an efficient, non-discriminatory basis.

For each option, the costs will depend to a large extent on the accounting and organisational arrangements currently applying within a business. Where some degree of accounting separation already exists, for example, the costs of moving to full accounting separation are likely to be lower.

Moving to more rigorous forms of separation will typically result in higher implementation costs but provide greater benefits in terms of cost transparency, efficiency in the setting of access prices, and confidence in access pricing processes.

The benefits from different forms of ring fencing will depend on the regulatory and structural arrangements applying in an industry. Where an industry is characterised by a high degree of vertical integration, more rigorous ring fencing arrangements are likely to be required to ensure that access pricing processes are transparent, based on accurate identification and allocation of costs to services, and not discriminatory (except where it aids efficiency). More rigorous ring fencing will be necessary in such industries because an infrastructure operator (or associated

business or business unit) would have an incentive to charge a higher than justified access price to reduce the competitiveness of access seekers that proposed to provide water or sewerage services in competition with it.

Legal and structural separation will be most appropriate in industries where retail competition is established and natural monopoly infrastructure operators are privately owned (such as in the gas and electricity sectors). The benefits from these options would be lower in the absence of competition at the retail level.

Box 6.1 Ring fencing options

Various options for ring fencing a business' activities exist – these are listed from the lowest degree of separation to the most rigorous level of separation. The options represent a progression with a higher level of separation building on the previous level through more rigorous separation requirements.

Accounting separation: This entails separate identification of the costs of supplying retail and wholesale products. It requires the allocation to particular activities of the costs incurred in providing services supplied by shared infrastructure facilities and by shared corporate functions. Some versions of accounting separation may require separate profit and loss statements and balance sheets for the separate entities. This option involves the lowest degree of separation.

Functional separation: The next step up involves functional (or operational) separation. This involves placing particular assets and other inputs within a separate unit that trades on a non-discriminating basis with both internal and external customers using transparent and verifiable business processes, including transfer pricing.

Functional separation with separate decision making: A higher level of functional separation involves separate decision making and/or governance arrangements. Measures could include the creation of a divisional board with non-executive directors independent of the group or monitoring arrangements to enforce separation.

Legal separation: A higher degree of separation would be achieved by legal separation, where a separate board is created and separate statutory accounts are filed. These measures would emphasise and support the independence of the separate business entities, although they would continue to come under the same ownership.

Structural separation: The most rigorous form of separation requires separate ownership of the separate business entities. In other words, two (or more) separate businesses would be created.

Source: Based on box 1 in Deloitte 2009, *Functional separation in the Victorian water industry*, Consultancy report prepared for the Essential Services Commission, September, available on the Commission's website www.esc.vic.gov.au.

6.3 Ring fencing in the Victorian water industry

Using economic principles and evidence on the ring fencing measures adopted in other industries, the Commission has analysed the different ring fencing options to determine which option is expected to promote the most effective operation of an access regime in the Victorian water sector.

The Commission considered that legal and structural separation were beyond the scope of this inquiry on the basis of the extant policy and regulatory settings. It did not further consider these options.

In further considering the remaining options, the Commission took into account the views expressed in submissions on ring fencing of water and sewerage infrastructure services.

6.3.1 Functional separation

Functional separation entails creating a separate business unit to operate the infrastructure operator's natural monopoly infrastructure facilities from the business unit(s) providing potentially competitive services. For the water industry, it would involve separating the natural monopoly infrastructure functions, being water storage and water and sewerage distribution (transport), from the potentially competitive functions, which include water sourcing, sewage treatment, and retailing.

As discussed in section 6.2, functional separation implements a more rigorous degree of ring fencing than accounting separation. It builds upon accounting separation to achieve a greater degree of separation, resulting in greater clarity around costs and greater transparency in access pricing.

Functional separation does not eliminate the need for accounting separation in respect of specific infrastructure services. Where a functionally separated business unit operated more than one infrastructure facility, and access was sought to the services provided by only one of those facilities, accounting separation would be required for the services subject to access.

Benefits from functional separation

To better understand the benefits from functional separation in terms of promoting the effective operation of an access regime, the Commission engaged Deloitte to formulate a detailed model of a functionally separated water business. The model would describe an 'average' metropolitan retail business which had functionally separated its natural monopoly infrastructure and potentially competitive functions.[58] The model is shown in figure 6.1.

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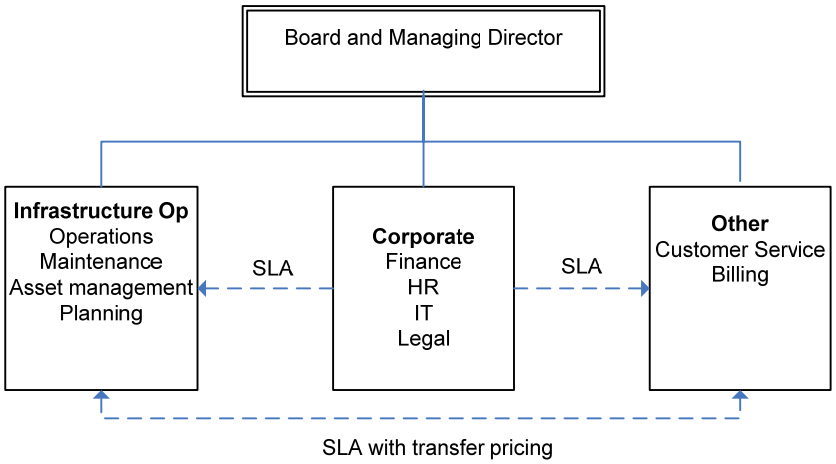
[58] Deloitte's report discussed three possible models of functional separation for a metropolitan retail water business. Identification of these alternatives recognised that individual water businesses would, in implementing functional separation in practice, investigate various functional forms and choose the most efficient and effective organisational structure to suit its particular operations and strategic direction. The three models are discussed in Deloitte's report, which is available on the Commission's

Figure 6.1 Possible model of a functionally separated business



Source: Deloitte 2009, *Functional separation in the Victorian water industry*, Consultancy report prepared for the Essential Services Commission, September, available on the Commission's website www.esc.vic.gov.au.

Note: SLA = Service level agreement

Deloitte's model illustrates how the major business activities of a metropolitan retail business could be allocated between three separate business units:

- infrastructure operator unit—This would comprise the natural monopoly infrastructure functions, including infrastructure investments (strategy, planning and construction), asset management (including maintenance and meter reading), provision of infrastructure services to customers, customer service in relation to faults and new connections, and business management (that is, regulation, reporting and procurement functions).
- other services unit—This would comprise the potentially competitive segments of the business' services, including provision of retail services (such as billing and customer service), marketing, strategy and planning in relation to those services, and business management (that is, regulation and reporting).
- corporate services unit—This unit would provide shared services to the other two units, including finance, human resources management, IT, legal and risk services, and corporate procurement. It could also provide services on a contract basis to other businesses.

For the regional water businesses, which are vertically integrated, Deloitte commented that a similar model with three business units could be adopted. In this case, the infrastructure operator business unit would include bulk water and

website www.esc.vic.gov.au. It should be emphasised that the Deloitte study did not include consultation with the water businesses—its models are provided for illustration only.

sewage transport services.[59] Further investigation would be required to identify an appropriate model for functionally separating Melbourne Water's business units, given that the majority of its services are provided by natural monopoly infrastructure.[60]

The arrangements for governing transactions between the functionally separate units are a central feature of this model. Services provided by the corporate services unit to the other two business units would be subject to service level agreements (SLAs). These would include SLAs for the provision of finance, human resource management, and IT services and a transfer price for charging for those services. Some water businesses already have SLAs in place for some corporate services, particularly IT services. The costs associated with the Board and managing director(s) would also have to be allocated between the infrastructure operator and 'other' services business units.

The infrastructure operator unit would provide water and sewerage transport services to the 'other services' unit for the delivery of water and sewerage services to retail customers. The infrastructure operator unit would invoice the 'other services' unit through an SLA specifying a range of matters related to the nature of the services provided and the transfer price for those services. Deloitte considered that the range of matters dealt with in SLAs would include:

- the service being provided and expected standard of service
- transfer pricing and payment arrangements
- risk sharing arrangements, such as arrangements associated with customer non-payment of bills
- responsibility for penalties payable under the guaranteed service level scheme—in the gas and electricity industries, the infrastructure operators are responsible for making these payments
- legal liability for any losses caused as a result of one party's actions, and
- new connections and disconnection arrangements.

These formal arrangements for governing transactions between units generate some of the main benefits from functional separation with respect to the effective operation of an access regime. By identifying the costs of these transactions and allocating the costs to particular activities, functional separation would result in a high degree of clarity about the level of costs associated with particular services as well as transparency in the allocation of those costs. This would, in turn, generate a high degree of certainty that access prices would accurately reflect costs.

Transfer prices charged by the infrastructure operator unit for providing water and sewerage infrastructure services to the 'other services' unit would provide a basis

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59 Deloitte's report includes a diagram illustrating a model of a fully integrated water supply/sewage treatment business.

60 A possibility would be to separate its drainage and waterways functions from its other functions, which are already ring fenced through accounting separation, but more work would be needed to identify an efficient structure. There could be benefits from functionally separating its large water treatment facilities where the provision of treatment services from these facilities is potentially competitive (see section 3.3.1).

for setting access prices for providing those services to access seekers. This would further improve the transparency of access pricing and engender confidence among access seekers that access prices are set on an efficient, non-discriminatory basis. Access seekers could be confident that an infrastructure operator had not set access prices higher than the costs charged to an affiliated business (or business unit) for the same infrastructure services in order to give a cost advantage to the affiliated business in competing for customers with the access seeker.

Ofwat identified a number of additional benefits from functional separation, including:

- increased responsiveness to customers' needs by a separate retail business unit
- improved management focus in the separate business units and
- eliminating any unnecessary activities (which resulted in annual savings of £6 million from Scotland's retail separation).[61]

Separating decision making would boost the effectiveness of an access regime by ensuring that management decisions are not biased towards benefiting internal customers, relative to external customers. For example, without separation of the natural monopoly infrastructure operator functions from the business' retail functions, a decision on whether to invest in a greenfields development may take into account the expected profits from providing retail services within the development in addition to the returns from the infrastructure investment itself. There are two possible scenarios:

- If the infrastructure operator does not expect to be able to provide profitable retail services, it may not proceed with the development, even though the infrastructure investment is commercially viable and another water and sewerage service provider could profitably provide retail services.
- Alternatively, the infrastructure operator might undertake a greenfields investment largely because of the monopoly profits it expected to make on its retail operations within the greenfields development. It would, therefore, oppose access to its infrastructure services by a competing water and sewerage service provider proposing to offer cheaper retail services to customers within the greenfields development.

Implementing functional separation: discussion

The key measures required to implement functional separation are outlined in box 6.2.

[61] Ofwat 2008, *Ofwat's review of competition in the water and sewerage industries: Part II*, May, p. 56.

Box 6.2 Key measures for implementing functional separation

Deloitte's report identified what it considered would be the key steps required to implement functional separation in a Victorian retail water business, including:

- changes in organisational structure—Organisational changes would include creation of separate business units, allocation of assets to particular business units, adoption of financial reporting arrangements consistent with the Commission's guidance (if not already in place), and putting in place separate management arrangements for each business unit.
- separate staffing of each business unit—Existing staff would need to be allocated to the separate business units, based on an analysis of resource requirements and staff capabilities and capacity. The Commission does not consider that physical separation of staff (in different office locations) would be required in the short to medium term; Deloitte considered this would significantly reduce costs and timelines to implement functional separation. There would, however, need to be controls on information flows between staff in the different business units to prevent staff in the infrastructure operator unit from passing on information that could give a competitive advantage to the other services unit (relative to unaffiliated businesses providing water and/or sewerage services in competition with the other services unit).
- amended processes—New or revised policies and procedures would need to be developed to govern transactions, SLAs and information flows between the business units. In respect of new customer connections in greenfields developments, arrangements will be needed to coordinate connections to infrastructure (by the infrastructure operator unit) and establishment of billing and other retail services (by the other services unit) for those new customers.
- information technology provision—Appropriate IT controls would be needed to support information controls between the business units but the same systems should be used where possible to reduce costs.

Source: Deloitte 2009, *Functional separation in the Victorian water industry*, Consultancy report prepared for the Essential Services Commission, September, available on the Commission's website www.esc.vic.gov.au.

Submissions to the draft report did not refute the benefits that functional separation would provide for the efficient operation of a water industry access regime in meeting the Government's policy objectives. VicWater and some water businesses did however oppose functional separation on the grounds of implementation costs. They also argued that the same benefits could be achieved by accounting separation. In its submission, VicWater stated that:

> *The operational separation of water business functions would be an expensive exercise that would have significant ramifications for customer service and the ability of water businesses to co-ordinate between business units. This recommendation would impose substantial additional costs … including duplicated administrative,*

technical, operational and constructions costs. In addition, the integration of planning, communications and day-to-day operations between business units will be severely hampered. (p. 2)

Yarra Valley Water argued that the costs of implementing functional separation would be substantial, as evidenced by the expenditure allowances provided by the Scottish regulator for Scottish Water, which received a total of $26 million in capital expenditure and $38 million in operating expenditure for the four year period 2006-2010.

While upfront and on-going costs would clearly be incurred with functional separation, the Commission considers that concerns in relation to these costs have been over-stated. There are countervailing and compelling arguments that suggest the costs will not be as high as suggested by some of the water businesses.

First, VicWater and some of the water businesses assumed that corporate functions, including human resource management, IT and finance, would be duplicated. To investigate this assumption, the Commission asked Deloitte to investigate what, if any, functions would need to be duplicated under functional separation. While it identified a number of business activities that would provide similar (but not duplicated) services across the business units (see box 6.3), Deloitte's study did not identify any significant functions that would need to be duplicated under the model of functional separation considered in its report.

Second, functional separation would facilitate cost savings through shared services, as recommended by VCEC's review on the structure of the retail water sector in metropolitan Melbourne.[62] This is in direct contrast to City West Water's submission that functional separation would prevent the metropolitan businesses from developing shared services.

By requiring the water businesses to identify the costs of providing services internally, so that transfer prices can be determined for those services, functional separation would assist the businesses to identify services that could be purchased more cheaply from external suppliers (where the transfer price exceeds the market price). An external supplier could be another water business that supplies a particular service, such as maintenance of certain infrastructure facilities, to a number of infrastructure operators or a private supplier of those services.

In the United Kingdom, the water industry regulator, Ofwat, noted that, following separation of their retail activities, a number of companies contracted out, or separated out, some of their retail activities to achieve efficiencies and cost savings. In 2002, a joint venture established by two water companies to provide billing services achieved lower unit costs and higher standards than any other water company. Based on this and other examples, Ofwat stated that 'separation

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[62] Victorian Competition and Efficiency Commission 2008, *Water Ways: Inquiry into Reform of the Metropolitan Retail Water Sector,* Final Report, July.

of some retail activities therefore has a proven history as an effective business model for some companies within the UK water and sewerage sectors'.[63]

Box 6.3 Business activities undertaken by more than one functional unit

In its report on functional separation, Deloitte identified a number of business activities that would provide similar, but not duplicated, services across the business units, including:

- communications—Communications related to assets, such as faults and interruptions, would be undertaken by the 'infrastructure operator' business unit, while billing inquiries and the provision of other customer service information would be handled by the 'other services' unit.
- water conservation—The allocation of responsibility of water conservation would require further consideration. Responsibility for government mandated programs and leakage control programs could be allocated to the 'infrastructure operator' unit. Other elements, such as providing information to customers on conserving water and managing their bills could sit within the 'other services' unit. Alternatively, all water conservation activities could sit within the 'infrastructure operator' unit and an appropriate share of the costs could be passed on to retailers.
- strategy—The infrastructure operator would have to develop strategies relating to assets and water resources, while strategies related to customer/market growth and new services would be developed by the 'other services' unit.
- regulatory compliance and reporting—The 'infrastructure operator' and 'other services' units would both have (different) regulatory compliance and reporting requirements. In complying with regulatory requirements, such as performance reporting and preparation of Water Plans, the two units could either prepare separate sections of a combined response to the Commission (or another regulator), with the response coordinated within the water business, or they could submit separate responses relating to their separate responsibilities. In relation to the regulatory accounts, the 'corporate services' unit (through the finance section) would prepare separate accounts for each unit, which it would submit to the Commission.

Source: Deloitte 2009, *Functional separation in the Victorian water industry*, Consultancy report prepared for the Essential Services Commission, September, available on the Commission's website www.esc.vic.gov.au.

[63] Ofwat 2009, *Advice from Ofwat to the UK Government on the question of a threshold for legal separation of appointed companies' retail businesses in the water and sewerage sectors*, July, p. 11.

Third, the costs of functional separation in the Victorian water industry would be significantly less than in Scotland where a greater degree of separation was implemented through full legal separation (in the context of introducing retail competition for non-residential customers).[64]

The major additional costs from functional separation identified by the Commission would result from adopting a model of functional separation with separate decision making. In this case, there could be some duplication of management positions, such as the creation of a separate managing director for each business unit. The costs could be minimised, at least initially, by retaining existing management structures but introducing a degree of separation in governance arrangements.

Measures could include separating Board papers and allocating separate parts of Board meetings to discussing matters relating to the infrastructure operator and other services business units. Such measures would emphasise to the Board and senior management that the two units are functionally separate and decisions in respect of one unit's operations and strategies should be undertaken independently of matters connected to the other unit's operations and strategies. It would ensure that, in making decisions relating to a particular unit, management would focus on the issues relevant to that business unit, resulting in greater management focus on meeting the needs of the customers of that unit.

In its draft report, the Commission recommended that functional separation be implemented by the four metropolitan businesses and by some regional water businesses where access to infrastructure services is likely to be sought in the near future. As noted above, VicWater and many of the water businesses opposed functional separation on cost grounds. They argued that accounting separation would be sufficient to achieve the benefits of ring fencing at a more reasonable cost than functional separation. Barwon Water, for example, suggested that:

> *adopting accounting ring fencing at this early stage of an access regime is sufficient to provide clarity in cost allocation between business units without imposing additional costs and operational impacts before it is determined how "popular" the access regime is with private parties.* (p. 2)

VicWater suggested that, to address any concerns that an infrastructure operator was supplying services on an inefficiently discriminatory basis (that is, to give a competitive advantage to an affiliated business or business unit), the regulator could be provided with powers to investigate and act on such claims. It considered that:

> *Combined, these alternatives [accounting ring fencing and anti-discriminatory pricing powers] would achieve the same objectives*

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64 According to Ofwat, the combined cost savings achieved by Scottish Water and its retail arm, Business Stream, as a result of legal separation and the introduction of retail competition will be sufficient to recoup the costs of implementing legal separation and retail competition within approximately four years. See Ofwat 2008, *Ofwat's review of competition in the water and sewerage industries: Part II*, May, pp. 38-39.

but would be far less costly to implement than operational [functional] separation. (p. 3)

Coliban Water's submission recognised 'the value of functional separation between natural monopoly and potentially competitive activities', stating that it will 'provide the platform for effective competition between all parties' (p. 2) and 'will be a necessary part of the implementation of a third party regime' (p. 5). It emphasised, however, that 'adequate time' would have to be provided for implementing functional separation (p. 2). In its view, the process of functional separation would take around 12 months and require substantial expenditure.

Melbourne Water stated that functional separation should only be considered if accounting separation fails to deliver the required clarity, transparency and cost information.

Commission's conclusions on functional separation

A detailed assessment of the net benefits of implementing functional separation compared with accounting separation (in the context of establishing an access regime) is not possible at this stage.

The Commission considers that debates over the costs and benefits of functional separation would present an unwelcome distraction from the more important task of implementing an access regime. The Commission has therefore decided to take a more pragmatic and expedient approach on this issue in recommending that accounting separation should be adopted on a provisional basis as the methodology for ring fencing in respect of infrastructure subject to access.

The Commission considers that the onus should now be on the water businesses to demonstrate that accounting separation can indeed meet the Government's policy objectives in establishing an access regime.

After accounting separation has been implemented and operating for a reasonable period of time, the Commission will assess whether it has resulted in sufficient clarity and transparency of costs. The Commission will also assess whether accounting separation has supported the effective operation of an access regime by providing market participants and potential access seekers with sufficient confidence in access pricing and compliance with other processes. If this is found not to be the case, functional separation (at a minimum) should be implemented by the relevant water businesses. The Commission considers that the review of outcomes from accounting separation should be undertaken towards the end of the implementation period.

6.3.2 Accounting separation

Accounting separation involves identifying a business' discrete activities and functions and grouping these activities into separate business units. Each unit provides services to other units, but there is no further separation of the business units; they are simply accounted for separately. A separate set of accounts would need to be prepared for each service subject to access as well as a separate consolidated set of accounts for all of the activities undertaken by the business.

Accounting separation represents the minimum level of ring fencing for the purpose of supporting the effective operation of an access regime. It is the least costly to implement but provides the lowest guarantee of clarity around costs, transparency of access prices and confidence in access pricing processes. In the context of vertically integrated infrastructure operators, as applies in the Victorian water sector, it may not provide sufficient protection against discriminatory access pricing designed to give affiliated businesses (or business units) a competitive advantage over access seekers.

The efficacy of accounting ring fencing in supporting an effective access regime will depend, to a large extent, on the approach infrastructure operators adopt in setting access prices. Provided infrastructure operators are committed to ensuring that access prices are determined in a fair and unbiased manner, and accurately reflect the efficient costs of providing infrastructure services, accounting separation may be sufficient to engender confidence among access seekers that access prices are set on an efficient, non-discriminatory basis.

In the draft report, the Commission proposed that accounting separation should be implemented by infrastructure operators within three months of becoming subject to access, that is, of being declared under an access regime or of an infrastructure operator making an access undertaking. Accounting separation would be implemented for units operating infrastructure facilities providing infrastructure services subject to access.

Guidelines for accounting separation

Ring fencing guidelines would be developed by the Commission, in consultation with the water businesses and other interested parties, to assist infrastructure operators in separating their accounts in respect of infrastructure services subject to access from their other accounts.

The accounting separation guidelines would include, but not be limited to, guidance on:

- financial separation—The guidance would contain clear instructions on how infrastructure operators should separate out the financial information related to the parts of their business that are subject to access. They would also provide guidelines to assist businesses in allocating shared costs between different parts of the business, such as the costs of providing corporate services.
- commercial neutrality—The guidance would stipulate that businesses are not to provide infrastructure services to other parts of its business on more favourable terms and conditions, including more favourable prices, than provided to other (competing) businesses.
- information sharing—The guidance would require an infrastructure operator to make any information shared with other parts of its own business available to businesses seeking access.
- compliance—The guidance would provide for the Commission to undertake on-going compliance monitoring of ring fencing arrangements to ensure that separate accounts are being accurately maintained by the infrastructure operator. This may be on an annual basis or a more ad hoc basis. The guidance would set out the requirements on businesses to demonstrate compliance with

the Commission's guidance. This would likely be through additional reporting requirements in the annual regulatory accounts.

- timing—Once an infrastructure service has been coverage declared under an access regime, the infrastructure operator would have to become compliant with the accounting separation guidelines within three months of declaration of the relevant service. Compliance with the accounting separation guidelines would also be required within three months of making an access undertaking in respect of a particular service.

For some water businesses, implementing accounting separation may not require substantial changes to their existing processes. As noted in several submissions to the draft report, some degree of accounting separation has already been implemented by many of the water businesses. For example, Melbourne Water already reports to the Commission separate information for bulk water provision, transfer, sewerage treatment, and drainage and waterways.

The Commission recommends that all infrastructure operators should be required to implement accounting separation in respect of infrastructure services that are subject to access, as well as maintaining a separate consolidated set of accounts for all of the activities undertaken by the business.

Recommendation 6.1

That the Commission develops guidance for implementing accounting separation of infrastructure services subject to access, in consultation with key stakeholders.

Recommendation 6.2

That within 3 months of an infrastructure service being coverage declared under an access regime or subject to an approved access undertaking, infrastructure operators must maintain separate accounting information for that infrastructure service, in accordance with the accounting separation guidance developed by the Commission.

Review of accounting separation

After accounting separation has been implemented and operating for a reasonable period of time, the Commission will assess whether it has achieved sufficient clarity and transparency of costs and promoted sufficient confidence among market participants and potential access seekers in access pricing processes to support the effective operation of an access regime. In undertaking its review, the Commission will take into account:

- the number of successful and unsuccessful access applications
- the number and nature of disputes and how they were resolved
- any complaints alleging price discrimination (except where it aids efficiency) and outcomes from investigating those complaints

- submissions by stakeholders and other feedback from consultation processes and
- any other information considered relevant by the Commission.

The Commission considers that the review of outcomes from accounting separation should be undertaken towards the end of the implementation period for an access regime.

If the Commission's review reaches a finding that accounting separation has not been sufficient to support the effective operation of an access regime, functional separation should be implemented by the relevant water businesses.

Deloitte's report sets out a roadmap for functional separation. Part of the process would involve detailed analyses by the relevant water businesses of their own business structures, identification of the most efficient arrangements for achieving functional separation, and formulation of a detailed implementation program. If functional separation proceeds, implementation would occur during the 2013-2018 regulatory period.

Recommendation 6.3

That, after accounting separation has been implemented, the Commission should review the efficacy of accounting separation in generating sufficient clarity and transparency of costs and promoting sufficient confidence among market participants and potential access seekers in access pricing processes to support the effective operation of an access regime.

Matters for further consideration

If the Commission's review of the efficacy of accounting separation finds that it is not sufficient to support the effective operation of an access regime, functional separation should be implemented by the relevant water businesses. An implementation process and timeframe should be developed by the relevant water businesses and approved by the Commission.

6.4 Certification criteria

Under clause 6(4)(n) of the Competition Principles Agreement (included at appendix F), for an access regime to be certified as an effective access regime, infrastructure providers must have separate accounting arrangements for the elements of a business that are covered by the regime.

The Commission considers that requiring accounting separation in respect of infrastructure services subject to access within three months of being declared under an access regime, or becoming subject to an approved access undertaking, will satisfy these ring fencing requirements under the Competition Principles Agreement.

In the NCC's guidance on certification,[65] it stated that more rigorous ring fencing arrangements may be required in some industries to ensure the required accounting information is transparent and objective. Such arrangements may be necessary in industries with high levels of vertical integration, where an infrastructure operator provides water or sewerage services, or has interests, in the same markets as those in which access seekers intend to participate.

In these circumstances, ring fencing arrangements should include measures to:

- segregate access-related functions from other functions
- protect confidential information disclosed by an access seeker to the infrastructure operator from improper use and disclosure to affiliated bodies and
- establish staffing arrangements between an infrastructure operator and affiliated bodies that avoid conflicts of interest.[66]

The Commission considers that the recommended review of the efficacy of accounting separation in supporting the effective operation of an access regime will determine whether more rigorous ring fencing arrangements are required in respect of any of the water businesses. If more rigorous ring fencing arrangements are found to be necessary, functional separation would include the implementation of the measures identified by the NCC.

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65 National Competition Council, 2003, op. cit.

66 *National Competition Council, 2003*, op. cit., pp. 70-71.

7 PROTECTION OF HEALTH, CUSTOMERS AND THE ENVIRONMENT

An important government objective in implementing an access regime is to ensure that existing water businesses and new service providers are able to comply with legislation and regulations related to resource management, the environment, water quality, and health and safety. In addition, clause 6(3)(a)(iii) of the Competition Principles Agreement (included at appendix F) requires that, where use of an infrastructure facility has safety implications, appropriate regulatory arrangements should be established to ensure that allowing access to infrastructure services does not compromise safety standards.

The existing water businesses are subject to a range of regulations relating to customer protection, water quality, public health and safety, and environmental protection. These regulations are administered by a number of agencies, including:

- the Commission in respect of economic regulation of prices, service standards and market conduct
- the Department of Sustainability and Environment (DSE) which regulates water resource allocation, environmental flows, dam safety, water conservation and reuse
- the Department of Human Services (DHS) in relation to the safety and quality of drinking water, public health aspects of water discharges and water reclamation and reuse, and concessions and other assistance programs for customers in hardship
- the Environment Protection Authority (EPA) which is responsible for preventing pollution and protecting Victoria's environment and
- the Energy and Water Ombudsman of Victoria (EWOV) which investigates and resolves disputes between customers and their water and sewerage service provider.

There was general support in submissions to this inquiry for extending existing obligations relating to health and safety, water quality, customer protection and environmental protection to new providers of water and sewerage services.

The Commission's key considerations in recommending amendment of the existing regulatory framework to support the development of an access regime are that:

- safety and service quality regulation should not unreasonably hinder access or create artificial barriers to entry
- the actions of the access seeker should not compromise the safe and reliable operation of the water or sewerage networks or impact on the service quality of other users and

- the costs of additional regulation to facilitate access must be weighed up against the benefits from access.

7.1 Review of the regulatory framework

The institutional arrangements currently in place provide a sound foundation for an access regime. However, the existing framework could contain gaps that either limit its applicability to new service providers or fail to give the relevant regulatory agency sufficient powers to effectively regulate new providers of water and sewerage services, including infrastructure operators.

In its draft report, the Commission recommended that the Government undertake a full review of the legal and regulatory framework to ensure that appropriate obligations apply to both incumbent and new service providers. There was general support in submissions for a comprehensive review of existing legislation and regulations.

The Commission's draft report noted that some existing health and safety, water quality and environmental protection obligations could be extended to new water and sewerage service providers by amending existing legislation. The Commission highlighted that measures should be taken to ensure that new service providers are subject to the *Environment Protection Authority Act 1970*, the *Safe Drinking Water Act 2003* and the *Occupational Health and Safety Act 2004*. The recommended Government review of legislation and regulations is likely to identify additional legislative and regulatory amendments. Submissions to the draft report supported amendment of existing legislation and regulations as required.

7.1.1 Environmental protection

The *Environment Protection Act 1970* (EPA Act) is Victoria's primary environment protection legislation. Environmental legislation is administered by the EPA. The EPA Act requires all scheduled premises to obtain an EPA licence. A scheduled premise may include an entity that removes salt from water, disposes of waste into the environment, or undertakes treatment of waste.[67] New entrants to the water industry would be obliged to have an EPA licence if they were undertaking any activities that require a licence.

Under the EPA Act, state environment protection policies (SEPPs) have been made to provide more detailed requirements and guidance for the application of the Act. Under the EPA Act, the requirements in environmental regulations, works approvals, licences and other regulatory tools, must be consistent with SEPPs. Works approvals are required for works relating to installation, construction or modification of apparatus for discharge of waste into water or onto land for treatment of waste prior to discharge, and any works that are likely to cause the discharge or emission of waste to land or water or result in an increase of discharge to the environment.[68] The SEPP (Groundwaters of Victoria), which was

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67 More detailed information is available on the EPA website www.epa.vic.gov.au.

68 Environment Protection Authority Victoria 2009, *Works approvals*, available at www.epa.vic.gov.au/bus/licences/works_approvals.asp.

developed to provide an integrated framework of environment protection goals for groundwater, may be relevant to water sourcing by new water service providers.

In New South Wales, new water and sewerage service providers are required to comply with the requirements of New South Wales' environment protection acts, the *Environmental Planning and Assessment Act 1979* (NSW) and the *Protection of the Environment Operations Act 1997* (NSW). The Commission's draft report recommended that new Victorian water and sewerage service providers should be subject to the requirements of the EPA Act.

Compliance with the relevant provisions of the EPA Act could also be included as a condition of a water industry licence (discussed in section 7.2) to provide an additional safeguard. While the licence condition would not provide the licensing authority (which would have to power to grant or refuse licences and to revoke licences) with the power to prosecute any breaches of environmental regulations, it would give the licensing authority the power to refuse a licence to any water or sewerage service provider that persistently breached environmental regulations. It would also allow for refusal of a licence to applicants who were unable to demonstrate the capacity to comply with the environmental regulations. In making these decisions, the licensing authority should consult with the EPA.

7.1.2 Drinking water quality standards

Maintaining existing standards of drinking water quality is imperative to ensure public health is protected. In Victoria, drinking water standards are regulated by the *Safe Drinking Water Act 2003*, which is administered by DHS. DHS identified three options for ensuring new water service providers were obliged to comply with the Act. A new provider could be declared a licence holder within the meaning of the *Water Industry Act 1994*, an authority within the meaning of the Water Act, or a 'water supplier' under the Safe Drinking Water Regulations 2005.

In New South Wales, water industry licences required by new service providers contain conditions relating to the supply of drinking water that: is fit for human consumption; complies with any requirement of the licence conditions; and complies with any requirements under the *Public Health Act 1991* (NSW).[69]

The Commission recommended, in its draft report, that new water service providers should be declared 'water suppliers' under the Safe Drinking Water Regulations 2005 to ensure that they must comply with the requirements of the Safe Drinking Water Act. New water service providers' compliance with drinking water standards would consequently be monitored by DHS, which has technical expertise in regulating those standards and would be able to prosecute any breaches of those standards. No objections were raised to this proposal in responses to the draft report.

Compliance with the Safe Drinking Water Act could also be included as a condition of a water industry licence to provide an additional safeguard. While the licence condition would not provide the licensing authority with the power to prosecute any

[69] Water Industry Competition (General) Regulation 2008, New South Wales Government Gazette, p. 28.

breaches of drinking water standards, it would give the licensing authority the power to refuse a licence to any water service provider that persistently breached those standards. It would also allow for refusal of a licence to applicants who were unable to demonstrate the capacity to comply with the safe drinking water standards. In making these decisions, the licensing authority should consult with DHS.

7.1.3 Occupational health and safety

The *Occupational Health and Safety Act 2004* (OHS Act) regulates workplace health and safety, including requiring measures to ensure employees' health and safety at work and to avoid workplace accidents.[70] The Commission recommended in its draft report that access seekers should be required to comply with all appropriate occupational health and safety requirements outlined in the OHS Act and the Occupational Health and Safety Regulations 2007. Access seekers should, for example, be required to comply with safe working practices in undertaking the construction, operation and maintenance of water and sewerage infrastructure.

Recommendation 7.1

That, during the implementation period, the Government conducts a comprehensive review of the legislation and regulations relating to health and safety, drinking water quality, customer protection and environmental protection in the water industry as soon as possible. This legislation would include the *Environment Protection Act 1970*, the *Safe Drinking Water Act 2003*, and the *Occupational Health and Safety Act 2004.* The review should identify amendments or additional measures required to extend (as appropriate) existing obligations in regard to these matters to new water and sewerage service providers, including infrastructure service providers, and to ensure that the relevant regulator has sufficient powers to require compliance with these obligations by all service providers.

7.2 Establishment of a licensing system

The Commission recommended, in its draft report, that the Government establish a licensing system for new water and sewerage service providers, including infrastructure service providers. There was broad support for this recommendation in submissions to the draft report.

A licensing system would clarify the rights and responsibilities of water and sewerage service providers. In addition, it would establish a legal framework for enforcing compliance with obligations relating to resource management, customer protection, health and safety, water quality and the environment. Jemena (a private utilities service provider) stated, in its submission to the draft report, that:

[70] More information is available on the Workcover website www.workcover.vic.gov.au.

> *a significant portion [of private participation] could proceed without an access regime. All that those schemes need is an appropriate legislative and licensing regime to support and authorise them. It is arguable that a licensing regime alone could open up a range of opportunities that would be of benefit to Victoria.* (p. 2)

The draft report noted that Victoria's Water Industry Act contemplates licensing for a number of activities, including the provision of water and sewerage services, drainage services, sewage treatment, and water headworks services. A functional licensing system could establish separate licences for each of these functions. Alternatively, a similar approach to that adopted in New South Wales could be taken where the licensing system contains two types of licences: a network operator's licence and a retail supplier's licence. A network operator's licence is required to construct, maintain or operate water industry infrastructure. A retail supplier's licence is required to supply water (potable or non-potable) or to provide sewerage services. Jemena submitted to the draft report that the licensing provisions should explicitly encompass direct private sector participation in all facets of the water industry, including the provision of infrastructure services.

The Commission recommends that further consideration be given to the appropriate types of licence during the implementation period, when the legislative amendments needed to give effect to a licensing regime are designed.

Recommendation 7.2

That the Government establishes a licensing system for new water and sewerage service providers, including new infrastructure service providers.

Matters for further consideration

The appropriate types of licence should be considered further during the implementation period.

Licences typically set out such matters as: the services or activities the licensee is able to perform; the term (duration) of the licence; the requirement to comply with technical or operational codes or agreements; confidentiality requirements; dispute resolution requirements; maintenance of accounts; information and audit provisions; payment provisions; requirements to comply with relevant laws; communications protocols; and requirements for ending, transferring or revoking a licence. The Commission considers that water industry licences should deal with similar matters.

Melbourne Water agreed, in its submission to the draft report, that these matters are relevant and should be considered in designing a licensing system.

The rest of this section considers in more detail the key matters that would be addressed in a licensing system.

7.2.1 Resource management

Under the Water Act (s. 22), the Minister for Water is responsible for assessing the State's water resources and ensuring that a program of sustainable water strategies is undertaken for the State. The Minister may also allocate the available water resources. In undertaking the resource management role, the Minister is required to collect relevant information about the availability and use of water within Victoria.

The Commission considers that, where new service providers propose to provide water services that involve the delivery of water (including recycled water) to customers, the licence conditions should require them to demonstrate how they plan to obtain sufficient quantities of water to provide the proposed services. The provision of this information would assist the Minister in managing the State's water resources as required under the Water Act.

It would also avoid the potential situation where a licensed water service provider could, for example, build a new development (such as an industrial park), sign up customers, and then find it has no means of obtaining the water required to service those customers. The proposed licence condition would provide greater security for customers and some assurance that they will receive water from their water service provider.

In addition, it would address Central Highland Water's concern, expressed in its submission to the draft report, that another service provider, most likely an existing water business, could have to take over the customers of a failed water service provider but without sufficient water to supply those customers.

The Commission considers that licence applicants should have to demonstrate, to the satisfaction of the licensing authority, that they will be able to obtain water to service their customers. Effectively, the condition would require the licence applicant to specify how it intends to obtain the required water. Where trading arrangements are in place, it may be sufficient to satisfy the licence condition by stating that water will be purchased on the market (at market prices). Alternatively, the licence application could include a statement that: water will be produced by a desalination plant to be operated by the applicant; or recycled water will be produced by a treatment plant operated by the applicant; or the applicant has either a contract to purchase water or an entitlement to water.

Under s. 7 of the *Water Industry Competition Act 2006*, New South Wales' Water Minister must, in deciding whether to grant or reject a licence application, have regard to ensuring the sustainability of water resources, among other factors. In its final recommendation on New South Wales' application for certification of its access regime, the NCC expressed concern that the licensing condition requiring licensees to obtain 'sufficient quantities' of 'new' water (that is, water not obtained from the existing publicly-owned water businesses) could limit opportunities for broader participation in the water sector.[71] The Commission considers such a

[71] National Competition Council 2009, *Water Industry Competition Act 2006 (NSW): Application for certification of the NSW water industry infrastructure services access regime*, Final recommendation, 11 May, available at www.ncc.gov.au.

condition could form an unreasonable barrier to entry by new water service providers, and reduce the scope for innovation in the provision of water services. The Commission does not support including a similar licence condition in the Victorian licensing system.

7.2.2 Customer protection

To ensure existing standards of customer protection are maintained, compliance with the Customer Service Code (the Code) should be a licence requirement. The Code may need to be separated into a network Code and a retail Code, as in other industries (such as the energy sector, which has distribution, retail and marketing codes), since the necessary customer protection measures will differ according to the types of service provided and the nature of the customer.

In New South Wales, licensed service providers must conform to the water industry code of conduct, marketing code of conduct and transfer code of conduct. The water industry code of conduct outlines the responsibilities relating to water quality, liability for infrastructure failure, payment of fees and charges for use of infrastructure, customer complaint handling, and liability in the event of water supply failure. A Victorian licensing system should include responsibilities in relation to these matters.

A marketing code of conduct would relate to the marketing of water supplies and sewerage services, including the type of information needed by customers and cooling off periods for new customers. A transfer code of conduct would include provisions relating to the information, procedures and timeframes governing transfers of customers between licensed retailers. Marketing and transfer codes of conduct may need to be developed, and compliance with those codes included in Victorian retail licences, if the Government decides that retail contestability is a desired outcome.

Any water or sewerage service provider that is servicing retail customers would be required to join the EWOV scheme.

A retailer of last resort (RoLR) scheme, which would ensure that water and sewerage customers would continue to receive supply in the event of failure of their existing retailer, would be required if competition existed at the retail level. Submissions to the inquiry by VicWater and a number of water businesses suggested that the detailed provisions to be included in a RoLR scheme, in particular the allocation of costs associated with RoLR obligations, should be specified before the commencement of a state-based access regime.

The Commission remains of the view that, to avoid imposing unnecessary costs on the water industry, the details of an appropriate RoLR scheme should be developed in consultation with stakeholders if and when the Government decides to allow retail competition. Such a scheme could be modelled on RoLR schemes in other industries. In the Victorian gas and electricity sector, for example,

comprehensive provisions have been established that set out the actions and procedures for when a RoLR event is triggered.[72]

In its submission to the draft report, Central Highlands Water raised a specific concern about the capacity of a retailer of last resort to obtain sufficient water to supply the customers of a failed retailer. The Commission considers that the licence condition proposed in section 7.2.1 above would address this concern. Rights to the water source used by the failed retailer, such as a water entitlement or a contract for the supply or purchase of water, could be transferred to the retailer of last resort. The details of such arrangements would be worked out in developing a RoLR scheme at an appropriate time.

In the event of the failure of an infrastructure service provider, an administrator could be appointed to continue operating the facility until it was sold, either to a new licensed infrastructure operator or to an existing infrastructure operator. The sale price would be expected to reflect the market value of the facility. Alternatively, if the facility was not commercially viable, and the infrastructure services provided by the facility were essential to provide water or sewerage services to particular customers, an infrastructure operator may have to be appointed to take over the facility. The Commission considers that this issue, and the details of any 'infrastructure operator of last resort' scheme, should be considered further, in consultation with stakeholders, during the implementation period.

Finally, licences would need to make provision for potential non-compliance with service standards in cases of extreme events or large scale emergency.

7.2.3 Operational and technical requirements

Licence conditions would address a number of operational and technical requirements. These would include obligations relating to the preparation and implementation of adequate risk management plans to appropriately manage any risks to the public and the environment from licensees' activities. In addition, licensees would be required to develop emergency management and contingency plans.

Licences would also contain provisions relating to meter installation, maintenance, and reading, appropriate sharing of meter data, and customer connection procedures.

Infrastructure operator licences should require licensees to prepare detailed infrastructure operating plans covering design, construction, operation and maintenance to ensure that facilities are properly designed and constructed, operated in a safe and reliable manner, and maintained in a proper condition. These plans should be audited on a regular basis. These types of provisions are included in New South Wales' network operator licence conditions.

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[72] Essential Services Commission 2009, *Retailer of Last Resort Manual*, available at www.esc.vic.gov.au. The procedural manual was developed by the Commission in consultation with a steering committee (comprising industry and Government) and with community input. To date, the provisions only deal with RoLR events triggered by the suspension of a second tier retailer's licence by the market operator.

In determining the minimum standards for satisfying the conditions in an infrastructure operator licence, reference could be made to a range of established technical standards, including:

- the national codes and input guidelines developed by the Water Services Association of Australia (in conjunction with water businesses) and adopted by the major water businesses
- the Australian Standards applying to many of the materials and equipment used in water and sewerage networks and
- design manuals and/or minimum requirements developed by some of the water businesses. For example, developers have to comply with standards set out in manuals prepared by water businesses; the standards are based on national technical standards.

New infrastructure operators could be required by licence conditions or a Code of Practice to design and construct networks in accordance with relevant standards. The *Victorian Gas Industry Act 2001* (s. 29(c)) allows the licence conditions to require the licensee to observe industry codes, standards, rules and guidelines. Section 21(c) of the *Electricity Industry Act 2000* includes similar provisions.

At the July public hearing, some concern was expressed that a new infrastructure operator might build inefficient infrastructure that would have to be taken over by an existing water business in the event of its collapse. The Commission considers that the provisions discussed above to require compliance with technical standards would minimise the risk that below-standard infrastructure facilities will be constructed.

Where an infrastructure facility was built to minimise the initial construction cost (while meeting minimum technical standards), with the trade-off being higher than average operating costs, the facility's high operating costs would be reflected in its market valuation and therefore in the price paid by another business for the asset in the event of the infrastructure operator's collapse. Similarly, if a facility was built with insufficient capacity, and augmentation was expected to be required in the foreseeable future, the expected capital costs of augmenting the facility would be reflected in the asset's market value.

7.2.4 Information provision and reporting

Information collection, reporting and auditing requirements underpin the regulatory arrangements for water and sewerage services. Currently, s. 4G of the Water Industry Act includes provisions requiring regulated entities to provide to the Commission information that the Commission requires to enable it to perform its functions.

New water and sewerage service providers, including new infrastructure service providers, would have to be made subject to these provisions to the extent necessary to enable the Commission to perform its functions. Given that the new water and sewerage service providers would generally operate in the competitive segments of the water supply chain, information collection, reporting and auditing requirements may be lower than the requirements applying to monopoly segments where more stringent regulation may be required to ensure that monopoly power is not exercised. New infrastructure service providers would, however, generally

operate in the monopoly segments of the water sector. In the electricity and gas industries, the purpose and nature of information collected differs according to whether the infrastructure or services are provided under competitive or monopoly conditions.

In addition, s. 22 of the Water Act requires the Minister for Water to ensure that assessments of Victoria's water resources are undertaken to allow effective management of the State's water resources. The water resources assessment program must provide for the collection, collation, analysis and publication of information about the availability and use of water required for resource management. Licensees should be required to provide the information required in undertaking these water resource assessments.

To ensure information requirements are met, conditions should be included in licences requiring water and sewerage service providers to comply with the Commission's and other regulators' reporting requirements, and to provide the information required for water resource assessments.

7.2.5 Financial capacity

In order to obtain a licence, new water and sewerage service providers should be required to demonstrate that they have sufficient capacity to carry out the activity and comply with the licence obligations. In New South Wales, the Minister must be satisfied that the licence applicant is financially viable, as demonstrated by evidence of the applicant's financial history, such as the last three years' financial statements. Financial requirements aim to ensure that water and sewerage service providers are likely to continue to provide services over a sustained period (and to prevent short term operations by so-called 'fly-by-night' operators).

In the Victorian gas industry, licences are granted under the condition that the Commission is satisfied that the applicant has and will maintain technical capacity to comply with the conditions of the licence and has the continuous financial viability to do so. The *Victorian Electricity Industry Act 2000* (s. 19(2)(b)) requires the Commission, in granting a licence, to be satisfied that the applicant has the technical capacity to comply with the licence conditions. There are also financial viability requirements on licensees in the Victorian electricity industry.

The Commission recommends that financial capacity be a consideration in granting licences to ensure the long term financial viability of the water industry in Victoria.

7.2.6 Other conditions

Licences may include requirements for licensees to have relevant technical expertise or be a 'fit and proper person', for example, the *Victorian Motor Car Traders Act 1986* (s. 13). Similar provisions could be included in licence conditions in the water sector.

As noted in section 7.1, a cross reference to existing legislative obligations could be included in licence conditions. Such conditions would allow the licensing authority to revoke a licence if a licensee persistently breached conditions set out in EPA Act, the Safe Drinking Water Act, the OHS Act or other relevant legislation, following consultation with the relevant regulator.

Licences should include provisions for dealing with applications for the transfer of a licence. Because of the need to ensure capacity to comply with financial and technical matters, an application to transfer a licence in the event that a licensed business was sold or the assets to which the licence related were sold, the transfer application would have to demonstrate compliance with all licence requirements and the capacity to comply with all licence conditions.

7.2.7 Penalties for non-compliance

Appropriate penalties would need to apply when a licensee failed to comply with licence conditions. Financial penalties may be imposed or the licence could be revoked for serious or persistent breaches of conditions. In the energy sector, the Commission has issued Procedures and detailed Guidance Notes for licence applicants. IPART has also developed detailed *How to Apply Guides* for licence applicants. Guidance could also be provided on how to comply with licence conditions in the Victorian water sector.

Matters for further consideration

The appropriate licence conditions should be considered further during the implementation period but should include:

- a condition requiring new water service providers to demonstrate how they plan to obtain sufficient quantities of water to provide the proposed services
- a condition requiring compliance with relevant parts of the Customer Service Code (according to the types of service provided and the nature of the customer) and any other relevant codes of conduct that may be developed
- a condition requiring any water or sewerage service provider providing services to retail customers to join the Energy and Water Ombudsman of Victoria (EWOV) scheme
- conditions establishing obligations relating to the preparation and implementation of adequate risk management plans and emergency management and contingency plans
- conditions relating to meter installation, maintenance, and reading, appropriate sharing of meter data, and customer connection procedures
- conditions requiring licensed infrastructure operators to prepare detailed infrastructure operating plans covering design, construction, operation and maintenance to ensure that facilities are properly designed and constructed, operated in a safe and reliable manner, and maintained in a proper condition
- a condition requiring licensed infrastructure operators to observe industry codes, standards, rules and guidelines in designing and constructing water and sewerage infrastructure
- conditions requiring licensees to provide the information required by:
  - the Commission to perform its regulatory and monitoring functions
  - other regulators, including the Department of Human Services, the Department of Sustainability and Environment, and the Environment Protection Authority, to undertake their regulatory and monitoring functions and
  - the Minister for Water to undertake the water resource assessments required under section 22 of the *Water Act 1989*
- a condition requiring the licensing authority to be satisfied that the applicant has, and will maintain, the technical capacity to comply with the conditions of the licence and has the continuous financial viability to do so, and
- a cross reference to existing legislative obligations giving the licensing authority the power to revoke a licence if a licensee persistently breached conditions set out in the *Environment Protection Act 1970*, the *Safe Drinking Water Act 2003*, the *Occupational Health and Safety Act 2004* or other relevant legislation.

7.3 Authority for making licensing decisions

In its draft report, the Commission recommended that it be appointed as the licensing authority with the power to grant or reject licence applications, revoke licences and enforce compliance with licence conditions, in consultation with the EPA, DSE and DHS. The Commission has reconsidered this recommendation in the context of the Minister for Water's legislative role in relation to water resource management as set out in the Water Act.

Under the Water Act, the State Government retains the overall right to the use, flow and control of all surface water and groundwater on behalf of all Victorians. Section 22 of the Act sets out the Minister's role in managing Victoria's water resources, including assessing the State's water resources and ensuring that a program of sustainable water strategies is undertaken for the State. The Minister may also allocate the available water resources by granting an entitlement to water through an environmental entitlement, a bulk entitlement, a water share or a section 51 water licence (a 'take and use' licence).[73]

In the Commission's view, the main focus of licensing is to ensure that water and sewerage service providers meet specified obligations in relation to health and safety, water quality, customer protection and environmental protection. Generally, the Minister's resource management role is conducted through the granting of entitlements to water under the Water Act, procurement policies and planning through the Sustainable Water Strategies,[74] and the application of restrictions policies.[75] The Commission recognises, however, that licensing decisions will have implications for resource management. It has recommended the inclusion of a licence condition designed to support the management of Victoria's water resources (section 7.2.1).

Taking into account the Minister's resource management role, the Commission has reached the conclusion that the Government should determine who should be responsible for granting or refusing licence applications and the appropriate role of the Minister in making those decisions. The appropriate allocation of responsibility for making licensing decisions should be determined during the implementation period.

The Commission has identified four options for licensing water and sewerage service providers:

- appointing the Commission as the licensing authority and regulator of the licensing system

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73 See Department of Sustainability and Environment 2009, *Water allocation framework*, available at www.ourwater.vic.gov.au/allocation/water_allocation_framework.

74 More information about the Government's Sustainable Water Strategies is available at www.ourwater.vic.gov.au/programs/sws.

75 More information about the Minister's role in determining restrictions policies is available at www.ourwater.vic.gov.au/allocation/water_allocation_framework/responding_to_water_availability.

- appointing the Commission as the licensing authority (and regulator of the licensing system) with a requirement for mandatory consultation with the Minister on licence application, transfer and revocation decisions
- making the Minister the decision maker on licence applications, transfers and revocations on the recommendation of the Commission (which would be the regulator of the licensing system) or
- making the Minister the decision maker on licence applications, transfers and revocations, with the Minister delegating his decision making powers to the Commission (which would be the regulator of the licensing system).

Under all four options, the Commission proposes that it would regulate the licensing system. It would monitor licensees' compliance with licence conditions and enforce compliance with those conditions, in consultation with the EPA, DSE and DHS. The Commission would also administer the register of licences.

In respect of licensing decisions, the first option of appointing the Commission as the licensing authority would be consistent with the approach adopted in the Victorian gas and electricity industries where the Commission is the decision maker on licence applications, revocations and transfers. In making licensing decisions, the Commission would be guided by the provisions of the Water Act and its objectives under the ESC Act, as well as the legislative provisions establishing a water industry licensing system. In assessing a licence application, the Commission would consult, as appropriate, with other regulators, including the EPA, DSE and DHS.

Decisions would be made in a transparent and open manner, including public consultation and opportunities for feedback on draft decisions. The Commission would develop guidance to assist licence applicants in applying for a water industry licence. The Commission has, for example, produced guidance notes for electricity industry licence applicants.[76]

The second option is similar to the first but includes mandatory provision for the Commission to consult the Minister for Water prior to making a decision. Such a provision would ensure that the Minister is consulted on all licensing decisions so that any resource management implications can be identified and addressed. It could, however, impose an unnecessary administrative burden on the Minister in respect of straightforward licence applications that have no significant implications for resource management. It would also increase the duration of the application process for straightforward licence applications.

The third option makes the Minister for Water the decision maker on licence applications and revocations. In deciding whether to grant a licence and what conditions the licence is subject to, the Minister would consider, but would not be bound to accept, the recommendation of the Commission. This option was adopted for the New South Wales water industry licensing system.

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[76] Essential Services Commission 2006, *Guidance notes for applications for electricity licences and the transfer of existing electricity licences*, available at www.esc.vic.gov.au/public/Energy/Regulation+and+Compliance/Licences/Applying+for+a+licence.htm.

IPART's functions in relation to licensing include considering licence applications, recommending the terms or conditions of a licence to the Minister, and auditing and enforcing licences. The Minister also has a range of functions to ensure the integrity of the licensing regime, such as giving emergency directions to deal with a risk to public health or safety, declaring specified persons as retailers of last resort and declaring a supply failure.[77]

Melbourne Water's submission to the draft report argued that decisions on the granting or revocation of licences should be made by the Minister for Water on the recommendation of the Commission.

In the fourth option, the legislation would appoint the Minister for Water as the decision maker on licence applications, revocations and transfers but allow the Minister to delegate his decision making power to the Commission. This option would then be similar to the first option except that the Minister would retain responsibility for the licensing decisions made by the Commission. The Minister's delegation could be written to include provision for the Minister to intervene and to specify the actions that could be taken if the Minister disagreed with a decision made by the Commission.

Matters for further consideration

In establishing a licensing system for new water and sewerage service providers, including new infrastructure service providers, the Government should nominate whether the Minister for Water or the Commission is responsible for making decisions on granting or refusing licence applications and licence transfer applications and revoking licences.

7.4 The licence application process

A broad description of the licence application process is outlined in this section. The process for applying for a licence would be similar under each of the options listed in section 7.3.

7.4.1 Application process

The Commission envisages that the licence application process would be conducted in a similar manner to those in the Victorian electricity and gas industries.[78] Initially, the application would be published on the Commission's website, and then advertised in a Victorian daily newspaper, inviting the public to

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77 Independent Pricing and Regulatory Tribunal 2009, *Overview of licensing regime under the Water Industry Competition Act 2006*, available at www.ipart.nsw.gov.au/water/ private_sector_licensing/ scheme_documents.asp.

78 See, for example, Essential Services Commission 2006, *Procedures for applications for electricity licences and electricity licence transfers,* November, available at www.esc.vic.gov.au.

obtain a copy of the application and to make submissions. The Commission would consult with the EPA, DSE and DHS, or obtain advice from expert consultants on various technical issues, as appropriate. It may also consult with the Minister for Water, either as appropriate or under mandatory consultation provisions. The Commission would then either make a decision or make a recommendation to the Minister.

The Commission considers that an unsuccessful licence applicant should have the right to limited merits review (as well as appeal to the Supreme Court). Legislative amendment would be required to establish a right to limited merits review. If the Commission was the licensing authority, the ESC Act could be amended to provide either that a licensing decision (under the relevant Act) was appealable under s. 55 of the ESC Act or that a decision on granting or refusing a licence is a determination for the purposes of s. 55 of the Act. Alternatively, the legislation establishing the licensing system could include provisions allowing for appeal to the Victorian Civil and Administrative Tribunal (VCAT).

Under New South Wales' water industry licensing system, licence holders are required to pay an annual licence fee. The licence fee is designed to cover the costs involved in monitoring, compliance, enforcement, conduct of investigations, and the management of the register of licences. In Victoria, existing water businesses are required to pay annual licence fees reflecting the costs incurred by the Commission, DHS, and the EPA in regulating the water industry. The Commission recommends that annual licence fees be set as part of a licensing system for the water industry.

The Commission recommends that it would set an appropriate licence application fee. In New South Wales, fees for water industry licence applications (for each licence required) and for applications for licence variations are $2 500.

Recommendation 7.3

That the Government incorporates appropriate provisions for limited merits review of licensing decisions in establishing a licensing system.

Recommendation 7.4

That annual licence fees for licences in the Victorian water industry be determined by the Commission in consultation with other relevant regulators, including the Environment Protection Authority and the Department of Human Services and that licence application fees be determined by the Commission.

A number of submissions from water businesses suggested that access seekers should have to obtain a licence (or licences) in respect of the water and/or sewerage services they propose to provide as a condition of applying for access. As discussed in section 4.2.2, the Commission considers that requiring potential access seekers to be licensed before they can apply for access would create an unnecessary obstacle for access seekers. The Commission considers that an

access seeker should have flexibility to choose the sequence of its applications for access and any required licence(s), such that it could:

- negotiate with the infrastructure operator before applying for, or being granted, a licence
- reach agreement with the infrastructure operator to suspend negotiations or the application process while it applies for a licence or
- apply for a licence and then apply for access.

7.4.2 Licensing of existing water and sewerage service providers

While the Water Industry Act contemplates licensing of water and sewerage service providers, in practice, the Statements of Obligations (SoOs) applying to the existing publicly-owned water businesses currently impose many of the obligations that would otherwise be included in licence conditions.

The SoOs are issued by the Minister for Water and impose obligations on each water business in performing its functions. As well as matters that could be included in licences, SoOs include obligations relating to governance and policy matters, which are imposed on the water businesses as publicly-owned authorities by the Victorian Government (their owner). Since governance-related obligations would not be extended to privately-owned providers of water and sewerage services, they would not be included in licence conditions. Some policy matters would also not be appropriately included in licence conditions. If the Government decided to require the publicly-owned water businesses to be licensed under a licensing system, it would need to review and amend, as appropriate, the water businesses' SoOs.

Before making a decision on incorporating the publicly-owned water businesses into a licensing system, the Government would need to consider whether the constitutional provision in respect of public ownership in the Victorian water industry (see section 9.1) limits or affects whether publicly-owned water businesses should be licensed under a licensing system.

The water businesses must currently comply with obligations under their SoOs as well as being subject to economic regulation by the Commission under the Water Act, the ESC Act and the Water Industry Regulatory Order (WIRO). They are also regulated under existing legislation and regulations dealing with health and safety, water quality and customer and environmental protection obligations. These measures together ensure the existing water businesses comply with all necessary obligations and maintain the operational, financial and technical capacity to fulfil their obligations to their customers. In the event that the water businesses were incorporated into a licensing system, the Government would need to consider whether the businesses would have to apply for a licence (and incur the costs of doing so) or whether they would be deemed to have satisfied the requirements for being granted a licence.

To enable deeming to occur, the licensing system would have to incorporate deeming provisions for existing water and sewerage service providers.

Some private businesses currently provide limited small-scale water or sewerage services, such as the Water Infrastructure Group which provides recycled water to

customers (described in box 1.1). In some cases, developers may provide services, such as recycled water services, to customers.

Since no licensing arrangements are currently in place for private water and sewerage service providers, they would legally be required to provide services through contractual arrangements with a water business. Compliance with the health and safety, water quality, and environmental and customer protection obligations applying to the water businesses would have to be written into those contractual arrangements to provide a legal basis for requiring the private provider to comply with those obligations. Responsibility for compliance would, however, remain with the relevant water business.

On the information available to the Commission, there are some questions about the extent to which existing small-scale private providers of water and sewerage services are covered by contractual arrangements with water businesses. The Commission does not consider it is reasonable for water businesses to be responsible for ensuring compliance with regulatory requirements by private providers, particularly where those providers proposed to provide water and/or sewerage services in competition with the water businesses. The Commission considers that existing private providers of water and sewerage services should have to apply for the relevant licence(s) when a licensing system is introduced.

Matters for further consideration

The Government should consider whether the constitutional provision in respect of public ownership in the Victorian water industry limits or affects whether publicly-owned water authorities should be incorporated into a licensing regime.

If the publicly-owned water businesses are required to be licensed under a licensing system, the Government should review and amend, as necessary, the Statements of Obligations applying to those businesses.

If the publicly-owned water businesses are required to be licensed under a licensing system, the Government should incorporate provisions for deeming some existing water and sewerage service providers (that is, the publicly-owned water businesses) as having met the requirements for a licence from the commencement of a licensing system.

7.4.3 Exemptions from licence conditions

The Commission's draft report recommended that the licensing system incorporate provisions for granting exemptions from some licence requirements in limited circumstances. Specifically, exemptions could be granted to water or sewerage service providers offering highly specialised services on a small scale to a limited number of customers. For example, Victorian alpine resorts provide very small scale water and sewerage services in national parks and may not need to comply with some of the general licence conditions designed for larger operations.

Exemptions would be granted in limited circumstances, and only for some licence conditions, to ensure that basic standards of health and safety, water quality, and customer and environmental protection are not compromised. The Commission does not propose that any water or sewerage providers should be exempted from obtaining a licence.

The purpose of granting exemptions from some licence conditions is to avoid imposing excessive costs on small scale, specialised service providers. In addition, exemptions would help to ensure that the costs of complying with licence conditions do not present an unreasonable barrier to the development of new and innovative services. Exemptions from licence conditions are provided for in licensing systems in the energy industry.

South East Water stated, in its submission to the draft report, that exemptions may be justified in a very limited set of circumstances although it considered that these would be uncommon. Even if an access seeker was planning only to supply itself, it would still need to meet minimum obligations in respect of environmental protection and some reporting requirements. No submissions opposed provisions for limited exemptions from licence conditions in some circumstances.

Recommendation 7.5

That the Government incorporates provisions for granting exemptions from some licence conditions in limited circumstances.

7.5 Certification criteria

The Competition Principles Agreement requires that where an infrastructure facility must be used safely, appropriate regulatory arrangements should exist. The NCC's guidelines on certification of access regimes state that it is appropriate for a State Government to determine whether and how to regulate the safe provision of an infrastructure service. It should not, however, regulate safety in a manner that poses unnecessary barriers to access and competition.

The Commission's recommendations relating to extending existing obligations relating to health and safety are, in the Commission's view, consistent with the certification criteria.

The NCC has also stated that regulatory arrangements for an access regime can contain provisions dealing with other matters, provided they are not inconsistent with the clause 6 principles in the Competition Principles Agreement. The Commission considers that its recommendations in regard to water quality and customer and environmental protection obligations are not inconsistent with the clause 6 principles.

In its final recommendation on the New South Wales application for certification of its water industry access regime, the NCC noted the New South Wales Government's argument that its licensing system does not form part of the access

regime. The NCC stated, however, that the licensing system and access regime are linked and highlighted that licensing arrangements should not include requirements that could form an unreasonable barrier to efficient competition. It also noted that providing for limited merits review of licensing decisions would improve the quality of, and confidence in, the decision making process.

The Commission considers that none of the recommendations in this chapter would create an unreasonable barrier to participation by new water and sewerage service providers in the Victorian water sector. It has recommended that limited merits review provisions be included in respect of licensing decisions.

The Commission has concluded that its recommendations are consistent with the certification criteria.

7.6 Implementation period

The Commission recommends that, during the implementation period for an access regime (see chapter 10), the Government conducts a comprehensive review of the legislation and regulations relating to health and safety, drinking water quality, customer protection and environmental protection in the water industry to identify amendments or additional measures required to extend these obligations to new water and sewerage service providers, including infrastructure service providers.

During the implementation period, the Government should establish a licensing system to create a framework to ensure that access seekers providing water and sewerage services have to comply with the same obligations relating to health and safety, water quality, customer protection and environmental protection as apply to existing providers of those services. Establishing a licensing system would have the further benefit of creating a legislative and regulatory framework to authorise the provision of new and innovative water and sewerage services by new businesses that do not require access to infrastructure services.

Identifying the necessary legislative and regulatory amendments, and implementing the required amendments, will require a substantial work program. The timeframe for undertaking these measures is discussed in more detail in chapter 10.

8 REGULATION OF AN ACCESS REGIME

A state-based access regime would have to be regulated to ensure that it operates effectively and that water sector participants comply with all relevant obligations. The terms of reference for the inquiry require the Commission to consider and make recommendations on the Commission's role as regulator of an access regime.

This chapter lists the broad regulatory functions that would need to be undertaken in regulating an access regime. It sets out the Commission's reasons for recommending that it should be appointed regulator of an access regime for the Victorian water sector and outlines the functions it would undertake in regulating an access regime.

8.1 Regulatory functions

As highlighted in chapters 3-7, a number of regulatory functions would have to be undertaken to ensure the effective operation of an access regime. These functions relate to:

- approving or rejecting applications for declaration of specific infrastructure services and approving or rejecting access undertakings proposed by infrastructure operators
- establishing an effective negotiation framework and arbitrating in access disputes
- developing access pricing principles, setting reference access prices (where appropriate) and establishing a ring fencing framework
- granting or rejecting licence applications and monitoring compliance with licence conditions
- monitoring and reporting on the performance of new water and sewerage service providers and the operation of the access regime, and
- monitoring and reviewing the effectiveness of the access regime.

This section summarises the Commission's proposed role in regulating a water industry access regime.

8.2 The Commission as regulator

In the draft report, the Commission stated that it is best placed to regulate an access regime for the Victorian water industry and recommended that it be appointed to regulate a state-based access regime.

The Commission is Victoria's independent economic regulator of essential services supplied by the water and sewerage industry. It also regulates the ports, grain handling and rail freight industries and aspects of the retail energy (electricity and

gas) industries. The Commission's primary objective under the ESC Act is to promote the long-term interests of Victorian consumers with regard to the price, quality and reliability of essential services. In pursuing this objective, the Commission must have regard to:

- facilitating the efficiency, incentives for long term investment and the financial viability of regulated industries
- preventing the misuse of monopoly or transitory market power
- facilitating effective competition and promoting competitive market conduct
- ensuring regulatory decision making has regard to the relevant health, safety, environmental and social legislation applying to the regulated industry
- ensuring users and consumers (including low income or vulnerable customers) benefit from the gains from competition and efficiency and
- promoting consistency in regulation across states and on a national basis.

These legislative objectives are all relevant to regulation of an access regime. The Commission has experience in regulating access regimes. It is the regulator of the Victorian intra-state rail access regime, the Victorian grain and wheat storage and handling access regime, and the Victorian channel access regime (which relates to port facilities).

In assessing an access regime for the purposes of certification, the 2(NCC) considers whether the regulatory arrangements for the regime will ensure that regulation will be conducted in an independent and transparent manner.

The NCC regards independence as necessary to engender confidence that regulation is free from bias. The essential criterion for an independent regulator is an 'arms length' separation from infrastructure owners, current users, access seekers, governments and other stakeholders. In addition, independence requires the regulatory body to be allocated sufficient resources to undertake its duties effectively. It should also be equipped with sufficient information gathering powers to obtain the information necessary to undertake its regulatory functions. The NCC has found the Commission to be independent and to be sufficiently resourced to properly regulate an access regime. [79]

A further consideration for the NCC is whether regulation of the regime is conducted in a transparent manner. Transparency is also critical to promote confidence in the regulation of an access regime.

In deciding on various regulatory matters, the Commission aims to be open and transparent and to consult with as many stakeholders as is practicable. The Commission's general approach to consultation is set out in its Charter of Consultation and Regulatory Practice.[80] In general, the Commission's consultation papers, reports, decisions, submissions and other documents are published and made available on the Commission's website. Stakeholders typically have a number of opportunities to be involved in the Commission's processes, including

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79 National Competition Council 2002, *op. cit.,* p. 28.

80 The Charter is available on the Commission's website www.esc.vic.gov.au.

making submissions and attending public meetings. The Commission also consults with other regulators, such as the EPA and DHS, and other government agencies, such as DSE and the Energy and Water Ombudsman (Victoria) (EWOV).

Further, the Commission has considerable expertise in regulating the water industry in respect of prices, service standards and reliability. It has extensive knowledge of the existing water businesses and their specific circumstances. The costs of regulating the industry and the compliance costs imposed on industry participants (infrastructure operators and access seekers) would be reduced by having a single economic regulator for the industry.

Submissions generally supported the appointment of the Commission as the regulator of a state-based access regime for water and sewerage infrastructure services. Some concerns were, however, expressed about the appropriateness of appointing the Commission as the arbitrator and regulator of the regime, and as the licensing authority. These concerns and the Commission's conclusions are discussed below.

8.3 The Commission as arbitrator

In the draft report, the Commission recommended that its regulatory role should include arbitrating in access disputes.

Some submissions to the draft report expressed the view that the Commission should not be both the regulator of the regime and the arbitrator in access disputes. South East Water's submission stated that an independent party should be nominated to arbitrate in disputes. In assessing these submissions, the Commission has taken into account two key factors.

First, the NCC has noted that 'an access regime's arbitration framework must engender confidence among the parties' by ensuring that the dispute resolution body is independent and has sufficient resources and expertise to carry out its dispute resolution role, and that arbitration is binding.[81] The NCC noted that, where the regulator is also the arbitrator, there may be benefits from being able to draw on past experience with industry issues and that, in highly technical access disputes, finding a suitably qualified alternative arbitrator may be difficult.

Second, the NCC has proposed safeguards to avoid potential issues that could arise when the regulator is also the arbitrator. The NCC suggested that a combination of some or all of the following mechanisms would be appropriate safeguards:

- ring fencing of the regulator's arbitration functions from its regulatory functions
- the development of practice and procedure notes to guide the regulator's arbitration decisions, independent of its regulatory functions
- a mechanism enabling any party to a dispute to require the regulator to appoint an arbitrator who has not been substantially involved in regulatory decision making for the service in question, and

[81] National Competition Council 2002, *op. cit.*, p. 16.

- an independent (administrative) appeals process to address questions of arbitrator bias or independence.

The Commission proposes to use the last three of these mechanisms. It considers that ring fencing the Commission's arbitration functions from its regulatory functions would be impractical and would lose the benefits of the Commission's knowledge and expertise in relation to the Victorian water industry.

In regard to the development of practice and procedure notes, the Commission proposes to develop dispute resolution guidelines for a state-based access regime for the water sector. The Commission notes that in New South Wales, IPART has published practice directions for the arbitration of disputes, as well as a guide to the arbitration of disputes.[82] Prior to the national regulation of the gas industry, the Commission had a gas distribution pipeline access disputes guideline.

In regard to the appointment of an independent arbitrator, the Commission has recommended that access seekers and infrastructure operators should be able to refer disputes to a private arbitrator under the *Commercial Arbitration Act 1984*, which provides for a final and binding decision (see section 4.3.2). The Commission notes that in the New South Wales water access regime, IPART may appoint an alternative arbitrator to arbitrate in disputes brought before it. Similar provisions could be included in the legislation establishing the Commission as arbitrator. For example, where the dispute is in relation to a technical matter, the Commission could refer the matter to a more appropriate body to arbitrate (such as another regulator or a panel of experts).

In regard to independent appeal provisions, s. 55 of the ESC Act includes provisions for limited merits review of determinations and certain decisions and requirements made by the Commission. The appeal panel is independent of the Commission and is established through the Victorian Civil and Administrative Tribunal (VCAT) (see section 4.4). The Commission (as arbitrator) would bear the onus of establishing that its decision was made in accordance with law and is reasonable, having regard to all relevant circumstances.

In its submission to the draft report, Melbourne Water expressed the view that the ESC Act:

> *contains an adequate framework for a review mechanism that allows parties to effectively test the adequacy of the decision, without undermining the authority as the key decision-maker, or certainty for access seekers or access providers (and any other affected third party). (*p. 19)

[82] IPART's *Arbitration Practice Direction and Arbitration Guide* is available at www.ipart.nsw.gov.ay/water/network-access/arbitration.asp.

Box 8.1 **The New South Wales arbitration process**

In New South Wales, IPART is the regulator of the water industry access regime and also acts as the arbitrator. When access negotiations fail, access seekers and infrastructure operators can take their disputes to a commercial arbitrator for a binding resolution or apply to IPART for arbitration. If IPART agrees to arbitrate in the dispute, it can arbitrate the dispute itself or appoint a member of its panel of arbitrators.

When IPART decides to arbitrate the dispute, it will hold a hearing where both parties present their case. After the hearing, IPART will:

- prepare a draft determination
- make the draft determination available to the parties and give them an opportunity to make submissions about it and
- make a final determination.

Before determining a dispute, IPART or the arbitrator (appointed from IPART's panel) must give written notice to the parties of:

- any assumptions that are proposed to be made for the purposes of the arbitration determination and
- each party's right to make submissions with respect to any of those assumptions and the date by which any such submissions should be lodged.

After IPART makes an arbitration determination, it will publish notice of the determination and a summary of the determination. When a determination is made by an arbitrator (from IPART's panel), the arbitrator will give IPART notice of the determination and a summary of the determination. IPART will publish this information.

The parties must give effect to the determination. If necessary, the determination may be enforced in the same manner as a judgement or court order.

Source: Independent Pricing and Regulatory Tribunal 2008, *WICA Access Fact Sheet No. 3*, available at www.ipart.nsw.gov.au.

The Commission proposes to adopt a transparent approach to making arbitration determinations to engender confidence in the arbitration process. In New South Wales, IPART has set out a transparent process for making arbitration decisions (see box 8.1) The NCC has stated that:

> *making such information publicly available (arbitrator/regulator determinations on access disputes) would help address information asymmetry between the access seeker and infrastructure service provider, as well as provide greater certainty*

about the arbitrator/regulator's most likely approach to resolving disputes.[83]

The Commission has experience in arbitrating in access disputes in the Victorian rail access regime, which it also regulates. In addition, the Commission performs functions similar to those of an arbitrator in both the ports and grain handling industries, in that the Commission will hear disputes and make a conclusive determination. Its determination is legally binding.

After weighing up the relevant considerations, the Commission remains of the view that it is best placed to regulate an access regime, including arbitrating in access disputes.

Recommendation 8.1

That the Commission is appointed the regulator of an access regime for the Victorian water industry. The Commission's regulatory role would include arbitrating in access disputes.

8.4 The Commission's regulatory responsibilities

This section outlines the specific functions the Commission would perform in regulating a state-based access regime.

8.4.1 Infrastructure service declarations and access undertakings

As noted in section 3.4, where private negotiations between an access seeker and an infrastructure operator have been unsuccessful, the access seeker may apply for declaration of the infrastructure service. An application for a coverage declaration would be lodged with the regulator.

In the New South Wales water industry access regime, the regulator, in this case IPART, must provide a copy of the application to the relevant Minister and certain prescribed persons and invite submissions on the application from those prescribed persons and from the public.

After considering the application and any submissions it receives, IPART must report to the Minister on whether the infrastructure service satisfies the declaration criteria. If the declaration criteria are satisfied, IPART makes a recommendation to the Minister. The Minister must consider but is not bound to accept any advice or recommendation in the regulator's report on the application, and may seek further advice from the regulator in relation to the application. If all of the declaration criteria are met, the Minister must make a coverage declaration in respect of the service.

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83 National Competition Council 2002, *op. cit.*, p. 43.

The Commission envisages that a similar process would apply to assessing applications for declaration of infrastructure services in a Victorian access regime. The Commission recommends that it would, as regulator, assess the application against the declaration criteria and decide whether to make a coverage declaration.

The Commission considers there would be benefits in giving it the authority to decide on coverage declarations instead of placing the decision making power with the Minister. First, declaration determinations would be subject to limited merits review under the ESC Act.

Second, the Commission is independent and makes decisions through a transparent process. The Commission's independence and transparency of decision making are particularly important when the infrastructure operators are publicly-owned authorities. In its final decision on certification of the New South Wales water industry access regime, the NCC drew attention to the New South Wales Government's involvement in the water sector through its ownership of water businesses and raised concerns about the scope for Ministerial discretion in decision making on coverage declarations.[84]

Applications for revocation of coverage declarations would be assessed through a similar process. The Commission recommends that, it would, as regulator, assess the application and decide whether it would revoke the coverage declaration.

In making its decisions on coverage declarations and revocation of coverage declarations, the Commission would ensure that the Minister for Water was informed of applications and the Commission's decisions. The Minister would have the opportunity to provide comments to the Commission on any aspect of an application or the Commission's decision.

An alternative to declaration of an infrastructure service is for the infrastructure provider to make a voluntary undertaking in respect of that service (see section 4.2.5). An access undertaking could be prepared by an infrastructure operator, setting out arrangements for providing access to its infrastructure services. These arrangements would generally include information about the specific terms and conditions, including access prices or the method of calculating prices, under which access would be provided. An access undertaking must provide for any disputes about the provision of access to its infrastructure to be referred to an arbitrator.

To ensure that an access undertaking was consistent with the provisions of an access regime, and any guidance or principles (such as pricing principles) developed by the regulator, an infrastructure operator would have to apply for approval of its proposed undertaking from the Commission. On receiving an application for approval of an access undertaking, the Commission would invite public submissions on the application. In deciding whether to approve an access undertaking, the Commission would consider:

- the legitimate business interests of the infrastructure operator

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84 National Competition Council 2009, *op. cit.*, p. 6.

- the interests of prospective access seekers
- the benefits to the public from competition in related markets and
- any other matters that the Commission considered relevant, such as consistency of provisions in the undertaking with the access pricing principles and negotiation framework established under the access regime.

During the implementation period for an access regime (discussed in chapter 10), the Commission recommends that the access commitments proposed by the water businesses be submitted to it for approval through a similar process to the process set out above for approving undertakings.

8.4.2 Negotiation framework and dispute resolution

As discussed in chapter 4, the Commission proposes that it would develop guidance for infrastructure operators and access seekers on negotiation protocols, information requirements and dispute resolution mechanisms and provide advice to infrastructure operators and access seekers on complying with these guidelines and other requirements.

It proposes to publish general information on its website, including fact sheets explaining the key features of the access regime, information about the regulatory framework, the negotiation protocols, and guides dealing with licences, access applications and arbitration.

As noted in section 8.2, the Commission considers that it is best placed to arbitrate in access disputes, having sufficient resources and expertise to carry out this role.

8.4.3 Access pricing and ring fencing

As noted in chapter 5, the Commission considers that regulatory guidance on access prices is likely to be needed to facilitate effective negotiations between an infrastructure operator and access seeker and provide a level of certainty to market participants on the method for calculating access prices. The Commission proposes to develop pricing principles and other guidance to assist the businesses in applying the cost of service and retail minus approaches. It would monitor compliance with the pricing principles and could arbitrate in disputes over access pricing.

The Commission would also develop guidance on accounting separation (see chapter 6). It would monitor compliance with its guidance.

8.4.4 Licensing

In chapter 7, the Commission proposed four options for licensing decision making. Under all four options, the Commission would be responsible for assessing licence applications, in consultation with other relevant regulators, government departments and the broader public, and would then decide either to grant or reject the licence application or make a recommendation to the Minister for Water who would make the decision.

The Commission would also monitor compliance with licence conditions (in consultation with other relevant regulators) and administer the register of licences.

8.4.5 Performance monitoring and reporting

In its current role as economic regulator of the Victorian water industry, the Commission monitors and reports on the performance of the water businesses in providing water and sewerage services. The Commission envisages that new water and sewerage service providers would be subject to some of the same monitoring and reporting requirements, taking into account the types of services offered.

It would extend its monitoring and reporting to include the performance under an access regime.

8.4.6 Review of the access regime

The Commission considers that an access regime should be reviewed on a periodic basis to ensure that it is operating effectively and to identify any modifications required to improve its effectiveness. Modifications may also be required to address any changes in conditions in the Victorian water sector to ensure that the regime remains appropriately tailored to industry circumstances.

The terms of reference allow the Commission to recommend the timing of a future review of the access regime to ensure it remains relevant and effective.

In its submission to the issues paper, Melbourne Water supported periodic review of an access regime 'to ensure that it is achieving its objectives and for the regulator and industry to understand where improvements are required' (p. 5). Barwon Water's submission to the issues paper stated that the access regime should be reviewed during the Water Plan period so any required changes can be implemented prior to preparing the next Water Plan.

The Commission considers that the access regime should be reviewed not less than five years, and not more than ten years, after the completion of stage 3 of the implementation process (see chapter 10). A review should be scheduled to allow the water businesses to make any required changes to their access provisions before they begin preparing their Water Plans for the 2013 price review. This timing would also allow the Commission to take into account the outcomes of the review and any modifications to the access regime, including the approach to access pricing, during its price review.

The Commission recommends that it should be responsible for undertaking future reviews of the access regime. It should also be able to provide advice to the Government on the operation of the regime, or any aspect related to its regulation, as required. During the first review following implementation of the regime, the frequency of future reviews should be determined.

Matters for further consideration

During the first review of the state-based access regime following its implementation, the frequency of future periodic reviews of the regime should be determined.

9 OTHER ISSUES

Under the Competition Principles Agreement, the legislation establishing an access regime must state clearly that the objective of the regime is to:

> *promote the economically efficient use of, operation and investment in, significant infrastructure thereby promoting effective competition in upstream or downstream markets.*[85]

In developing access regimes in other industries, governments have commonly introduced complementary measures to ensure that the access regime is effective in facilitating broader participation in the industry to which the regime applies. These complementary measures have often addressed obstacles to participation by new entrants to the industry and competition with the incumbent business. Without complementary measures in the water industry, the full benefits from introducing an access regime, in terms of substantially boosting innovation and efficiency, are unlikely to be achieved.

Coordination and network management measures will also have to be implemented to ensure that the operation of the Victorian water industry is economically efficient when a larger number of businesses are providing water and sewerage services in the existing service areas. Such measures will also promote economically efficient investment in water industry infrastructure.

The terms of reference for this inquiry invited the Commission to make observations regarding potential barriers to implementing an effective access regime. They also require the Commission to make recommendations on coordination and network management.

This chapter highlights the main barriers that would need to be addressed by the Government to support the effective operation of an access regime. It also identifies a number of coordination and management issues and makes recommendations on addressing them.

9.1 Potential barriers to the effective operation of an access regime

In the draft report, the Commission noted that the Government is currently undertaking an extensive work program to identify measures to improve the efficiency of the water industry. Some of the projects underway in the water industry were listed in the terms of reference for this inquiry (see appendix A). The Commission also noted the Government's statement about the opportunities for

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[85] Clause 6(5)(a) of the Competition Principles Agreement. See appendix F.

longer term reform of the water industry set out in its response to the Victorian Competition and Efficiency Commission's (VCEC) report.[86]

A number of submissions to this inquiry highlighted that the Government's program for water industry reform will have important implications for designing an effective access regime. For example, Melbourne Water's submission to the Commission's issues paper commented that an understanding of the Government's competitive reforms 'is necessary to design a fit for purpose access regime' (p. 4). South East Water's submission to the issues paper stated that its 'preferred outcome would be to integrate the introduction of a third party access regime into a well defined reform program for the industry' (p. 14).

In its submission to the draft report, Yarra Valley Water expressed the view that 'the access regime as envisaged in the Draft Report will only deliver limited community benefits … [unless it is] considered to be one element of a broader reform agenda' (p. 1) Its submission sets out a proposed 'roadmap' for a staged approach to reform. A key element of its proposed reform program is development of wholesale water markets, reflecting its view that 'wholesale market reform is a precondition for an effective access regime' (p. 1). It commented that an access regime 'would result in a form of retail competition' which could, under its proposed reform 'roadmap', be gradually extended subject to an assessment of expected net benefits (p. 2).

Jemena, a private utilities service provider involved in a number of recycling projects in New South Wales, submitted in its response to the issues paper that it would be 'desirable to remove barriers to retail contestability and provide for access to facilitate innovative models' (p. 3). While it did not believe full retail contestability would be an appropriate policy objective, it suggested that, without reforms to increase the scope for competition and innovation in providing retail water and sewerage services, '[t]he demand for access is likely to be limited' (p. 2). In its submission to the draft report, Jemena argued that introducing a licensing regime would open up a range of opportunities of benefit to Victoria, even without establishing an access regime.

New opportunities could generate access applications to enable businesses to provide new services using existing infrastructure. These applications may come from private businesses planning to start offering water and sewerage services or existing publicly-owned water businesses planning to extend into other service areas (including greenfield developments).

The Commission has identified aspects of the existing legal and institutional arrangements that need further consideration in terms of their implications for broader participation in the water industry, including:

- legislative and regulatory arrangements relating to bulk water entitlements and potential constraints on the ability of the existing water businesses to compete with each other

[86] Victorian Government 2008, *op. cit*. The reform opportunities identified by the Government are listed in section 1.1.

- resource management processes, including procurement processes and demand and supply management
- the property rights applying to different types of water and
- constitutional provisions for public ownership in the water industry.

Matters requiring further consideration in the context of developing an effective access regime are discussed in more detail in the rest of this section.

9.1.1 Legislative and regulatory arrangements

In developing an access regime for the water industry, the Government will need to undertake a comprehensive review of relevant legislative and regulatory provisions to identify whether amendments are required to support the effective operation of the regime. The Commission has identified several major areas where amendments are likely to be required.

Water entitlements

The Minister for Water issues water entitlements and administers water allocations under the Water Act. A water entitlement is the maximum amount of water authorised to be taken and used by a person under specified conditions. There are four different types of issued entitlements to take water: bulk entitlements; environmental entitlements; water shares and section 51 water use licences ('take and use' licences). [87]

Bulk entitlements may be granted to water corporations, the Minister for the Environment and other specified bodies defined in the Water Act (such as electricity generators). The right to hold and trade bulk water entitlements is effectively limited to existing water businesses. Bulk entitlements are capable of being disallowed by Parliament, which makes them inappropriate instruments for granting water entitlements to the private sector and for trading. (The issuing of bulk entitlements to certain electricity generators largely reflects historical reasons.)

Yarra Valley Water suggested, in its submission to the draft report, that it might be worthwhile unbundling the existing 'pooled' bulk entitlements held by the metropolitan retailers into separate retailer bulk entitlements as well as into their individual components of rights to inflow share, storage share and outflow capacity share (p.24).

Water entitlements can also be granted through water shares and water use licences. These are granted to irrigators and diverters, including for domestic and stock uses. Water shares may be held by any person. Water use licences are only granted to landholders and land occupiers.

The Government may need to consider which type of instrument would be most appropriate for granting entitlements to hold large amounts of water for the private sector. The existing water shares and water use licences may be appropriate.

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87 Department of Sustainability and Environment 2008, *Allocation and trading*, available at www. ourwater.vic.gov.au/allocation.

Consideration should also be given to whether electricity generators should be granted water shares rather than holding bulk entitlements. This would lead to consistency in the way large commercial water users hold their entitlements to water across industries, including the electricity, aluminium, dairy and other industries, and facilitate trading among these users. It would also result in consistency between existing electricity generators that hold bulk entitlements and new electricity generators, such as solar thermal generators, which are likely to be granted water shares.

The Water Act states that entitlements can be held in relation to water in a waterway, water in storage works of a water corporation and groundwater. This definition would exclude some new water sources developed by the existing water businesses or by new businesses. The Commission notes that the Government is currently considering amendments to bulk water entitlements to reflect new water sources, such as the desalination plant and the Sugarloaf pipeline. Amendments may also be needed to support the development of innovative water sources by private businesses.

In its submission to the draft report, South East Water recommended that the Government's review of the entitlements be undertaken in conjunction with the metropolitan water retailers' transition to the Water Act and current work program on establishing markets.

Matters for further consideration

The Government should review the entitlements system established by the *Water Act 1989* in the context of establishing an access regime and consider whether any new sources of water would require some form of entitlement.

Water trading in urban systems

Water trading commenced in Victoria in 1991 after the Water Act allowed permanent transfers of rights and established trading regulations. In 2004, the Council of Australian Governments (COAG) agreed under the National Water Initiative to undertake reforms to achieve a nationally compatible water market.

The Victorian Government has developed policy and legislative approaches to support interstate water trade. The *Water (Resource Management) Act 2005* instituted further reforms in water use and management, including trade and the unbundling of water entitlements. Currently, most water trade in Victoria is in the regulated water systems in northern Victoria, the Goulburn and Murray River systems.

Legislative and regulatory amendments would be needed to establish water markets to extend trading to bulk water entitlements within urban systems. Currently there are no clear arrangements for potential access seekers planning to supply bulk water from a new supply source to offer water into any form of urban

wholesale market.[88] Similarly, there are no clear provisions for potential access seekers proposing to provide some form of retail water services to purchase water supplies from a wholesale market.

The Commission concluded, in its draft report, that the absence of trading arrangements could form a significant barrier to broader participation in the Victorian water sector.

In its submission to the draft report, Yarra Valley Water stated that reform of wholesale markets should be 'a primary focus' of water industry reform. Benefits from establishing a wholesale market include lowering the cost of wholesale water, optimisation of water use, achieving optimal state wide urban to urban water transfers, and expanding rural to rural trading (p. 5). South East Water's submission to the draft report stated that extended trading arrangements are not a prerequisite for access and commented that any Government review of trading arrangements should be finalised prior to access being introduced.

Matters for further consideration

The Government should investigate the implications for economic efficiency and assess the costs and benefits of extending the existing trading arrangements for water in the context of establishing an access regime.

Competition between the existing water businesses

Section 11 of the *Water Industry Act 1994* prohibits competition for customers between the three metropolitan retail water businesses by limiting the area within which each business can provide water and sewerage services. The provision also prevents the metropolitan retailers from competing with the regional urban businesses.

Similar provisions are not included in the Water Act, although a business may require approval from the Minister for Water before it could begin offering certain services in another water business' service district (or outside Victoria). Water businesses regulated under the Water Act are able to supply water to customers outside their district without the Minister's approval. Arrangements for the supply of water from one water business to another already exist. For example, Melbourne Water supplies bulk water to Gippsland Water and Western Water, and GWMWater has agreed to supply bulk water to Wannon Water.

The Commission considers that confining an existing water business to only servicing customers within a specified geographic service area could reduce the opportunities for the existing water businesses to take advantage of opportunities presented by an access regime. This could put them at a competitive disadvantage

[88] Referring back to example 1 described in section 1.2.3, a business planning to supply bulk water from a new supply source would have no option but to sell to a single buyer (the incumbent water business) without a market to determine the price.

in providing some water and/or sewerage services compared to new private providers that were not subject to such restrictions on their areas of operation. Further it could limit the benefits from an access regime in promoting innovation and improving in efficiency and productivity in the water sector.

In its submission to the draft report, South East Water suggested that allowing a water business to operate in another water business' supply area could result in inefficient duplication of infrastructure. The Commission considers that an access regime would prevent inefficient infrastructure duplication. Allowing a water business to access another water business' infrastructure services would allow it to provide water and/or sewerage services within that business' supply area using the existing infrastructure. Similarly, in greenfields developments bordering two businesses' supply areas, an access regime would facilitate the sharing of any existing infrastructure that was needed to supply water and sewerage services to the greenfields development. For example, another water business could operate a large water pipeline to which access was required (by the water business developing the greenfields site) to transport water from a supply source to the water reticulation network constructed for the greenfields development.

Matters for further consideration

The Government should investigate the implications for economic efficiency of the provisions in the *Water Industry Act 1994* and the *Water Act 1989* that limit a water business to only servicing customers within a specified geographic area and assess the costs and benefits of removing those provisions in the context of establishing an access regime.

9.1.2 Resource management processes

Clarifying resource management processes and improving the information available about expected future demand and supply for water and sewerage services would facilitate opportunities for developing low-cost new water sources under an access regime.

Procurement processes

The current arrangements for planning and managing water supply procurement may form an impediment to the development of innovative supply options. The lack of transparency in decision making on which water sources to develop, when to develop them and how to operate them once they are in place, creates risks for potential water suppliers and could limit broader participation in bulk water provision. Further, there may be a real or perceived conflict of interest for the relevant water business as a supplier and seller of bulk water. These include scope for bias when selecting which sources to invest in or use.[89]

[89] Economic Regulatory Authority 2008, *Inquiry on Competition in the Water and Wastewater Services Sector: Final Report*, June.

In Western Australia, the Economic Regulatory Authority (ERA) proposed the creation of an independent procurement entity (IPE) as a means of separating bulk water procurement from the role of the government and the state-owned water business, thereby reducing some of the potential risks faced by private water suppliers. The ERA noted that the IPE model would also clarify the role of government and reduce the risk of political involvement in investment decisions.[90]

The IPE would have responsibility for ensuring that supply and demand were balanced at least expected cost, subject to the constraint of maintaining security of supply at the level set by the government. Independence from government would improve certainty for the private sector, transparency in decision making, and consistency in approach. The ERA noted that the proposed reforms would support an access regime by facilitating broader participation in supplying water.

The Victorian Government is currently reviewing arrangements for optimising system management of the expanded water grid and new water sources so that the desired level of security is achieved at least cost. It is also considering whether market-based mechanisms could be used to inform resource management decisions.

In its submission to the draft report, VicWater expressed the view that any review of bulk water procurement processes should involve extensive consultation with the water businesses.

Matters for further consideration

The Government should review its bulk water procurement processes to assess opportunities for improving the efficiency of those processes in the context of establishing an access regime.

Information provision

Access seekers require information on industry conditions, costs, the expected demand and supply balance, and other matters to assess the viability of proposed projects and other forms of participation in the water industry.

In the national electricity market, the Australian Energy Market Operator (AEMO) has responsibility for providing information to assist market participants. Each year it publishes a *Statement of Opportunities*, which is a ten-year forecast intended to assist market participants assess the future need for generation capacity, demand-side response and augmentation of the network. It also publishes other information, including the *Projected Assessment of System Adequacy*, which provides short term forecasts.

Some businesses expressed concern about disclosing information that could be commercially advantageous to potential competitors. However, Melbourne Water noted in its submission to the inquiry that much of the information required by

90 *ibid*.

access seekers to assess the viability of proposed projects 'is currently available in one form or another'. Information on industry conditions, costs, the expected demand and supply balance, and excess capacity is already published in the water businesses' Water Plans, the Commission's price determinations and annual performance reports, and government publications such as the Sustainable Water Strategies prepared for the four Victorian regions and the Government's *Our Water, Our Future* planning documents.[91] In addition, the Commission notes that any information that was commercial in confidence would not be disclosed.

Gippsland Water's submission to the draft report stated that the aggregation of water industry data into a state-based summary along the lines of the *Statement of Opportunities* would be of little value to access seekers, given the lack of interconnectivity between water supply systems.

The Commission sees value in reviewing whether the publicly available information relating to resource planning is adequate, easy to understand and released on a timely basis and that the resource planning processes are sufficiently open and transparent.

In relation to demand management, the ERA identified that uncertainty about the trigger conditions for the imposition of water restrictions or the provision of rebates for water conservation measures may create a barrier to private supply of water. Water restrictions and rebates influence the level of water use and therefore the returns expected by private providers of water services, including recycled water. Uncertainty about the trigger conditions increases the risks associated with supplying water services. The ERA concluded that 'the rules that govern the introduction or amendment of these factors [should] be known with certainty'.[92]

The Commission considers that clarification of whether (and if so, how) restrictions policies would apply to new water sources would also have value. Several submissions to the inquiry agreed that the Government should clarify whether restrictions policies should be applied to new water and sewerage service providers. While some water businesses stated that new water service providers should be subject to the same level of restrictions as they are, the Commission is concerned that this would stifle innovation in developing new water sources. It would be more efficient for restrictions policies to apply to sources of water rather than to types of water services or types of customers.

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91 See Department of Sustainability and Environment 2004, *Our Water, Our Future—Securing Our Water Future Together,* Victorian Government White Paper, June; and 2007, *Our Water, Our Future—The Next Stage of the Government's Water Plan*, Victorian Government, June. The Government's policy documents and the regional Sustainable Water Strategies are available at www.ourwater.vic.gov.au/programs.

92 Economic Regulatory Authority 2008, *op. cit*., p. 31.

Matters for further consideration

The Government should review the adequacy and timeliness of publicly available information related to resource planning in the context of establishing an access regime.

The Government should review the application of restrictions policies and clarify whether, and if so, how, restrictions policies would apply to new water sources in the context of establishing an access regime.

9.1.3 Property rights related to different types of water

The VCEC report noted that clarifying the property rights and obligations associated with different water resources would support broader participation in the water sector by providing clearer information on costs, risks and opportunities.[93] It noted further that uncertainty about rights, especially to wastewater, recycled water and stormwater, could create a barrier to some activities that could be proposed by new participants in the sector.

As the Commission noted in its draft report, DSE is undertaking work on clarifying rights to alternative water sources and identifying where the rights framework could be improved.

9.1.4 Constitutional provisions

Access regimes provide a framework for third parties to share the use of natural monopoly infrastructure and so allow opportunities for broader participation in supplying water and sewerage services. However, an access regime is neutral with regard to who owns the infrastructure and who might seek access to that infrastructure in order to offer new services and products to potential customers. It is also neutral on whether infrastructure providers and access seekers are privately owned or owned by Government.

The Commission noted, in its draft report, that the *Constitution (Water Authorities) Act 2003* amended the Victorian Constitution to require that where 'a public authority has responsibility for ensuring the delivery of a water service, that it or another public authority must continue to have that responsibility' (sec. 97(1) of the Victorian Constitution).

In developing its recommendations, the Commission has been mindful of the Government's policy in respect of public ownership of water businesses. The Commission's terms of reference clearly require it to have regard to the relevant provisions in the *Constitution Act 1975*.

In its draft report, the Commission noted that the constitutional provision in respect of public ownership in the water sector has not prevented a range of commercial relationships involving private provision of water and sewerage services and

[93] Victorian Competition and Efficiency Commission 2008, *op. cit*.

associated services, such as public-private partnerships under the *Partnerships Victoria* framework. Examples include the Yan Yean treatment plant in Melbourne, Aqua 2000 in Bendigo and the desalination plant that will supply water to Melbourne.

Beyond the terms and conditions of an access regime, potential service providers will require clarity about any limitations imposed by the constitutional provision. The Commission has not investigated this matter as it lies beyond the terms of reference of the current inquiry.

South East Water submitted to the draft report that an investigation into the implications of constitutional provision should be undertaken prior to access being introduced. It commented that the design of the access regime may be substantially different and less extensive if private provision of water or sewerage services is prohibited.

The design of the licensing system discussed in chapter 7 will need to take into account any limitations arising from the *Constitution (Water Authorities) Act 2003*. Any constraints on the Government's ability to introduce legislation regulating water service providers could necessitate taking a different approach to that adopted in respect of some of the Commission's recommendations.

The Commission proposes that the Government consider these issues during the implementation period for an access regime. Specifically, the Government should consider whether the constitutional provision in respect of public ownership in the Victorian water industry limits or affects the options available to the Government to regulate, by legislation, the provision of water services.

9.1.5 Other potential barriers to the effective operation of an access regime

The Commission has identified other potential barriers to the effective operation of an access regime.

Taxes and charges

Gippsland Water's submission to the draft report drew attention to the environmental contribution paid by the water businesses under the s. 191 of the *Water Industry Act 1994*. It stated that new water and sewerage service providers would have a cost advantage if they did not have to pay the environmental contribution.

Section 191 of the Act states that the environmental contribution is payable by a 'water supply authority' defined as: an authority that has a water district under Part 8 of the Water Act, or a sewerage district under Part 9 of the Water Act, or an irrigation district under Part 11 of the Water Act; or 'a person who is the holder of a water licence, a water and sewerage licence or a sewage treatment licence' under the Water Industry Act; or Melbourne Water. Legislative amendment may be required to extend the application of the environmental contribution to new water providers.

The Commission suggests that the Government reviews the application of the environmental levy, as well as other taxes and government charges paid by the

water businesses, to identify whether the same taxes and charges would apply to new water and sewerage service providers.

Matters for further consideration

The Government should review the application of the environmental levy, as well as other taxes and government charges paid by the water businesses, to identify whether the same taxes and charges would or should apply to new water and sewerage service providers in the context of establishing an access regime.

Planning provisions

All state planning schemes give the relevant statutory water authority a role as referral authority in relation to new land developments. Their role involves considering both the ability to supply water and the power to require facilities to be available by the subdivider in the form of easements, construction of infrastructure, and contributions to costs. The easements granted as part of that process can only be used for water supply purposes by the relevant statutory water authority.

The state planning schemes are supported by legislation and regulations, including the *Subdivision Act 1988* and the Water Act. The water businesses' statutory powers in relation to land development do not extend to developers or new water or sewerage service providers. While the water businesses can contract with developers and private providers to deliver services or construct infrastructure on their behalf, the final responsibility for service delivery or the infrastructure remains with the water business.

The Commission suggests that the Government investigates whether the existing planning arrangements present any barriers to private participation in any aspects of water and sewerage service provision, including the provision of infrastructure services.

Matters for further consideration

The Government should review the state planning schemes, and associated legislation and regulations, to determine whether any of their provisions would present a barrier to the effective operation of an access regime.

Innovative local water supply solutions

One of the Government's objectives in establishing an access regime is, as noted in the terms of reference for this inquiry, to 'facilitate the development of innovative local solutions to water supply, consistent with broader sustainable urban planning objectives'.

In its submission to the issues paper, South East Water commented that a state-based access regime should not be biased towards any specific solutions, as it could be if it was designed to be consistent with current sustainable urban planning policies. South East Water considered that a competitive water market would best promote the development of efficient and innovative means of supplying water services. The Commission notes that similar issues arise in respect of water recycling policies that set targets for recycling.

In the Commission's view, policies that mandate or subsidise certain approaches could undermine the potential benefits of an access regime in promoting efficient and innovative solutions.

9.2 System coordination and management issues

With increasing integration of the Victorian water network to create a Victorian Water Grid, an important consideration is how to manage the grid to ensure that the desired level of supply security is achieved while minimising the cost of supply on a day-to-day basis. Coordinating different sources of bulk water and directing the transfer of bulk water across the grid will be essential elements in achieving this objective.

An access regime can be expected to result in an increase in the number of businesses using particular water networks. New businesses will be able to use these networks to supply water from new sources with varying cost structures. A larger number of market participants, and greater diversity in the nature and cost of supply sources, will increase the importance and complexity of coordination across the water supply grid.

Submissions supported the strengthening of coordination arrangements in conjunction with the implementation of an access regime. In its submission to the draft report, Yarra Valley Water stated that the Commission should nominate a specific agency to take responsibility for developing improved coordination arrangements.

9.2.1 Network management

In its report on the Melbourne water sector, VCEC noted that a Water Grid Manager or other system coordinator could be established to undertake the day-to-day operation and coordination of the water supply system. The grid manager would determine operating rules for the grid and how much water to take from different sources to meet demand at any particular time.[94] Its tasks would include:

- integration and optimisation of all sources of water
- managing the transfer of bulk water within the grid
- creating the mechanisms for the efficient transfer of water between users
- managing the entry of third parties and

[94] Victorian Competition and Efficiency Commission 2008, *op. cit*.

- optimising the transfer of water to produce the lowest overall community cost of supplying water.

The grid manager would also need to manage temporary supply shortages or congestion.

VCEC considered that, in the short term, a grid manager would need to take a centralised approach. Without a well functioning market for trading bulk water entitlements, the system coordinator would have to estimate costs and willingness to pay without access to genuine market valuations. However, if such a market were established in future, the grid manager's task would become one of managing bids from market agents and dispatching water from lowest to highest bids to meet demand.

Issues that would need to be considered when establishing a water grid manager include:

- whether to set up a framework for a centralised approach in the short term that leaves open the option of a transition to a decentralised approach
- how to establish the water grid manager so that it has no conflicts of interest in its operation of the network
- clarity around the allocation of responsibilities for managing the commodity and for managing the transfer of that commodity
- pricing and operational arrangements and
- how the water grid manager should interact with water businesses and users on the boundaries of the metropolitan market (where there is scope for interconnection).[95]

The Victorian Government is currently investigating arrangements for optimising system management of the expanded water grid, appropriate roles and responsibilities in the new system (including whether an independent system or grid manager should be established), and expansion and increased interconnectivity of the Victorian Water Grid.

In its submission to the issues paper, the Consumer Utilities Advocacy Centre (CUAC) emphasised the need for accountability in managing the water supply grid. It expressed concern that:

> *Unbundling of the wastewater sector and breaking up obligations along the supply chain, for example, may make it easier for businesses to avoid responsibility for supply failures.* (p. 4)

In its response to the issues paper, Barwon Water expressed the view that a grid manager would not be needed for regional networks, stating that: 'Regional water companies are in the best position to coordinate, manage and optimise their systems to provide a secure level of supply at least cost' (p. 4). Coliban Water noted, however, that:

> *It is currently able to optimise the management of its distribution network to best match demand and supply across areas. It is also*

95 *ibid*.

> *able to balance the use of different assets at different times of day and throughout the year to meet the varying demand from different locations. Providing rights of access to third parties to that infrastructure would add a level of complexity to the current management arrangements.* (p. 7)

In its submissions to the inquiry, South East Water encouraged the Government to consider appointing an independent grid manager.

In developing an access regime, the Government would need to ensure that appropriate arrangements were in place for coordination and day-to-day management of water supply requirements where access could occur.

The Commission concluded, in its draft report that, in the short term at least, Melbourne Water in metropolitan Melbourne and the regional businesses in their service areas are best placed to provide the required coordination and management functions. No objections to this recommendation were raised in submissions to the draft report. The Commission therefore confirms its recommendation. The businesses could be asked to provide a commitment that they would undertake these functions in a way that does not unfairly discriminate against other users.

Recommendation 9.1

That until such time as the Government completes its review of network management arrangements, Melbourne Water and the regional businesses provide water supply coordination and management functions in their service areas.

9.2.2 Network balancing

Another issue that will need to be dealt with is network balancing. While the access arrangements between access seekers and infrastructure operators will go some way to matching water demand with its supply, imbalances may be expected to occur on a daily basis. Management of these imbalances may best be undertaken by the infrastructure operator (such as through the operation of service reservoirs and by varying pressure at different points in the network). The costs of network management should be passed on to those who generate the imbalances. Such imbalances may also impact on service quality elsewhere in the network.

A methodology for estimating system losses and processes for allocating the associated costs will need to be developed. Losses should be maintained at an economically efficient level (which is unlikely to be negligible). The costs associated with losses would have to be taken into account in access pricing. Network balancing could be managed by an infrastructure operator or grid manager.

9.2.3 Interoperability

Issues can arise where an access seeker requires interconnection between its own infrastructure and a water business' infrastructure. For example, an access seeker might propose to connect into a sewer main in order to take out sewage (equivalent to the sewage discharged into the sewerage reticulation network by the access seeker's sewerage customers), which it would then transport along its own pipeline to its treatment plant. Alternatively, a business with a new water source might propose to connect its own pipeline into the main water pipeline in order to inject water that is then delivered to its customers through the water business' water supply network.[96]

Interoperability issues may involve operating procedures and other terms and conditions of access. Terms and conditions imposed on interconnections by the infrastructure operator should be no more stringent than required to ensure the safe and efficient operation of the infrastructure. Negotiation of these terms and conditions would occur within the negotiation framework discussed in chapter 4.

In its submission to the issues paper, South East Water noted that the quantities of water or sewage put into, or taken out of, the network by access seekers would have to be measured. Additional metering could be required at interconnection points. It identified other issues that would need to be considered in developing an access regime, including:

- determining responsibility for meter provision and reading
- allocating the cost of additional metering and
- developing a protocol for measuring sewage volumes.

The Commission considers that protocols should be developed for: metering of water and sewage flows at interconnection points, allocating the cost of additional metering; and exchanging information, such as meter data. Access seekers should be responsible for the costs of installing, maintaining and reading additional meters at interconnection points.

9.2.4 Network operation, maintenance and expansions

Currently water businesses have responsibilities related to planning, operation, maintenance and development of water and sewerage networks, including backlog programs for currently unserviced areas. In its submission to the issues paper, CUAC emphasised the importance of efficient network planning and design. Gippsland Water's submission to the draft report also highlighted related issues in its response to the draft report, for example, planning for new infrastructure investments.

An access regime will need to identify responsibilities for network operation, maintenance and network expansions. The Commission suggested, in its draft report, that the incumbent infrastructure operator would retain these responsibilities. Access seekers would need to comply with operational and

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[96] A number of examples where an access seeker needs to connect into the natural monopoly infrastructure operated by the infrastructure provider are described in appendix D.

maintenance requirements and provide information required by the infrastructure operator to assist it in planning for network augmentation and expansion. These requirements could be included in the conditions of a licence (see chapter 7). No objections to these proposals were raised in submissions to the draft report.

9.2.5 Emergency management

A further consideration is determining responsibility for managing emergencies. Currently water businesses are required to have emergency management plans. The water businesses generally supported extension of the existing emergency management arrangements to new businesses providing water or sewerage services.

These arrangements would have to be reviewed to appropriately allocate primary responsibility for co-ordinating and managing emergencies. The Commission considers that the incumbent infrastructure operators are currently best placed to retain responsibility for managing emergencies. New businesses should be required to provide information and participate, as appropriate, in emergency planning and co-ordination exercises. Requirements relating to emergency management could be included in the conditions of a licence (see chapter 7).

Recommendation 9.2

That the Government develop, in consultation with the water businesses, appropriate arrangements for: network balancing; interconnections into infrastructure facilities; information exchange and metering of water and sewage flows; network operation, maintenance and expansion; and emergency management.

9.3 Sewer mining

As noted in section 1.3.3, sewer mining involves the extraction of sewage from a sewerage pipeline (by a party other than the infrastructure operator), usually for the purpose of treating the sewage and subsequently selling or using the recycled water. A number of sewer mining projects are already operating, for example, in Pennant Hills in NSW[97] and a pilot project at Flemington Racecourse in Melbourne.

In its response to the VCEC inquiry into the Melbourne metropolitan water sector, the Victorian Government noted that it would work with stakeholders, government departments and the Commission to develop consistent sewer mining guidelines.[98] Sewer mining guidelines are currently being developed by an industry working group with input from DSE. These guidelines will address four key matters:

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97 K. Dahl and R. Kirkby 2008, 'Sewer mining as an alternative water source: the Pennant Hills experience' in *Australian Turfgrass Management*, October.

98 Victorian Government, July 2008, *Inquiry into reform of the Melbourne metropolitan retail water sector – Victorian Government Response*. Available on the VCEC website www.vcec.vic.gov.au

- operational and technical requirements
- pricing principles and cost allocation methods
- licensing and
- dispute resolution mechanisms.

While sewer mining does not involve access, the four matters listed above involve similar issues to those considered in relation to access arrangements. Consistency in addressing them is likely to reduce costs for participants in the water sector. As noted in section 1.3.4, as well as access to infrastructure services, access seekers will require access to water or wastewater resources (which include sewage) in order to provide water and/or sewerage services.

The operational and technical guidelines for sewer mining will need to address interconnection issues, metering of extractions and discharges into the system, risk management, procedures to maintain adequate flows through the sewerage system, and monitoring and management of the composition of sewage extractions and discharges into the sewerage system. Section 4.2.4 discusses operational and technical issues relating to infrastructure access.

To ensure environmental protection and health and safety, the Government could ensure appropriate regulatory obligations are placed on sewer miners through a licensing system. A licensing system for sewer mining would provide a framework for compliance with obligations relating to health and safety and environmental protection, for allocating responsibility for managing risks and emergencies, and other relevant conditions. Licence conditions related to sewer mining are likely to be similar to some of those imposed by the licensing system recommended for new water and sewerage service providers (see section 7.2).

Disputes may arise between sewerage infrastructure operators and potential sewer miners over the terms and conditions of interconnection into a sewerage system and the extraction of sewage, as well as over reasonable charges for the right to extract sewage. A dispute resolution process similar to that recommended for an access regime (see section 4.3) could be adopted for resolving disputes relating to sewer mining applications.

In New South Wales, a resolution framework for sewer mining disputes was established under Part 4 of the *Water Industry Competition Act 2006*, which is the Act that also establishes the state-based access regime. The dispute resolution mechanism is similar to that provided for under the access regime, with the option of arbitration by a commercial arbitrator or binding arbitration by IPART.

10 IMPLEMENTATION PROCESS

The terms of reference for this inquiry required the Commission to present the Government with the information, analysis and recommendations it requires to implement an access regime as soon as practicable. The Commission can make recommendations on any transitional arrangements that may be appropriate.

Chapters 3 to 8 set out a large number of recommendations on measures to establish an effective access regime tailored to conditions in the Victorian water industry. An extensive work program would be required to work out the details of these measures, in consultation with stakeholders, and then to implement them. Legislative amendments would be required to: establish the legal framework for the regime; extend obligations relating to health and safety, water quality, and customer and environmental protection to new water and sewerage service providers, including establishing a licensing system; and to provide the necessary powers to the relevant regulators.

In addition, an extensive work program would be required to investigate the potential obstacles to the effective operation of an access regime discussed in chapter 9 and then to identify and implement appropriate measures to improve the efficiency of the water industry and remove barriers to competition.

This chapter describes a staged implementation process for establishing an access regime and a licensing system. It sets out an indicative timetable showing the sequencing of the key implementation stages and feasible timeframes for completing each stage.

10.1 Staged implementation of an access regime

In its draft report, the Commission recommended that an access regime and licensing system should be implemented in stages. A staged process would allow for monitoring of early outcomes and for refinements as required to tailor the regime to the specific conditions of Victoria's water sector. The initial measures would establish the basic foundations for an access regime, with subsequent measures building on these foundations to produce a comprehensive and well-designed regime that will maximise the benefits for Victorians.

The Commission remains of the view that a staged implementation process will minimise implementation costs while avoiding unnecessary delay in opening up greater opportunities for participation in the water sector. It will thereby ensure that the benefits from implementing an access regime outweigh the costs. It will allow for a step-by-step approach to addressing the full list of recommendations and broader work program set out in this final report.

Many submissions to the Commission's issues paper expressed concern that the costs of implementing an access regime should not exceed its expected benefits.

To minimise costs, most submissions advocated a cautious and staged approach to implementation.

Submissions to the draft report have also expressed strong support for a staged implementation process. Gippsland Water, for example, stated that: 'It is far more important to develop a robust access regime, than to rush headlong into an access regime that is poorly developed' (p. 5) Some submissions, however, raised concerns about the feasibility of the indicative timeframes included in the draft report and the costs that could be incurred by water businesses during the implementation period.

The Commission has reviewed the indicative implementation timeframes proposed in the draft report, in the context of the finalising its recommendations. A revised indicative timeline is proposed in section 10.4.

A number of submissions to the draft report expressed concern that the full details of an access regime will not be determined when the implementation process commences. This is seen as creating uncertainty and potential costs for industry participants. The Commission acknowledges that there will be some uncertainty while the detailed measures to establish the access regime are being developed and implemented. While some uncertainty is unavoidable, the Commission considers that adverse impacts from uncertainty can be avoided, or at least minimised, by:

- developing the regime in a logical, step-by-step process with each stage in the process building on and refining measures put in place during earlier stages
- keeping stakeholders informed through regular communications, including publication of guidance papers and regular progress updates, and
- involving stakeholders in the implementation process through extensive consultation, including workshops to resolve technical and other issues.

The Commission believes that this approach will also minimise the costs of the implementation process for stakeholders, particularly the water businesses. (The costs associated with developing access commitments are discussed further in section 10.4).

South East Water's submission to the draft report expressed the view that access should not be permitted until all the key components of an access regime and licensing system have been implemented. The Commission does not accept this view because delaying access while the implementation process is taking place would result in the loss of benefits for Victorians from the provision of new and innovative water and sewerage services during this time. In any case, access seekers that could not negotiate access arrangements, either privately or within the initial framework provided during the implementation period, could apply for declaration of infrastructure services through the national access provisions established by the TPA.

The Commission considers that, by putting in place a basic framework to guide access negotiations from the first stage of the implementation process, the Victorian Government (and water businesses) will demonstrate that all reasonable efforts will be made to accommodate access seekers' requests to share the use of water industry infrastructure. The framework will facilitate access negotiations and

contribute to obtaining better information and knowledge about the nature and extent of demand for access to Victorian water industry infrastructure.

The staged implementation process will allow for refinement and modification of the initial access arrangements to ensure that an access regime will be consistent with any policy measures implemented by the Victorian Government in respect of the water sector during the implementation period. It will also provide an opportunity to ensure consistency, as appropriate, with any access regimes developed by other State Governments (as discussed in section 3.1).

10.2 Transitional arrangements

The terms of reference allowed the Commission to make recommendations on any transitional arrangements that may be appropriate.

In initial submissions provided in response to the issues paper and at the May public meeting, there was general support for transitional arrangements in implementing an access regime. Melbourne Water advocated 'a light handed approach to access regulation for the water industry in Victoria, particularly in the early stages of any regime's development' (p. 1). South East Water stated that it:

> *… would prefer access to be implemented incrementally to ensure a smooth transition and to ensure that the assets that can offer the greatest net benefit are opened up first. However South East Water recognises that requests for access from new participants are likely to be relatively unpredictable depending on perceived customer requirements and opportunities for innovation.* (p. 8)

Yarra Valley Water advocated a step-by-step approach addressing any immediate barriers to innovation and access present in the existing access provisions. Central Highlands Water drew attention to the 'importance of a transitional process to learn from a staged implementation and in retaining flexibility for modification as a result of those learnings' (p. 3). It favoured guidelines on the type of assets that can be declared and initially limiting access arrangements to a few large assets.

Barwon Water supported transitional arrangements that provided guidelines for infrastructure operators and access seekers. It considered this would be more efficient than the current situation where the incumbent water business would have to deal with ad hoc requests without guidelines to assist them and access seekers. A comment was made at the May public meeting that potential access seekers sometimes approach the water businesses to discuss proposals involving access only to withdraw them when the obligations associated with providing water and sewerage services, or planning and approval requirements, are explained to them.

In the draft report, the Commission noted that it had taken account of stakeholders' comments on transitional arrangements in developing its recommendation for a staged implementation process that allows for modification and refinement of the arrangements to reflect knowledge and experience gained in the initial implementation stages. A key feature of the recommended implementation process was the development of clear guidance for infrastructure operators and access

seekers. As noted in section 10.1, responses to the draft report strongly supported a staged implementation process.

In its submission to the issues paper, VicWater proposed transitional access arrangements that would initially apply only to large non-residential customers or third parties seeking to supply large non-residential customers. It considered that such arrangements would 'ensure that the access regime can be assessed and refined in more detail before it is applied' more broadly (p. 5). Central Highlands Water also proposed limiting access initially to a small number of non-residential customers. In the draft report, the Commission stated that it does not support limiting access arrangements to particular customers or particular types of services. Restricting access in this way could prevent innovative solutions that would generate significant benefits for customers and the community more generally. Such solutions could, for example, involve the supply of services to greenfields developments, such as new housing estates or inset developments.

10.3 'Learning by doing' through a staged approach

A major advantage of a staged approach to implementation is the opportunity to refine and improve the initial arrangements based on the information and knowledge gained from experience during the implementation period.

Learning from experience will be particularly important for developing an effective access regime for the Victorian water sector. As noted in section 1.4, New South Wales is the only Australian State to have established a water industry access regime. To date, there have been no applications for access under the regime. Overseas, the United Kingdom and Scotland are the only jurisdictions to have introduced (limited) access regimes for their water industries. Thus, the models available to inform the development of a water industry access regime in Victoria are limited.

The Commission has referred to arrangements established under access regimes in other industries as a guide for developing a water industry access regime. It has, however, been mindful of the significant differences in the nature of the services offered in different industries, in market conditions, and in the regulatory and other policy settings applying in other industries. It does not, therefore, consider the experiences in other industries to be a substitute for experience with the operation of access arrangements for water and sewerage infrastructure services.

Without such experience, and better information about the nature and extent of access arrangements expected for Victorian water and sewerage infrastructure services, the Commission considers that proceeding straight to developing a comprehensive, legislated access regime could run the risk of 'locking in' poorly designed arrangements that do not achieve the Government's objectives for an access regime.

A further benefit is that implementation costs will be spread over time, which avoids placing an unmanageable burden on industry participants, particularly the water businesses. If regulatory arrangements or implementation processes were to prove more costly than anticipated, modifications could be made to ensure that costs were kept within reasonable bounds.

10.4 Recommended implementation process

The Commission recommends that an access regime for the Victorian water industry be implemented in four main stages:

- The first stage would establish the foundations for a state-based access regime. Arrangements would be put in place to clarify which infrastructure services will be subject to access and to set out a transparent framework for negotiations (backed up by dispute resolution mechanisms) between infrastructure operators and access seekers. The Government would commence the process of developing a licensing system.
- In the second stage, the early outcomes from the measures implemented in the first stage would be monitored to identify any shortcomings or unintended consequences from the arrangements. The legislative amendment process would commence.
- The third stage would include the enactment or amendment of legislation and regulations underpinning the regime. Any required refinements to the access arrangements, identified during the monitoring conducted in the second stage, would be made.
- The final stage would occur after the legislation establishing the access regime and licensing system is enacted and the Commission has completed and published all necessary guidance documents. The Government would then decide when to apply for certification of the regime under the *Trade Practices Act 1974*.

An indicative timeline showing the key stages in the implementation period is shown in figure 10.1. The timeline shows the sequence in which the implementation stages would be expected to occur, as well as a feasible duration for each stage. The actual duration of each stage will depend on a number of factors and cannot be predicted precisely. If one stage takes longer than expected, subsequent stages would likely be deferred (and vice versa).

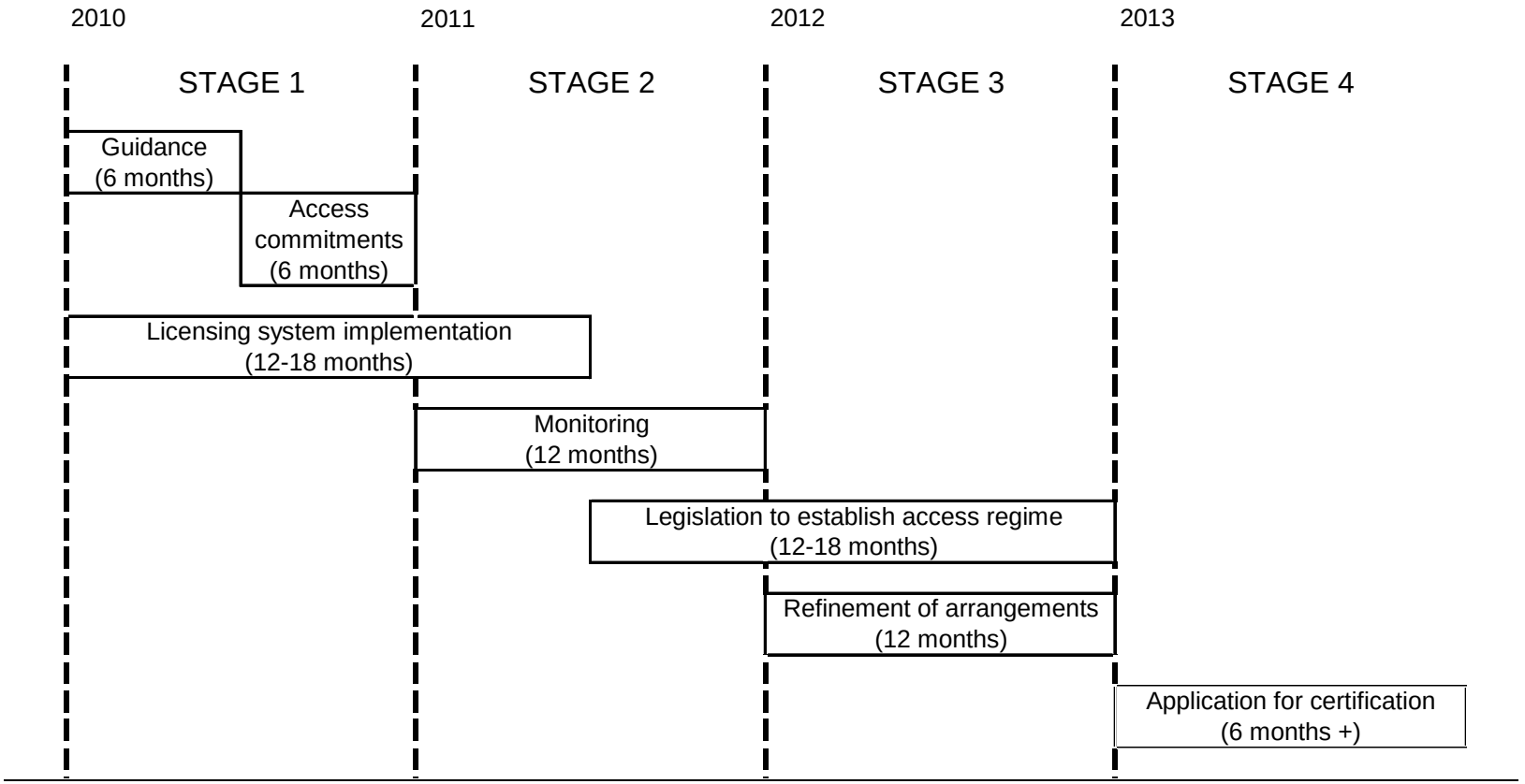
The timeline assumes that the implementation process commences in early 2010. This would imply that the third stage of implementing an access regime is largely completed by the commencement of the 2013 price review period. Specifically, the water businesses that were required to develop access commitments would have those commitments in place, and the main consultation processes will have been undertaken, before the water businesses start preparing their Water Plans for the 2013-2018 regulatory period.

Recommendation 10.1

That a Victorian water industry access regime is developed and refined over a staged implementation period.

The rest of this section sets out the details of each implementation stage.

Figure 10.1 **Indicative implementation timeline**



Stage 1: Access commitments and licensing

In the draft report, the Commission recommended that clearer arrangements be put in place to facilitate access to natural monopoly infrastructure while the details of the access regime, and the supporting legislation and regulations, are developed. Three main steps would be undertaken during Stage 1:

- development of guidance on: identifying specific infrastructure services that should be subject to access; negotiation frameworks, including negotiation protocols and information provision; dispute resolution; pricing principles; accounting separation; and other relevant matters
- formulation of access commitments by some water businesses for key infrastructure services and
- commencement of the development of a licensing system.

Guidance

The first step in the implementation process would be the development of guidance on identifying specific infrastructure services for which access commitments should be made. The infrastructure subject to access commitments would have to meet the criteria of being provided by significant natural monopoly infrastructure facilities and of being needed to promote competition in related markets (see section 3.1).

The Commission would also formulate guidance for the businesses on the matters that should be included in access commitments, including negotiation protocols, timeframes for various stages of the negotiation process, and the information that should be provided as part of the negotiation process. The access commitments would provide for dispute resolution when agreement cannot be reached through negotiation (see chapter 4).

Guidance would also be prepared on other matters, including access pricing principles and accounting separation (as discussed in chapters 5 and 6). The Commission recommends that access commitments (see below) set out detailed principles for calculating access prices and the process for negotiating access prices. During the implementation period, the Commission proposes to develop access pricing guidelines in consultation with the water businesses and other interested parties. These pricing guidelines would provide a basis for pricing provisions included in the water businesses' access commitments.

Guidance would also be developed on implementing accounting separation for infrastructure services that are subject to access. These services would either be subject to an access commitment during the implementation period or be subject to a coverage declaration once the legislation establishing an access regime has been enacted.

A public consultation process and industry workshops on technical matters would provide feedback to assist the Commission in developing the guidelines.

Melbourne Water's and Gippsland Water's submissions to the draft report highlighted the need for further guidance when nominating infrastructure for access commitments, in particular, the criteria to be used in determining which

infrastructure services should be subject to access commitments. Other submissions also stressed the need for clear guidance to assist infrastructure operators and access seekers to negotiate access arrangements.

Recommendation 10.2

That the Commission develops guidance, in consultation with the water businesses and other interested parties, on: identifying infrastructure services that should be subject to access commitments; matters that should be included in access commitments; a negotiations framework, including timeframes and negotiations protocols; access pricing methodologies and tariff structures for access prices; and accounting ring fencing.

Access commitments

To facilitate access and improve certainty and clarity for industry participants, the Commission recommended, in the draft report, that the water businesses make 'access commitments' giving access seekers the right to negotiate with them on sharing the use of specified infrastructure facilities. Access commitments would be similar to the voluntary undertakings that infrastructure operators can make under the national access provisions but would differ in two ways.

First, unlike access undertakings, which are voluntary, the Commission recommended that the Government requires the water businesses to make access commitments in respect of key infrastructure services that are most likely to be required by access seekers. The Minister for Water could direct the water businesses to make access commitments under the Water Act.

In its submission to the issues paper, Yarra Valley Water suggested, as an initial step in establishing an access regime, that all incumbent water businesses should have an obligation to provide access on fair and reasonable terms. Such an obligation could be imposed either through the businesses' Statement of Obligations or through a Ministerial direction under the Water Act.[99] Yarra Valley Water considered that such an obligation 'would clarify that open access to monopoly infrastructure is mandated and that Victorian water companies are required to provide such access on fair and reasonable terms' (p. 5). The Commission agrees with Yarra Valley Water's assessment.

Second, while access commitments would be modelled on access undertakings under the national access provisions, they would initially contain less detailed information. This will ensure that water businesses are not required to incur excessive costs in developing access commitments for infrastructure facilities for which there is little or no demand for access. Greater detail could be added on a

99 Sections 307 and 307A of the *Water Act 1989* allows the Minister for Water, in consultation with the Treasurer, to give written directions to a water corporation in relation to the performance of any of its functions.

step-by-step basis as more experience and knowledge are gained during the implementation period.

The Commission envisaged that it would assess proposed access commitments to ensure that they are reasonable and consistent with the proposed access regime for Victoria, the national access provisions, and Government objectives.

In the first instance, the water businesses would be responsible for nominating specific infrastructure facilities for which access commitments would be made. These nominations would be reviewed by the Commission and subject to public consultation. Additional infrastructure services could be proposed by the Commission, which would advise the Government of its recommendations. The Commission considers that there should be flexibility during the implementation period to add access commitments for other infrastructure facilities that were not initially nominated or to revoke an access commitment to reflect a significant change in circumstances.

Several submissions to the draft report opposed the draft recommendation that access commitments be made by water businesses. Jemena suggested that the initial burden on existing businesses would be significant as establishing access commitments from the outset would involve public consultation. It noted that there has been little demand for access under New South Wales' regime and suggested that an attempt should be made to establish the extent of the latent demand that may occur due to the lack of certainty about the processes, costs and timeframe for obtaining access and possible terms of access if infrastructure is not declared at the outset.

South East Water did not support requiring water businesses to make access commitments before the necessary amendments to legislation, review of Statements of Obligations, establishment of a licensing system and the development of retailer and network supplier of last report schemes have been completed.

Coliban Water, however, supported access commitments as 'a workable first entry level approach' (p. 1). While supporting access commitments, Melbourne Water stated that they should be voluntary, not mandatory, to avoid imposing unnecessary costs on the water businesses.

Some submissions to the issues paper suggested that it was not possible to identify, with any certainty, which water industry infrastructure facilities were likely to be subject to access requests. Yarra Valley Water, for example, stated that there is 'considerable uncertainty as to the nature of the future activities and innovations … that might be forthcoming under an open access regime' (p. 4).

Several submissions to the issues paper argued that existing provisions are sufficient to permit any potential access seekers to negotiate access with the water businesses. VicWater submitted that 'current legislative and regulatory regimes provide an adequate framework for water businesses to develop access arrangements as privately negotiated contracts' (p. 1). Melbourne Water stated that it has privately negotiated terms and conditions of access to its infrastructure services.

As the Commission noted in its draft report, the relatively few access arrangements that have been negotiated to date for access to infrastructure services have involved access by other water businesses. The Commission considered that the absence of access applications by private access seekers largely reflected the lack of a clear framework to guide access negotiations.

Potential access seekers face higher costs and risks in formulating business proposals that require negotiated access to infrastructure when they are uncertain about their obligations under existing legislation and regulations (and the costs of complying with those obligations). When potential access seekers cannot quantify all the costs associated with proposals requiring access, including the likely access price, they cannot accurately assess the expected commercial returns from such proposals. Further, without an expected timeframe for getting a decision on an access request, planning and organising resource requirements would be more difficult. All of these uncertainties would tend to deter broader participation in activities requiring access by increasing the costs and risks associated with such activities.

The Commission has concluded that a clearer framework is necessary to facilitate access arrangements between the existing infrastructure operators (the water businesses) and access seekers. Access commitments would make a major contribution to establishing a clearer framework for access to key infrastructure services. The Commission expects that the number of access commitments made would be relatively small. They would be likely to be required in respect of Melbourne Water's bulk water and sewerage infrastructure and large pipelines like the Goldfields Superpipe.

The Commission confirms its recommendation that the water businesses be required to make access commitments in respect of key infrastructure services.

The Commission recommends that accounting separation should be introduced during the regime's implementation period (as discussed in chapter 6). Once an access commitment is made in respect of specific infrastructure service(s), the accounts for those services should be ring fenced from the accounts for other services provided by the infrastructure operator, within three months of making the access commitment.

Recommendation 10.3

That the Government requires the water businesses to prepare 'access commitments' giving access seekers the right to negotiate access to nominated infrastructure services during the implementation period, in accordance with guidance prepared by the Commission, within six months of the development of that guidance. These services would be key infrastructure services for which access requests are likely.

Recommendation 10.4

That provision be made for the water businesses to make additional access commitments in respect of specific infrastructure facilities subsequently identified as satisfying the criteria set out in the guidance prepared by the Commission and for access commitments already made by the water businesses to be revoked if justified by a change in circumstances.

Recommendation 10.5

That the Government requires the water businesses to apply for the Commission's approval of access commitments or revocation of access commitments already made.

Recommendation 10.6

That the Government require water businesses that make access commitments during the implementation period to establish accounting separation for the infrastructure service(s) subject to an access commitment, within three months of making the access commitment. The accounting separation measures adopted by the water business should be consistent with the relevant guidelines developed by the Commission.

Licensing

To clarify the obligations on new water and sewerage service providers, the Commission recommended in chapter 7 that a licensing system be established. A substantial work program will be needed to design the licensing system and a substantial legislative program will be required to enact legislation to establish the legal framework for the licensing system. These processes are expected to take around 12-18 months to implement.

Identifying the necessary legislative and regulatory amendments to extend existing obligations relating to health and safety, water quality, and customer and environmental protection will require a detailed review of existing legislation and regulations (see section 7.1). Following this review, the Government may have to undertake a substantial legislative program to implement the required changes. These processes are also expected to take around 12-18 months to implement and would be taken concurrently with establishing a licensing system.

As the first step in this process, the Commission recommends that the Government identify key measures to be implemented as a matter of priority from the

commencement of the implementation period. These measures could ensure that the most critical obligations would apply to businesses granted access before the completion of the full review and legislative program.

Stage 2: Monitoring of access outcomes and framework

During the second stage of the implementation process, the Commission proposes to monitor how the arrangements established in the first stage are operating. The Commission, the water businesses, access seekers and other industry participants would all have the opportunity to improve their knowledge and understanding of the nature and extent of demand for access in the Victorian water industry.

This knowledge would allow the water businesses to develop and refine their access commitments and to nominate any additional infrastructure facilities or services that should be covered by the access regime. The Commission would identify any aspects of the access provisions, its guidance to the businesses and the licensing provisions that need extension, modification or refinement to improve the operation of the access regime.

Stage 3: Legislative and regulatory amendments

To establish the legal and regulatory basis for a Victorian access regime, the Government will need to formulate and enact new or amended legislation and regulations. The Commission notes that the New South Wales Government introduced the *Water Industry Competition Act 2006* to establish an access regime for the water industry.

In the third stage, the Government would develop and enact new legislation and regulations, or amend existing legislation and regulations, to establish the legal framework for the access regime. Any legislative or regulatory changes required to enable broader participation and competition in the water industry would also be addressed to ensure the access regime is effective in achieving the Government's objectives. The process is expected to take around 12-18 months to complete.

The Commission would finalise its guidance and develop templates and other required documentation. It notes that the Independent Pricing and Regulatory Tribunal's (IPART) development of documentation associated with the New South Wales access regime required a significant investment of time and resources.

As discussed in chapter 6, once accounting separation has been established, the outcomes should be reviewed towards the end of the implementation period. The review would assess the efficacy of the accounting separation arrangements and whether it has achieved sufficient clarity and transparency of costs and promoted sufficient confidence in access pricing processes to support the effective operation of an access regime.

Recommendation 10.7

That the Government develops and enacts new legislation and regulations, or amends existing legislation and regulations, to establish the legal framework for the access regime during an implementation period. The Government should aim to complete its legislative and regulatory work program within three years of the commencement of the implementation period.

Stage 4: Application for certification of the regime

The completion of the first three stages of the implementation process is expected to take approximately three years. This will ensure that the regime is in place before the next price review for the 2013-2018 regulatory period. After these three stages have been completed, the Government would be in a position to apply for certification of the regime under the TPA.

The Commission anticipates that the regime established during the implementation period would satisfy the requirements for certification. It considers that the implementation period, and provision for review and refinement of the regime, will provide the Commission and the Victorian Government with an opportunity to address the concerns expressed by the NCC in relation to New South Wales' regime.[100] Staged implementation of the regime will allow the development of a more comprehensive and well-defined regime that provides greater clarity, certainty and transparency. It will also allow the Victorian Government to fine-tune the access regime in response to industry developments and a better understanding of the nature and extent of demand for access, prior to an application for certification.

A Victorian access regime may therefore receive certification for a longer period than the ten year certification period granted for the New South Wales access regime. If so, this would provide greater certainty for both infrastructure operators and access seekers, recognising that many water industry infrastructure facilities are long-lived and require substantial capital investments.

In making its recommendations on developing an access regime, the Commission has been mindful of the reservations expressed by the NCC about some aspects of the New South Wales regime. The NCC suggested that several issues would benefit from further consideration by the New South Wales Government and by other governments developing access arrangements for water industry infrastructure.

First, the NCC highlighted that a state-based regime should provide more certainty than the TPA regulations and be tailored to the specific conditions of the industry. In particular, the scope of the regime's coverage should be clear from the outset.

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[100] National Competition Council 2009, *Water Industry Competition Act 2006 (NSW): Application for certification of the NSW water industry infrastructure services access regime*, Final recommendation, 11 May, p. 7 available at www.ncc.gov.au.

The Commission's recommendations for access commitments and declaration of some infrastructure services from the enactment of the legislation establishing an access regime address this concern.

Second, the NCC was concerned that the New South Wales regime is a principles-based regime that gives too much discretion to the regulator and the Premier and Minister for Water. In industries (like the water industry) where the Government has a substantial ownership interest in the businesses that will be exposed to competition from access seekers, it considered that an access regime should be transparent and well-defined. In addition, it stated that limited merits review of regulatory decisions is desirable. The Commission has recommended independent regulation of an access regime, including decision making on coverage declarations by the Commission and provision for limited merits review.

Third, the NCC highlighted that licensing arrangements should not include requirements that could form an unreasonable barrier to efficient competition. In this regard, it drew attention to the requirement for retail water supply licence applicants to have access to sufficient quantities of water from 'non-public utility sources' as a potential deterrent to private participation in the New South Wales water industry. The Commission considers that none of the recommendations in chapter 7 on a licensing system would create an unreasonable barrier to participation by new water and sewerage service providers in the Victorian water sector. It has recommended that limited merits review provisions be included in respect of licensing decisions.

Fourth, the NCC noted that its decision to recommend a relatively short certification period of ten years for the New South Wales regime (compared to 25–50 year certification periods in other industries) reflects the 'embryonic stage of development' of broader participation in the water industry and uncertainty about the nature and level of demand for access to infrastructure services.[101] Consequently, the NCC considered that 'there would be significant benefit in reviewing at a relatively early stage how the … Regime has operated to facilitate access, with the opportunity taken for any necessary fine-tuning'.[102] It stated that any fine-tuning could occur when an application for extension of the certification period was made.

The Commission's implementation period includes provision for ongoing monitoring and review and refinement of the access arrangements.

10.5 Periodic review of the access regime

The terms of reference allow the Commission to recommend the timing of a future review of the access regime to ensure it remains relevant and effective.

In their submissions to the issues paper, Melbourne Water supported periodic review of an access regime 'to ensure that it is achieving its objectives and for the regulator and industry to understand where improvements are required' (p. 5) and

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[101] National Competition Council 2009, *op. cit.*, p. 7.

[102] *ibid*.

Barwon Water stated that the access regime should be reviewed during the Water Plan period so any required changes can be implemented prior to preparing the next Water Plan.

The Commission considers that the access regime should be reviewed not less than five years, and not more than ten years, after the completion of stage 3 of the implementation process. A review should be scheduled to allow the water businesses to make any required changes to their access provisions before they begin preparing their Water Plans for the following price review. This timing would also allow the Commission to take into account the outcomes of the review and any modifications to the access regime, including the approach to access pricing, during its price review.

Recommendation 10.8

That a Victorian water industry access regime be reviewed not less than five years, and not more than ten years, after the legislative and regulatory amendments required to establish the legal framework for the access regime have been implemented.