

Chapter 7

Exploiting the unspeakable: Third-party access to sewage and public-sector sewerage infrastructure

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Water has the capacity to capture the imagination, particularly the Australian imagination. Historically, it has loomed large in Australian literature, film and art, both overtly and suggestively. Sometimes it has been a site of celebration, sometimes a site of pain and darkness. The breadth of water imagery is vast. A cursory reflection brings to mind Patterson's *Clancy of the Overflow*,¹ Slessor's *Five Bells*, Winton's *Cloudstreet*, Drewe's *The Drowner* and *The Bodysurfers*, as well as Streeton's painting *Sunlight Sweet*, *Coogee*, and Done's prolific collection of harbour and beach paintings, for example.² The subject of water in these representations is commonly fresh, clean water. Often beginning in pure mountain springs, it gushes down rivers displaying strong, untamed qualities. At other times, the representations are of the salty seawater that provides pleasure for a sun-loving beach culture or, alternatively, they are images of freshwater in life-sustaining rural rivers — part of a lost pastoral era. In bolder and more sinister representations, water may take life. Waves and tsunamis may cause death. However, rarely have art, literature and film taken as their subject water that is polluted by waste, particularly human bodily waste. That subject is left largely to science. The film *Kenny* was an exception, relying on 'toilet humour' and focusing, as it did, on the provision of waste removal. Sewage, outside of the sciences, is largely what might be called 'unspoken' water.

This chapter suggests that 'unspoken water' is rapidly becoming 'spoken' water. Sewage is in the process of being 're-imagined'.³ A paradigm shift is taking place in the community's attitude towards wastewater and sewage. Water which was once seen as a nuisance is now being recast as a valuable resource. New technology is being developed to treat and use this resource for industrial, agricultural and, even, environmental and drinking purposes (although, as Spearritt observes in Chapter 2, the 'yuck' factor posed difficulties in relation to the water referendum in Toowoomba). The recycling of human wastewater is being reinvented as both an environmental and commercial opportunity that can be facilitated by giving 'third-party' access to established public-sector

sewerage infrastructure and — importantly — to the sewage! The realisation of the resource value of wastewater has spawned a new industry — sewer mining!

But there is a problem — a legal problem. Historically, large public utilities have controlled urban sewerage infrastructure and they have not been enamoured with new private-sector operators entering the field as competitive service providers by means of access to their infrastructure. With some justification, they see the infrastructure and the wastewater resources as their property. Yet, they may not possess the technology or capital to exploit the new water resources in the timely way that the paradigm shift in attitudes suggests is opportune. Conversely, the new private-sector entities may not be able to operate without obtaining access to the established public-sector infrastructure, either to provide a water supply or sewerage service, or to access the wastewater resource with a view to converting it into a saleable product. So, we confront the question of how to provide new third-party (and usually private-sector) access to old public-sector infrastructure in order to make better use of these valuable water resources. We also confront the associated issues of how to maintain health standards and societal protections in the face of private-sector involvement in the supply of fundamental life services.

Providing for private-sector access to wastewater infrastructure and facilitating private-sector wastewater services will require sophisticated levels of science and technology. It will also require the development of an appropriate legislative framework to regulate the private-sector access and services. Regulatory wastewater regimes will need to operate in tandem with the broader legal framework for water-services provision, including the economic regulatory bodies at both the State and Commonwealth levels.

This chapter seeks to highlight where opportunities may exist for third-party access to public infrastructure and, accordingly, it sketches the present institutional frameworks for water and wastewater management throughout Australia. It then briefly reviews the international and national experiences of third-party access in the water sector and discusses the relevant Commonwealth legal framework for facilitating third-party access to monopoly service infrastructure, contained in Part IIIA of the *Trade Practices Act 1974* (Cth) (*TPA*). In particular, we consider the catalytic role of Services Sydney Pty Limited, the private company seeking access under that Act to the sewerage network operated by the Sydney Water Corporation (Sydney Water), a public water utility. The company's application for a 'declaration' that Part IIIA covers the sewerage service operated by Sydney Water demonstrates the access regime in operation and, effectively, gives us a 'test case' of the concept.

The chapter then reviews the *Water Industry Competition Act 2006* (NSW) as an example of state-based industry-specific legislation incorporating a third-party access regime. This legislation may become a model for other states

(such as Western Australia) as they seek to increase opportunities for competition in the water sector. The final section of the chapter attempts to tease out some points of interest and potential concerns associated with third-party access regimes. It considers issues of water-service coverage declarations, access and resource pricing, building customer trust in new third-party service providers, step-in rights for operators of last resort when a service provider fails, 'property' in the water resource, and consumer-protection provisions.

We acknowledge at the outset that the sorts of issues discussed here in the context of wastewater may similarly arise in relation to drainage water and drainage infrastructure. However, this chapter reviews only the situation in relation to wastewater.

Current institutional frameworks for water and wastewater

In order better to appreciate where opportunities for third-party access may potentially arise, a brief survey of the institutions currently responsible for the supply of water and wastewater services throughout Australia is offered. They are discussed on a state-by-state basis.

In Queensland, 125 local governments have been responsible for the supply of water in all urban areas, while in a number of regions some bulk water supply is provided by corporatised entities of the state government. Changes to this structure are likely in response to the Queensland Water Commission's (QWC's) Final recommendations, which were designed to allow third parties access to natural monopoly segments in the supply chain. The QWC Report, among other things, recommended that the 25 water entities in Southeast Queensland be collapsed into nine and that the State take control of wastewater in the region (QWC *Final Report*: May 2007; QWC *Fact Sheet 1*: 1).

In Victoria, four main metropolitan water providers operate, with Melbourne Water acting as the wholesaler, providing bulk supplies and wastewater services to three large distribution and retail service providers (AGD of PMC August 2006: 2). The distribution and retail businesses buy in water and then distribute it to their customers. Later, they collect the wastewater, bill customers and send the wastewater to Melbourne Water, where it undergoes treatment. No direct competition occurs between the three distribution and retail businesses because they all operate within different geographic boundaries. In Victoria, there are also 15 non-metropolitan urban service providers operating outside of Melbourne. They service country towns. Another five regional water authorities provide water, mostly for irrigation purposes (AGD of PMC August 2006: 2).

In Western Australia, South Australia and the Northern Territory, large state-wide utilities operate in both rural and urban areas. In Western Australia, the Water Corporation provides most of the water and wastewater services, as well as infrastructure building.⁴ It contracts out some of these tasks to the

private sector (through a tendering process) while it performs other tasks itself.⁵ In 2007, the WA Economic Regulation Authority received a brief to explore the issue of increased competition in the water and wastewater sector. One aspect requiring particular attention was third-party access to water and wastewater infrastructure (ERA Issues July 2007: *i*).

In South Australia, SA Water operates as a wholly government-owned entity responsible for the provision of water and wastewater services throughout the state. It also contracts out many of its responsibilities to private operators. One such operator is United Water,⁶ the sole and private retail provider of urban water services for Adelaide, to whom a 15½-year contract was awarded in 1995. The contract covers the management of water and wastewater-treatment plants, water and wastewater mains, billing and the operation of call centres.

In Tasmania, retail supply and wastewater services are provided by local councils in regional areas, while in Hobart eight local councils jointly own Hobart Water, which services all the councils in the Hobart area.⁷ In the Australian Capital Territory, a joint venture between the Australian Capital Territory Government and a private operator formed ActewAGL, which manages water and wastewater services (AGD of PMC August 2006: 2).

In New South Wales, the bulk water supply for Sydney, the Illawarra and the Blue Mountains is provided by the Sydney Catchment Authority, with retail services being supplied by Sydney Water, a state-owned corporation. The Sydney Catchment Authority was established as a result of the Independent Inquiry into Sydney Water's water-supply function, conducted by Commissioner Peter McClellan, in the wake of the 1998 Cryptosporidium and Giardia scare.⁸

Sydney Water provides water (including some recycled water), sewerage services and limited stormwater drainage services to Sydney, the Illawarra and the Blue Mountains. In the Newcastle area, Hunter Water, another state-owned corporation, provides both bulk and retail water-supply services. Local councils provide urban water services in all other towns and cities.⁹ The State Government also manages separate bulk water supplies in various regions throughout New South Wales.¹⁰ Overall 120 different water-service providers operate in New South Wales (AGD of PMC August 2006: 2).

We surmise that there would be many opportunities for third-party access to major water infrastructure as a means of supplementing the existing provision of water and wastewater services.

Finally, in all Australian states the primary legislation that facilitates the key functions and obligations of the public water utilities is supported by other legislation and regulations including those relating to state-based economic regulators, standards of water quality and use, local government, protection of the environment, public health and consumer protection. This suite of legislation

would also apply to any operators who enter the water-services industry via third-party access to the monopoly infrastructure.

Definition of third-party access

As the name suggests, third-party access involves a party other than the incumbent service provider and infrastructure owner gaining access to and using excess capacity in the natural monopoly infrastructure of the incumbent (AGD of PMC August 2006: 13).¹¹ The purpose of the access is to promote competition in markets upstream or downstream of the relevant infrastructure.¹² Of course, the service provider could contract with the third-party access seeker to grant that access, but the provider may be unlikely to do so where the third-party proposes to compete with the service provider in the upstream or downstream markets. Certainly, the infrastructure owner possesses the unilateral capacity at general law to refuse access. The purpose of the statutory third-party access regimes is to facilitate such access and to provide a framework for an independent agency to arbitrate the terms of third-party access in those cases where the incumbent and the third party or parties cannot agree the terms of access. The presence of the statutory access regime would, no doubt, set the framework for any private access arrangements and may even be preferable for the incumbent service provider because it can provide procedural certainty.

As a result of the infrastructure access, the new entrant would be in the position to target new customers or the incumbent's existing customers and provide them with an established service, such as water supply or sewage removal. Alternatively, the third party could supply a new service as a result of gaining access. An example of the latter would be a third party supplying a water-recycling service as a result of gaining access to the incumbent's wastewater system¹³ (AGD of PMC August 2006: 13). This has become known as 'sewer mining'.

Relationship between third-party access and sewer mining

Sewer mining is defined as the process of tapping into a sewer (before or after it reaches the sewage-treatment plant) and extracting the sewage so that it can be treated in a separate treatment facility and put to another use as recycled water (Sydney Water, *How to Establish a Sewer Mining Operation*, May 2006).¹⁴ Although the production and supply of recycled water could be undertaken by the sewerage service provider, sewer mining is normally associated with third-party access by persons who either use the recycled water for their own purposes or supply it to others. In that sense, sewer miners are a subset of a wider class, known as third-party access seekers. Sewer miners engage in sewer mining by virtue of a contractual agreement with the public water infrastructure owner (for example, Sydney Water).

To date, sewer miners have established sewer-mining operations either over or adjacent to the sewer main on their own land. They have recycled the sewage at that venue and then piped the recycled water to the point of usage.¹⁵ Several schemes of this nature are located on golf courses, where there is a demand for the product and enough space to build sewer-mining operations sufficiently distant from residents.¹⁶ Nevertheless, sewer mining, particularly on a large scale, is still in its infancy despite the sewage farms begun at Botany Bay in the 1960s and the Werribee Treatment Plant, noted by Dingle in Chapter 1.

Sewer mining does not involve third parties using the infrastructure owner's sewerage pipes to provide a competing sewage-removal service by transporting wastewater. Hence, a sewer miner would not contract directly with the incumbent's customers for the provision of a sewerage service, whereas the third-party access seeker who becomes a competitive service provider will do so. Accordingly, the third-party sewerage service competitor will be responsible for extracting a designated volume of sewage from the sewerage network commensurate with the input of the customers with whom the third-party has contracted to supply sewerage services. The extraction proportion is likely to be calculated on the basis of the third-party access seeker's proportion of all sewage at a given time or alternatively on the basis of an agreed volume, extracted at a fixed rate (*Sydney Water Network Access Agreement*, August 2007, cl 8.1).¹⁷ Either way, the alternative sewerage-service provider may not vary, at will, the amount of sewage taken from the system. Further, the provider will be responsible for treating and disposing of its sewage share according to approved standards. Technically, third-party access seekers could provide a sewage-removal service *without* also engaging in recycling. However, we suspect that the potential profits of water recycling would be a substantial incentive for third-party access seekers endeavouring to gain access to provide a competing sewerage service.

There may also be other attractions to becoming a competing sewerage-service provider. Although the infrastructure owner must be able to maintain adequate flows in the sewerage system for both the competing service provider and the sewer miner, the amount of sewage available to the sewer miner is more variable. Minimum operational flow requirements, the diurnal flow pattern of the system and existing commitments to the extraction of sewage up or down stream will determine how much sewage is available for the sewer miner to extract.¹⁸ The available sewage will then be allocated on a first-come-first-served basis, giving sewer miners some security of resource access to their operation (*Sydney Water, How to Establish a Sewer Mining Operation*: August 2007: 1). However, Sydney Water offers no guarantee of the quantity or quality of the sewage available for sewer mining.

Accordingly, in the context of the wastewater industry, a third-party access seeker may compete with the incumbent service provider in the upstream market (sewage removal) or the downstream markets (sewage treatment and supply of recycled water). In the Sydney context, the sewer miner operates in the downstream markets and has not been seen as a direct competitor of the incumbent service provider, Sydney Water. This is probably because the supply of recycled water is a relatively new and small market and the sewer miners have assisted Sydney Water by saving sewage-treatment costs and supplying recycled water to displace demand for treated drinking water. However, the company, Services Sydney, sought third-party access to compete with Sydney Water in the established upstream market for sewage removal as well as the downstream markets of sewage treatment and, eventually, the supply of recycled water. This evoked a very different response from Sydney Water, perhaps because the proposal threatens its control of the newly perceived resource — sewage.

Experiences of third-party access regimes for water

Third-party access has been available in network-based utility industries such as telecommunications, gas and electricity for some time¹⁹ but the experience of third-party access in the water industry is somewhat limited.²⁰ In England, the *Water Act* 2003 seeks to extend competition, with s 39(2B) specifically seeking to protect consumers by promoting effective ‘competition between persons engaged in, or in commercial activities connected with, the provision of water and sewerage services’²¹ (DEFRA 2005: 1). Significantly, however, when the Ofwat²² framework was set up, provision for third-party access to sewerage infrastructure was not included, apparently because the industry did not foresee the need for it. Accordingly, the Ofwat framework only applies to water supplies.

In California, legislation known as the Katz Wheeling Law was introduced in 1986. It provides for unused capacity, within artificially constructed water-conveyance facilities, to be made available to others (Slater 2005). However, the legislation does not provide clear guidance on how issues of access pricing should be dealt with and this has acted as a disincentive to third parties pursuing access.²³

In Australia, there has been only limited experience of third-party access to water. One such example is in the case of Barossa Infrastructure Limited (BIL). That company gained access to transportation capacity in the Mannum–Adelaide pipeline, as well as storage capacity in the Warren Reservoir. The purpose of the access is to provide extra irrigation water from the Murray River for the Barossa Valley. The BIL scheme involved significant upgrading of the SA Water system in order to assist BIL gain a year-round supply of water, and goes beyond a simple third-party access regime (Marsden Jacob 2005: 22).²⁴

In Southeast Queensland, there is another arrangement which could perhaps be described as a form of third-party access. It involves Southeast Queensland Water providing raw bulk water which, in turn, is pumped to Brisbane Water's treatment plant and then eventually provided to the customers of Brisbane Water, Logan City Council and Gold Coast Water. Brisbane Water's infrastructure is used by other retailers in this process (Marsden Jacob 2005: 22).

The case of Lakes R Us Pty Ltd represents a thwarted attempt to gain third-party access to water storage and transport services provided by Snowy Hydro Limited and the State Water Corporation.²⁵

Given that state-based third-party access regimes for water services can be made compliant with National Competition Policy and National Water Initiative goals it seems possible that other states will join New South Wales in introducing third-party access legislation of their own, rather than rely solely on the generic Commonwealth access regime under the *Trade Practices Act 1974* (Cth).²⁶ The New South Wales specific state-based water-access regime is a 'significant and unique reform', with 'no similar regime elsewhere in the world' (Freehills 2006). It is helpful, therefore, to examine the development of legal frameworks for third-party access, beginning with the Commonwealth scheme.

Commonwealth legal framework for third-party access in Australia

The move to open competition in the water and wastewater sector came with the 1993 release of the Hilmer Report.²⁷ This argued for greater competition among government-owned entities, the removal of trade barriers, the elimination of cross-subsidies in the provision and delivery of water and the abolition of monopoly practices.

Following the Report and the Competition Principles Agreement, amendments were made to Commonwealth legislation, including the *Trade Practices Act 1974* (Cth). State-based legislative changes followed more slowly and were often tied to Commonwealth incentive payments to the States, which were made in three tranches from 1997 to 2005 to induce State compliance with National Competition Council (NCC) goals (NCC, Principles for Reform).²⁸

The *TPA* was amended to include Part IIIA, which relates to 'Access for Services'. Under that Part, third-party access to nationally significant infrastructure may be sought. This may occur by virtue of a 'declaration' of the service by the designated Minister (*TPA*, Part IIIA Division 2) or by virtue of service-provider access undertakings or industry access codes approved by the Australian Competition and Consumer Commission (ACCC, *TPA*, Part IIIA Division 6). Whilst the designated Minister will normally be the Commonwealth Minister, it is the responsible State or Territory Minister if the service provider is a State or Territory body, such as a public water utility. A service may not

be declared, and an access undertaking or industry access code may not be approved, if there is in place an 'effective access regime' established by the State or Territory.²⁹

Where the infrastructure concerned is not nationally significant (and, therefore, beyond the jurisdiction of the Commonwealth), state-based access regimes consistent with sub-clauses 6(3) and 6(4) of the Competition Principles Agreement are to be used to gain access.³⁰

The *TPA*'s generic scheme for declaration of a service involves a two-stage process. First, the third-party access seeker applies to the National Competition Council for a recommendation that the designated Minister declares that the infrastructure is 'covered' by Part IIIA. The NCC may not recommend, and the Minister may not declare, that the infrastructure is covered unless satisfied that all six assessment criteria are met.³¹ The criteria comprise: the promotion of increased competition in at least one market; the economic infeasibility of anyone else developing another facility for the service; the national significance of the facility; that access would not cause undue human health or safety risk; that access was not already part of an effective access regime; and that access would not be contrary to public interest.

The second stage of the process is the determination of the terms of access to the declared service (*TPA*, Division 3). An access seeker (it does not have to be the entity that obtained a declaration of the service) will endeavour to negotiate the terms of access with the service provider. If the parties fail to reach agreement, either of them may give notice to the ACCC to arbitrate the dispute. The ACCC may determine the access dispute consistent with statutory restrictions that seek to protect existing user rights in the service, including by provision for compensation by the third-party entrant to an existing user who suffers deprivation of a pre-notification right (*TPA* s 44 W).

One additional point to note here is the *TPA* definition of 'service' that may be the subject of an access declaration.³² It is defined to mean:

'a service provided by means of a facility and includes:

- a. the use of an infrastructure facility such as a road or railway line;
- b. handling or transporting things such as goods or people;
- c. a communications service or similar service;

but does not include:

- d. the supply of goods; or
- e. the use of intellectual property; or
- f. the use of a production process;

except to the extent that it is an integral but subsidiary part of the service.'

It is suggested that this definition, particularly paragraph (d), means that a Part IIIA declaration may apply to compel access to the sewerage transportation infrastructure of a service provider, but may not apply to compel the service provider to provide 'access to the goods'; that is, the raw sewage resource.³³ Thus, Part IIIA could be used to compel access for a competing sewerage-service provider or a sewer miner to the sewerage infrastructure but it could not be used by a sewer miner to compel access to the sewage resource itself.

So far, there has only been one successful wastewater access application made under this Part IIIA regime, and that is Services Sydney's application. This contrasts significantly with the position of third-party access in the gas and electricity sectors (which can also use the *TPA* generic scheme) where, by 2005, 60 arrangements had been registered with State and Federal agencies (Marsden Jacobs 2005: 86). In part, the difference is accounted for by the resistance to the dismantling of the vertically integrated, monopolistic public water utilities, owned by State and Local Government agencies. As well, there are difficulties associated with transporting water, which makes the market structure for water more complex than gas and electricity.

Services Sydney application: An access regime in practice

Services Sydney Pty Ltd initially began discussions with Sydney Water to become a sewer miner but later decided to become a competitor with Sydney Water as a provider of sewerage-collection services in Sydney. Rather than build its own sewerage network, it sought access to Sydney Water's sewerage reticulation network to transport the sewage of its customers (to be) to connections with its own pipeline; a pipeline which would ultimately transport the sewage to its own treatment plant. It proposed to use the treated water for non-potable purposes such as agricultural, industrial and domestic uses as well as for environmental flows. Consequently, in 2004, Services Sydney applied to the NCC for a recommendation that the sewerage networks leading to the North Head, Bondi and Malabar Ocean Outfalls be 'declared' under the *TPA* Part IIIA. The NCC recommended to the then Premier, Mr Carr, that the services be declared, but the Premier did not publish the declaration within the 60-day time period and was deemed to have refused to declare the services (under *TPA* s 44 H (9)). Services Sydney successfully appealed that deemed refusal to the Australian Competition Tribunal (ACT), which declared the service for a 50-year period from December 2005.³⁴

However, after declaration a dispute ensued over the access-pricing methodology to be used by Sydney Water and, on 6 November 2006, Services Sydney activated the arbitration mechanism when it notified the ACCC of the dispute. In July 2007, the ACCC released its final determination on the dispute. The ACCC largely found in favour of adopting Sydney Water's 'retail-minus' proposal for calculating the cost of transportation of the sewage by Sydney

Water. It also retained postage-stamp pricing³⁵ for all customers (ACCC Arbitration Report, July 2007).³⁶ Having lost the battle to prevent access³⁷ it was presumably a consolation to Sydney Water that the pricing decision was favourable to them.

Sydney Water's resistance to granting access raises a number of questions, the key of which is, why? Was there good reason to resist the opening up of infrastructure to third parties or was it simply a case of protective self-interest?

There are several possible answers to this question. In its submissions against the NCC draft recommendations, Sydney Water argued that it supported appropriate market structures and competition reforms but believed that access should be considered in the 'context of an overarching market framework for providing water and wastewater services' rather than be driven by specific access proposals (NCC Draft Recommendations 2004: 3). Put another way, Sydney Water wished the issue to be approached holistically, so as to ensure that market structure and access arrangements supported Governmental policy and facilitated decisions relating to consumption and production (NCC Draft Recommendations 2004: 3). Sydney Water recognised its obligation to find ways of using existing potable water supplies more efficiently and of finding alternative sources that represented 'least-cost' outcomes for the community at the current level of service. It believed that those goals did not necessarily sit easily with private investment, which is more likely to be driven by profit-maximisation objectives.

Sydney Water was also concerned that no appropriate access-pricing arrangements had been resolved. Sydney Water acknowledged that, if a declaration were made (as it ultimately was), the then current integrated wastewater tariff would need to be 'unbundled' in order to determine a separate price for the use of the sewer networks. However, it believed that the then current integrated wastewater tariff, as determined by IPART, did not reflect the full cost of retail sewage-collection services. As a result, Sydney Water considered that it would not be economically viable for a third party to enter the dependent market without some form of subsidy.³⁸

A further reason for Sydney Water's resistance to third-party access may have lain in a concern that Australia and, in particular, New South Wales were entering uncharted territory by supporting the Services Sydney application. The Services Sydney plan was, and remains, quite novel and consequently means that it is difficult for Australia to call on the benefit of others' experiences. Given that the resource over which the regime is to operate (water) is a very precious, life-sustaining one, the stakes seemed alarmingly high. In fact, to many they still do.

Yet other reasons for Sydney Water to oppose the application so fervently included:

- a. the cost to Sydney Water of making the significant changes to facilitate the obtaining of access by a third party;
- b. concerns about the provision of adequate consumer protections such as providers of last resort in the case of emergencies;
- c. concerns about how third-party access would fit with obligations to maintain environmental standards, particularly as they relate to leaks and spills;
- d. concerns about public safety and performance standards; and
- e. the constraints that third-party access may impose on future reform of the water sector, such as the discouraging of new entrants into franchise markets because of concerns about the number and nature of contestants in the retail market (NCC Draft Recommendations 2004: 4).

Services Sydney's application under this regime has proved very expensive and time-consuming. Three years after lodging its original application, it still has not actually gained access. Only in 2007 has it learnt of the methodology that will be used to calculate an access price.³⁹ However, it is on its way to establishing a competing sewerage service and gaining access to that new resource — sewage.

The *Water Industry Competition Act 2006 (NSW)*

While resistance to making a declaration under the *TPA* continued, the New South Wales parliament worked on the development of a state, industry-based access scheme, which is now housed within the *Water Industry Competition Act 2006 (WICA)*.⁴⁰ This Act is examined as a case study because some other states are also considering the introduction of legislation setting up state-based access regimes.⁴¹

WICA is designed to reflect the State government's *2006 Metropolitan Water Plan*⁴² and is based on recommendations in the 2005 IPART review of water and wastewater service provision (IPART *Water and Wastewater Report*, October 2005). The IPART review included recommendations for:

1. the State government to develop a state-based access regime for services traditionally provided by significant water and wastewater infrastructure;
2. a review of the legal framework to ensure appropriate obligations were placed on both incumbents and new entrants, as well as ensuring that barriers to competition and private-sector involvement were addressed;
3. the development of a streamlined regulatory framework for sewer mining which included establishing a formal dispute-resolution process and;
4. continued IPART price regulation of services to small customers, as well as the continuation of price regulation for large customers, regulation which would be reviewed if an access framework were established.⁴³

The Act was designed to encourage competition in the water industry and to promote innovative solutions to the water supply-and-demand balance, particularly in so far as the development of infrastructure for the production and distribution of recycled water is concerned.⁴⁴ *WICA* is, in many ways, only a skeletal framework which needs to be fleshed out by operational and enforcement mechanisms. The Act contains provisions for:

- a. a Licensing Regime for private-sector participation in the water industry (in Part 2);
- b. a third-party access regime to facilitate the negotiation of access to significant water-industry infrastructure (in Part 3);⁴⁵ and
- c. binding arbitration of sewer-mining disputes (in Part 4) (DWE, *WICA Regulations Consultation Paper* 2007: 8).

The detail for the administration of these Parts is provided by the Regulations made under the Act. Section 101 provides for the Governor to make Regulations in respect of a range of issues.

Licensing regime

The legislation includes a licensing regime, rather than alternatives such as rules-based regulation, certification or industry self-regulation because the licensing regime was thought to offer the best adaptive capacity, allowing flexible responses to future situations that competition, public expectation and scientific knowledge might present. Accordingly, private entities that seek to provide drinking, recycled and other grades of water, *as well as those seeking to provide sewerage services*, will need to be licensed. The licensing requirement operates by virtue of a prohibition-and-exemptions approach. The Act makes it an offence to construct, maintain or operate any water-industry infrastructure or supply water or provide a sewerage service by means of any water-industry infrastructure without a licence. There are monetary penalties for non-compliance (*WICA* s 5).

The Act also establishes a set of principles that are to guide the Minister when he or she is deciding whether to grant a licence. Those principles relate to issues such as the protection of public health, the environment, public safety and consumers; the encouragement of competition in the supply of water and the provision of wastewater services; the ensuring of sustainability of water resources; and the promotion of production as well as the use of recycled water (*WICA* s 7). Unfortunately, the constraints of this chapter do not permit further exploration of these issues. (See DWE *WICA Regulations Consultation Paper* 2007.)

Access regime under WICA

Central to this chapter is the third-party access regime under Part III of *WICA* (MWDCO, *Creating a Dynamic and Competitive Water Industry* 2006: 18). The access regime is designed to operate in concert with the licensing regime, in that water and wastewater-services providers gaining access under the access regime will also need to be licensed in order to operate. The aim of this industry-specific access regime, like the Commonwealth's generic one under the *TPA*, is to facilitate third parties gaining access to the incumbent's 'infrastructure service', thus allowing third parties to become new service providers in the upstream or downstream markets without having to incur the expense of duplicating the infrastructure.⁴⁶ Third parties may be interested in seeking access so as to supply drinking water, recycled water or wastewater services, for example.

The regime specifically facilitates the negotiation or arbitration of arrangements for third-party access to the storage and transportation facilities of the incumbent's water-supply and sewerage networks. The definition of 'infrastructure service' (*WICA* s 4 and dictionary) as the 'storage, conveyance or reticulation of water or sewage by means of water industry infrastructure' but not including 'the supply of goods (including the supply of water or sewage)' shows that the access regime itself does not create rights for the access seeker to obtain the raw resource of sewage. However, it is anticipated that the execution of a Sewer Network Access Agreement between the sewerage network owner and the access seeker will not only create rights to extract a designated volume or proportion of sewage but will cause that agreed volume or proportion to be extracted.⁴⁷ Further, *WICA* does not create rights to use the incumbent's treatment plant.

Initially, the third-party access regime is only available to access seekers in the Sydney and Hunter regions but that could be extended (*WICA* s 22 and Schedule 1 of Act). An infrastructure service would become the subject of the access regime if:

1. the Minister makes a 'coverage declaration' in respect of it;⁴⁸ or
2. a service provider gives an 'access undertaking' in respect of it (*WICA* s 38.)

Where a service provider has given an 'access undertaking' for the infrastructure service, IPART must still approve the access on the basis of statutory criteria in cases where the undertaking is lodged with it (*WICA* s 38(a)–(d)). Once approved, the access provider is required to negotiate in good faith to accommodate the access seeker's requirements. If commercial negotiations break down and agreement is not reached, the matter may be referred to IPART for arbitration.⁴⁹

The access seeker will need to request that the Minister declare the service covered by the access regime where: (a) the service provider has not agreed to access by suitable private arrangements (that is, without lodging an access undertaking with IPART) and the service provider has not given an access undertaking which has been lodged with IPART; or (b) the service has not been previously been declared. IPART will advise the Minister on whether he or she should declare the service.

A declaration will only be made if the service meets the 'declaration criteria' in *WICA* s 23. They reflect those in the TPA's generic model and require that the infrastructure be of State significance; it would not be economically feasible to duplicate the infrastructure; access is needed to promote a material competition in an upstream or downstream market; the safe use of infrastructure can be ensured at an economically feasible cost and; access would not be contrary to the public interest. A service will not be the subject of a coverage declaration if it is subject to a binding non-coverage declaration (*WICA* s 25(5) (a) and Division 4), subject to a voluntary access undertaking (*WICA* s 25(5) (a) and Division 5) or IPART has determined, with the consent of the Minister, that it is a frivolous or vexatious application (*WICA* s 25(5) (b)).

If a declaration is made, the requirement to negotiate the terms of access using all reasonable endeavours will be triggered. If the commercial negotiations as to terms break down, the matter may again be referred to IPART for arbitration (*WICA* s 40).

In practice, the issue of access pricing will play an important role in the effectiveness of the access regime. This is discussed later in this chapter.

Sewer Mining Disputes under *WICA*

Part 4 (ss 45 & 46) of *WICA* creates a mechanism to resolve disputes about sewer-mining access, both as to the terms of a proposed agreement and as to the application of an established agreement. It provides for disputes between the sewerage-service provider and the sewer miner to be arbitrated by IPART or a person nominated by IPART, but only if the service provider has lodged a notice with IPART setting out the provider's policy on sewer mining. The arbitrator must give effect to the service provider's policy and, subject to that policy, any other matters prescribed by regulation. *WICA* does not require or authorise IPART to review or approve a sewer-mining policy.

The statutory policy would seem to be that sewer mining can only occur with the in-principle agreement of the sewerage-service provider that it is willing to consent to the extraction of raw sewage. The service provider may decide to manage sewer-mining access according to its own policy and entirely outside the *WICA* regime, just as it could before the enactment of that Act. *WICA* does not provide a mechanism to compel the service provider to grant access to the

sewage resource itself, as opposed to the sewerage infrastructure. Sydney Water retains control over the amount of wastewater that may be extracted from its sewerage network so that it can ensure the effective operation of the network. That said, Sydney Water's policy is to refer sewer-mining disputes to IPART for arbitration (Sydney Water, *How to Establish a Sewer Mining Operation* 2006: 8).

Yet, it would also seem equally possible for a potential sewer miner, whose activities are thwarted by the infrastructure owner, to achieve its end by going into competition with the infrastructure owner as a competitor in the provision of wastewater services. This method requires that the service is the subject of a coverage declaration and that a price determination has been made for the use of the infrastructure. However, by using this route the third party gains direct access to the sewage resource from the sewerage customers and is able to by-pass the infrastructure owner's resistance to its sewer mining.

WICA's relationship with other legislation

Legislation and codes such as the *Local Government Act* 1993, the *Public Health Act* 1991, the *Protection of the Environment Operations Act* 1997, the *Sydney Water Act* 1994, the *Environmental Planning and Assessment Act* 1979, the Australian Drinking Water Guidelines and the NSW Plumbing Code of Practice 2006 currently provide public health, public safety and environmental protections for the water industry. All service providers, whether they are continuing public utilities or new third-party entities gaining infrastructure access, will be bound to comply with these requirements. Hence, the access regime under WICA will operate subject to these prior protections. Technically, there is no question that health, safety and environmental protection standards will be by-passed by the introduction of private-sector, competitive involvement. Indeed, the Regulations Consultation Paper suggests that 'the various legislative and regulatory drivers can therefore be viewed as supplementing the commercial drivers of suppliers to ensure that they deliver services at the level, quality and reliability customers need, at the lowest long-term cost (while also meeting health, safety and environmental obligations)' (DWE, *WICA Regulations Consultation Paper* 2007: 11).

However, critics of water-industry competition question whether this objective is realistically achievable or whether the drive for profit necessarily compromises the ability to deliver services at the lowest long-term cost, while meeting health and environmental standards. They cite Sydney's Cryptosporidium and Giardia scare (which the McLellan report found was probably, in part, linked to problems at the *privatised* Prospect treatment plant)⁵⁰ and Adelaide's 'big pong'⁵¹ (which also involved a private entity in the form of United Water) to highlight the tensions of private-sector involvement in the industry. Critics also question whether the wider legislative frameworks beyond

WICA are sufficiently stringent to deal with new problems that may arise as a result of third parties gaining access to public-utility infrastructure, for example. In that regard, it has been suggested that the *Public Health Act 1991* be amended to introduce new offences prohibiting the supply of water which is a risk to public health and the supply of non-drinking water in circumstances where it could reasonably be mistaken for drinking water (MWBCO 2006, *Creating a Dynamic and Competitive Water Industry*).

The role of Regulations under *WICA*

The Regulations give the Act further shape, form and substance and the capacity to supplement the public health, consumer and environmental protections of the other legislation. *WICA* authorises the Governor to make Regulations pertaining to water quality and public health; construction and maintenance of water-industry infrastructure; consumer protection; licensing administration and licence conditions, for example (*WICA* s 1001 and Schedule 2).⁵² The potential effect of regulations on these issues will not be explored here.

However, it is opportune to note a draft Regulation applying specifically to the access regime. The NSW Cabinet Office released its draft Water Industry Competition (Access to Infrastructure) Regulation in mid September 2007.⁵³ The draft nominates the persons whose submissions are to be invited in relation to coverage applications for an infrastructure service and these persons include the incumbent service provider along with various relevant Ministers. The Regulation also sets out the process for negotiating disputes concerning access determinations. It places an onus on the service provider to use all reasonable endeavours to accommodate the access seeker's requirements but interestingly does not require those requirements to be reasonable themselves (NSWCO, *Access to Infrastructure Services Regulation 2007*: Div 2, 8 (3)). Further, it sets out a timeline for dispute resolution and outlines the basis on which disputes may be determined. The Regulation does not include a definition of 'capacity' or 'spare capacity', presumably recognising these as site-specific.⁵⁴

Principles of Regulation

As part of the process of developing the *WICA* Regulations, the New South Wales government endorsed some best-practice principles of regulation (DWE *WICA Regulation Consultation Paper 2007*: 11). One of those principles is that of periodic review and reform. Given the changing landscape of regulation, this is welcome.

Regulatory models are diverse and may embrace approaches including 'centred' regulation, a 'hollowing out of the state'⁵⁵ or 'smart' regulation amongst others.⁵⁶ Although a discussion of regulatory theory and practice is well beyond the scope of this chapter, it is perhaps useful to observe, as does Julia Black,

that regulation has developed into a multi-layered phenomenon which may be transnational, supranational, national or sub-national, for example. Regulation is 'thus not simply an activity carried out by the state using laws backed by sanctions; it is a broader enterprise consisting of a sustained and focused attempt by state or non-state actors to alter the behaviour of others with the intention of producing a broadly identified outcome or outcomes'.⁵⁷ This will need to be borne in mind when assessing *WICA*'s effectiveness as a regulatory regime, particularly in relation to how well it deals with issues of proportionality, accountability, consistency and transparency, as well as its ability to target areas of risk.

Key issues of interest

Various key issues emerge in relation to the operation of the access regimes under the *TPA* and *WICA*; namely, coverage declarations, access and resource pricing, building trust, step-in rights for operators of last resort, property law issues about the ownership of sewage, and customer and consumer protection. They are treated discretely below, with a focus on the implications for the *WICA* regime.

Coverage declarations

In many ways, the *WICA* access regime reflects the generic access regime available under the *TPA*. For example, the criteria for declaring an infrastructure service open to the access regime are quite similar. Importantly, both include requirements that access or increased access would 'not be contrary to the public interest'.⁵⁸

However, retention of the public-interest test in its present form has prompted criticism for not placing a positive onus on the access seeker. To explain, the *TPA* does not define public interest and the *NCC* and the *ACT*⁵⁹ have dealt with the issue on a case-by-case basis, relying tentatively on clause 1.3 of the *Competition Principles Agreement (PIAC Submission to Creating a Dynamic and Competitive Water Industry 2006: 11)*. That Agreement supports considerations relating to ecologically sustainable development, social welfare and equity considerations, occupational health and safety issues, industrial relations issues, economic and regional development, consumer interests, competitiveness of business and the efficient allocation of resources being taken into account. Accordingly, the Public Interest Advocacy Centre (PIAC) distilled from those considerations issues such as 'the loss of equity in pricing, the impact on prices for the incumbent, risk of consumers being excluded from price benefits and the magnitude of public costs' as all being relevant and coming under the head of 'public interest' (PIAC submission to *Creating a Dynamic and Competitive Water Industry 2006: 11*). PIAC went on to argue that the *WICA* access regime should place a greater burden on the access seeker to demonstrate that these

concerns have been adequately addressed. It also favoured demonstration of a positive-outcomes approach by access seekers rather than the mere demonstration that outcomes will not negatively affect the public interest. PIAC claimed that its proposal was consistent with the Intergovernmental Agreement on a National Water Initiative (IGA), which was agreed in June 2004 by the Council of Australian Governments (*PIAC Submission to Creating a Dynamic and Competitive Water Industry* 2006: 13). It favoured the onus in the public-interest test from negative to positive.

While at one level it would seem insufficient for access seekers to argue that their business models promote competition and, by extension, that environmental benefits will flow and that those benefits will not be against the public interest, change to the public-interest test along the lines of PIAC's recommendation may also pose problems. The proposed switch of onus from negative to positive could potentially place an enormous burden on the applicant unless the public-interest test were focused on achieving better outcomes on specified issues, such as pricing and environmental protection.

In regard to retail pricing, the applicant already has to show how access will promote competition. One of the difficulties in showing that competition will reduce prices is that the public-utility models have artificially suppressed prices by applying a pricing formula which has not been based on full cost recovery. The Australian Competition Tribunal (ACT) in the *Services Sydney* decision acknowledged the difficulties caused by artificial price suppression (*Application by Services Sydney Pty Ltd* [2005] at [201]).

As to environmental outcomes, any likely adverse environmental impact from an associated works proposal would be subject to an environmental impact assessment. Hence, protective mechanisms are already in place. Yet, perhaps PIAC would consider that mechanisms of this nature still do not go far enough because they do not require demonstration of a positive outcome. They simply protect against adverse ones.

In the specific case of *Services Sydney*, it is arguable that the company could have easily satisfied a positive-outcomes test because it proposed treating the relevant sewage to secondary and tertiary levels (*Application by Services Sydney Pty Ltd* [2005] at [70]–[73]), whereas Sydney Water had only been treating sewage to primary levels and then discharging it to ocean outfalls. Further, *Services Sydney* also intended charging customers much the same price as Sydney Water charged, but *Services Sydney* planned to attract customers with its greener credentials. The problem in such a case is perhaps not one whereby the applicant finds meeting the positive-outcomes test too burdensome but, rather, that there would be little incentive for the public utility to improve its own standards when to do so would have cost implications for it.

Access and resource pricing

Questions have emerged about the pricing of access to the infrastructure service and of access to the sewage resource itself. The pricing of both may prove important to setting the conditions for successful entry of third parties into the wastewater and water-recycling industries. The power to determine the price for access to infrastructure rests with the ACCC under the *TPA* and with IPART under *WICA* where the incumbent service provider and the access seeker cannot agree (see previous discussion). The power to determine the price of recycled-water services (that is, the supply of recycled water) rests only with IPART under the *IPART Act* 1992 (NSW) s 11 and Part 3, Division 5, but only in respect of prices to be charged by a 'government monopoly service'.

What of the power to determine the price of the sewage charged to the sewer miner? On our reading of the *IPART Act*, IPART also has the power to determine the price of the sewage resource charged by a government monopoly service to a sewer miner. However, an alternative opinion is that the *IPART Act* only authorises IPART to determine the price for the interconnection service for sewer mining, which does not include pricing the sewage resource itself. However, under *WICA* ss 45 and 46, IPART does have the power to determine the price of the sewage to be drawn by a sewer miner where the infrastructure 'service provider' has agreed to IPART having the jurisdiction to arbitrate such disputes consistent with the terms of the service provider's policy on sewer mining. That policy may contain propositions about pricing the sewage. Here, however, the definition of 'service provider' means any person who has, or is to have, control of the infrastructure; so this will include private providers. Thus, the service providers, public and private, can set the parameters for IPART's determination of the price of the sewage as a resource.

The price of access to the incumbent's infrastructure is a very important factor in the success or otherwise of any third-party access regime. Should the price of access be set too high, competition is unlikely to ensue because access seekers will presumably opt not to take up the access opportunities that they have been granted. Alternatively, if access seekers do take up the access that they have been granted and enter the market but find that the access price has been set at a level too high for them to operate a successful business, the customers of the incumbent and the new service provider may ultimately pay for inefficiencies in price setting. A possible outcome is that one group of customers may end up subsidising another (PIAC Submission 2006 *Creating a Dynamic and Competitive Water Industry*: 11).

The legislation provides various principles to be applied in determining the price of access, but there are still choices about pricing methodologies that are available (*TPA* s 44X; *WICA* s 41). Some were discussed in the ACCC's *TPA* determination of the access-pricing dispute between Services Sydney and Sydney

Water (ACCC *Arbitration Report* 2007). The ACCC noted that the most appropriate methodology depends on a range of factors, including the infrastructure facilities to which access is sought and the particular characteristics of the upstream and downstream markets (ACCC *Arbitration Report* 2007: 1).

In that dispute, Services Sydney favoured a 'bottom-up' building-block methodology under which the price is calculated by building up the various blocks of costs associated with providing the service. Sydney Water, on the other hand, favoured a 'retail-minus' methodology, which calculates price by first determining Sydney Water's regulated retail price and subtracting from it the cost of contestable services (for example, sewage treatment and sewage disposal and recycling) associated with the supply of the product or service in the downstream market. To that figure any facilitation costs (those associated with the provision of the service by Sydney Water to Services Sydney) are then added.

Ultimately, the ACCC favoured Sydney Water's 'retail-minus' approach but, instead of subtracting 'avoided' costs, it subtracted 'avoidable' costs or costs that could in the long run be avoided. The result is that access prices are lower than if only actually avoided costs were subtracted. The types of concerns addressed by the ACCC under the *TPA* regime will also need to be addressed in relation to access that is made available under *WICA* and other state-based regimes (Economic Regulation Authority, Western Australia, 2007: 79 ff).

Pursuant to *TPA* s 44X(2), the ACCC also took into account some other matters such as the complexity that would be involved in practically implementing each party's proposed access-pricing methodologies. As part of its decision, the ACCC retained postage-stamp pricing for all customers, thus favourably addressing many equity concerns raised by consumer-interest groups. Although the provision of sewerage services to different parts of Sydney costs vastly different amounts, to a considerable extent consumers have already paid for that cost differential through the developer charges for different areas, which are meant to reflect the cost differential. To apply this cost differential to the periodic charges for sewerage services would effectively require the consumers in high-cost areas to pay twice.⁶⁰ Consequently, *WICA* specifically requires that the pricing principles for access to infrastructure services be implemented in a manner that is consistent with any pricing determinations for the supply of water and the provision of sewerage services, including the maintenance of 'postage-stamp pricing' for the provision of those services.⁶¹

However, a real concern for legislators is that, having developed extensive regimes for access, the so-called opportunities might not be taken up by third parties because the price of access does not leave the opportunity for sufficient profit. Anecdotally, some large water companies have expressed concerns about whether it is worth their while entering the market. They have suggested that,

due to cost constraints, third-party access may well end up only being viable for greenfield residential developments or large industrial sites. In Sydney, this would limit third parties to about a 20 per cent market share, given that it has been estimated that about 80 per cent of Sydney Water's existing customers are not in greenfield developments and are small, largely residential customers. If that is so, perhaps the *TPA* and *WICA* third-party access regimes might not provide the levels of competition envisaged by legislators. Further, with retail prices for services being set by state regulators (for example, by IPART in NSW) and the infrastructure access prices being set by the ACCC in cases coming under the *TPA*, some third parties may see high transaction costs as a disincentive to invest. Practitioners report that there does not appear to be a large number of potential, third-party access seekers lining up to enter the market.⁶² Yet this position could change. Indeed, a declaration made under the *TPA* could even be revoked under s 44J of that Act if an alternative, effective state-access regime becomes available. One would expect that the *WICA* regime should provide the basis for the *TPA* declaration of Sydney Water's sewerage network to be revoked. That expectation should be measured against the sceptical assessment of *WICA* by one NSW member of Parliament: 'The Competition Bill may well prove to be only window-dressing in terms of actual competition.'⁶³

It will be interesting to see whether in the hard, cold, light of a commercial day Services Sydney ultimately decides that it is worthwhile pursuing the competitive opportunity available to it, given the price it will have to pay for access to the infrastructure service of sewage transportation.⁶⁴ Much may depend on (a) the estimates of the value of the ultimate product — recycled water — and (b) the related cost of acquiring the raw resource of sewage in the first place. It would seem that Services Sydney may not have to pay for the resource at all. As Sydney Water would not be the supplier of raw sewage to Services Sydney, it could not charge for supply of the resource as distinct from the provision of the service of sewage transportation. Instead, Services Sydney will take delivery of the sewage from its own customers. If Services Sydney customers 'give' rather than sell their (purported) property rights⁶⁵ in 'their' sewage to the company, then the company will receive a windfall benefit of 'free' sewage.

Accordingly, in the recycled-water market, Services Sydney may be at a competitive advantage over sewer miners who take delivery of raw sewage from Sydney Water. Why? Because IPART chose not to regulate sewer-mining prices in its 2006 pricing determination (IPART, *Pricing Arrangements for Recycled Water and Sewer Mining*, September 2006: 66). Unless IPART regulates the price of sewage for sewer miners, Sydney Water will be able to charge them what it likes if it abandons its current policy of zero pricing of sewage. Even more significant, potentially, is that there is no regulatory regime applicable to the

choices that private sewerage-service providers make with respect to sewer miners, either as to whom they choose to sell the sewage or as to the price that they charge. Similarly, private sewerage-service providers who decide to recycle the water will be subject to no direct pricing regulation for their product, other than the market competition from the regulated public-sector providers. If public-policy concerns develop about how private providers are allocating the sewage resource, either as sewage or as recycled water, then consideration may need to be given to whether sewage may need to be made the subject of a resource regulation regime, not just a competition and service regulation regime. These issues are ripe for further investigation.

Building customer trust

In the New South Wales electricity and gas sectors, enticing customers to move to new third-party competitors has been partly dependent on making customers feel confident about entering into negotiated contracts in the first place.⁶⁶ It would seem that establishing the requisite levels of trust and comfort in those sectors may have posed some difficulties because the 'churn' rates in relation to residential electricity supplies have remained relatively low. ('Churn' is the rate of switch between competing suppliers and is the basic measure of retail competition.) The rate of churn for residential electricity customers in New South Wales was, according to the Public Interest Advocacy Centre, approximately 15 per cent and that was after four years of retail competition.⁶⁷ Hence 85 per cent of retail customers remained with the incumbent supplier and purchased electricity at the regulated price. In the gas industry the position was similar.⁶⁸ After approximately five-and-a-half years the churn rate has increased but the competitor's market share remains relatively small. About 70 per cent of electricity customers have opted to remain with the incumbent supplier according to IPART's 2007 figures (IPART, *Overview of Final Report, Retail Prices in Electricity in NSW* June 2007: 1). It is possible that this position would not be entirely dissimilar in the water sector.

It is acknowledged that in some other jurisdictions, such as South Australia and Victoria, the churn rates in the electricity sector have been higher than in New South Wales (PIAC Submission to *Introducing a Dynamic and Competitive Water Industry* 2006: 5). However, IPART also acknowledged that New South Wales would be unlikely to approach these high churn rates because the rate of switch in Victoria and South Australia was associated with a peculiar set of circumstances.⁶⁹ IPART also noted that the average switching rate for (electricity) customers in the European Union was around 10 per cent and that in New Zealand, which had the longest history of contestability, the churn rate was also around 10 per cent (IPART, *Promoting Retail Competition* Final Report: 104). This suggests that churn rates are not generally high. Further, although IPART has proceeded on the basis that its determination is likely to lead to increased

competition, it admits to still being uncertain about whether that will translate into increased churn rates. IPART has expressed the view that increased rivalry between firms may have positive spin-offs for existing customers, in the form of discounts or innovative services, for example, but not impact greatly on churn rates (IPART, *Promoting Retail Competition* Final Report: 105). Whether this is ultimately the case is not yet known but recent debates surrounding the potential privatisation of the electricity sector in New South Wales suggests that IPART's confidence in the benefits of competition is, at least, contestable.⁷⁰ It may be helpful to bear in mind the experience of the electricity sector when assessing competition in the (waste)water sector, albeit that there are some notable differences between the two.

Perhaps one reason for the relatively low churn rate in the New South Wales electricity sector is customer resistance to being contacted (particularly by telephone) by competitive operators offering 'better deals'. The implementation of the national 'Do Not Call Register'⁷¹ is just one measure of how far customers will go to avoid being contacted by retailers seeking to sell 'their product'. Hence, it may be more problematic than first thought for new third-party competitors in the wastewater sector to attract customers. (Dovers discussed the significance of human behaviour and conduct in Chapter 5 when he observed that although 'we talk of "water management" ... it is really about managing people'.) Ease of access to the customer base, plain-English information, positive financial and service benefits, as well as confidence and trust in the retailer itself, will be important factors to address if the introduction of alternative wastewater-service provision via third-party access to infrastructure is to succeed. The introduction of 'retail headroom' in pricing may achieve a greater take-up rate of alternative service provision but the *quid pro quo* could be financial hardship for many customers.⁷²

Step-in rights for operators of last resort

How will the regulatory framework deal with the delivery of water or sewerage services if that delivery is prevented because of physical problems with transportation or infrastructure, insufficient water, the financial distress of the operator or the financial distress of the retailer? One mooted solution is the creation of 'step-in' rights for replacement operators, often known as 'operators of last resort'. This approach is common in the electricity sector, for example, where electricity can be fairly readily transferred between grids. However, such transferability is not so simple in the water sector. Indeed, Bakker described water as an unco-operative commodity (Bakker 2003). In practice, therefore, one could imagine that those nominated as 'operators of last resort' would not necessarily be poised, ready to step in, should they be needed. The task of supplying the water or wastewater service may well be limited by physical and technical constraints. Operators of last resort would presumably also have their

own businesses to run and may be diverted by activities relating to those obligations at the time they are most needed to step in.

A related concern is whether the new private-sector operators (some of whom may have third-party access to infrastructure) will bring with them the technical and management skills to operate their businesses successfully. This is of particular concern where they are entering new fields. Inexperience bears its own inherent set of problems. To explain, one wonders what would be the case if a private operator faced technical problems which it could not solve and so needed assistance from the public utility, who was the operator of last resort, but the expertise traditionally housed in the public utility operator of last resort, had been lost or depleted when its staff were retrenched as a result of a private competitor entering the industry?⁷³ Anecdotally, this kind of scenario has been used to explain the position in Adelaide at the time of the 'big pong'.⁷⁴

There is also the question of risk-auditing in relation to the payment of bonds under the licensing regime to offset 'step-in' costs in the case of an emergency. A scheme for bond payments would require assessments to be made about operators and that, in turn, would raise questions about where the risk should be parked. Should it be placed with the community at large, or should it be borne by the retailer, the end-user or others? Under socio-liberalism, the entrepreneur bore the risk but under neo-liberalism we have seen a shift to democratise risk and have it borne by the whole of society, while profit has remained largely privatised. How best to deal with these issues is something that legislators will need to review constantly in relation to the water sector.

Property law issues

The issues of third-party access, wastewater service provision, sewer mining and recycling also raise some fundamental property-law issues that deserve further consideration. There is already, in other contexts, established law dealing with the ownership of, and access to, infrastructure, such as the pipes which lie on private land.⁷⁵ That law is based on statute (for example, *Sydney Water Act* 1994 s 37), the doctrine of fixtures, easements and licences. *WICA* also deals with the question of ownership of a licensed network operator's water-industry infrastructure, deeming it to belong to the operator (*WICA* s 64). The more interesting question is the ownership of the sewage itself. This is particularly pertinent in the context of sewage being cast as a valuable asset. It excites interest in the related question of which party should be reimbursed, if any, for the sewage used to make profit through on-sold recycled water or treated sludge.

While water as a flowing natural resource is not the subject of property,⁷⁶ water in other circumstances may be. For example, trade in bottled spring water, treated tap water or 'manufactured' effervescent water all demonstrate the ability of water to be commodified and become the subject of property. Hence, an

argument exists that a householder who pays for water to be supplied by a retailer, such as Sydney Water, purchases the water that is supplied. The water becomes his or her property. Subject to some restriction (for example, Sydney Water's restrictions on hosing), the water may be used and enjoyed and transferred to another, while third parties may also be excluded from it. The householder may use the water to take a shower, boil some potatoes, wash clothes or mix with some lemons to make and sell as lemonade. Should the water have been captured by rainwater tanks on the householder's property instead of purchased from a service provider, the conclusion that the water has become the householder's property applies *a fortiori*. The householder, in capturing the water, has brought it into his or her possession and brought it under his or her control.

If the water is the property of the householder who purchased (or captured) it, this, in turn, raises the question of whether the water becomes any less his or her property once it has been despoiled by human and other waste and flushed into the sewerage system. To explain, the food scraps that ultimately flow into the sewerage system when the sink plug is released are certainly the property of the householder before they enter the sewerage system. Human bodily waste is also presumably the property of the householder before its entry into the sewerage system, although cases such as *Moore v The Regents of the University of California* raise important and interesting issues on the question of characterising body parts as property.⁷⁷ But do these proprietary rights terminate once the water is discarded?

On one analysis, the wastewater or sewage remains the property of the householder, who has merely contracted with the wastewater-service provider to perform only a service in relation to it. But that argument has its weaknesses, not the least of which is establishing that the householder/owner intended to continue exercising dominion over the wastewater once it entered the sewerage network. On another reading, the individual householder's title may be said to be transferred to the wastewater-service supplier, directly or indirectly, by way of the wastewater-service contract⁷⁸ or any relevant legislation which governs the entity supplying the wastewater service (for example, *Sydney Water Act 1994*). Which view is better will depend on the terms and conditions of the contract. It is possible that the wastewater-service provider is only that, a 'service' supplier. Its role is to supply a service rather than acquire property rights. Hence, although it contracts to remove wastewater, on this line of reasoning it is unlikely to acquire property rights by way of simply performing the service.

Yet there is a weakness in the proposition that the wastewater-service supplier only provides a service in taking away the wastewater. It may mean that the water retailer may also only provide a service when it supplies clean water in

the first place. If that is so, the householder would have no property in the water which has become the subject of a dispute. However, this may not be fatal. The householder's proprietary rights in the water may not be dependent on a transfer of property rights from the supplier to him or her. Perhaps the property rights in question are created by the manner in which the householder uses the water and how effectively he or she demonstrates possession and exercises dominion over it.⁷⁹ (This is demonstrated even more clearly in relation to the person who collects water in the rainwater tank.)

Yet another, and perhaps more fruitful, way of looking at this question is through the legal doctrine of abandonment. This argument is based on an understanding that, whilst the householder may have held property rights in (a) the water supplied to him or her and (b) the waste matter with which he or she polluted the clean water supplied to him or her, once the sink plug is pulled or the toilet flushed, the householder has abandoned any proprietary rights that he or she may formerly have held.

The doctrine of abandonment involves ownership of a chattel being divested in circumstances where it can be shown that: (a) the original owner intended to renounce his or her title and (b) the chattel lawfully fell into the possession of another.⁸⁰ Perhaps it could be argued that when the householder flushes the toilet, he or she is divesting him or herself of any title (by way of the doctrine of abandonment) to the wastewater which he or she might have had in it, rather like the householder who takes his goods to the local rubbish tip and leaves them there.⁸¹ Once the householder dumps his or her goods, the tip operator acquires a possessory title to them by means of the strict control the operator exercises over the tip site (K. and S. Gray 2004: 55). It is possible to conceive of the householder flushing the toilet in a similar manner. Accordingly, once the toilet is flushed, the householder relinquishes his or her title and the wastewater becomes the property of the sewerage-network operator, who can resist the claim of a householder if he or she later tries to claim title over his or her sewage.

The recent decision of *R (Thames Water Utilities) v South East London Division, Bromley Magistrates' Court* dealt with the issue of whether wastewater which had accidentally escaped from a sewerage system constituted waste within Directive 75/442 EEC. In that case, it was alleged that the Thames Water Utilities deposited untreated sewage constituting 'controlled waste' on land in the county of Kent, as well as into controlled waters in that county.⁸² The Court found that, although the escape of sewage was accidental, it did not preclude it being 'discarded' (by the Utility) and, in turn, from being characterised as 'waste'. However, the case did not discuss whether waste was inside or outside the property paradigm and nor did the Court decide the issue by reference to the language of property law. Instead, it referred to the 'producer' of waste and the 'holder' of waste. This would tend towards waste being seen, at least in the

context of an accidental discharge and the relevant European Community Law, as outside property law.⁸³ Perhaps this conclusion is supported by the fact that authorities such as Sydney Water do not currently charge for the sewage that a sewer miner removes from the network. This suggests that, to date, sewage has been regarded as worthless, something that could not be given away and, accordingly, there has been little incentive to conceive of it as property or to bring it within the parameters of a trading regime valid at law. However, that may well change if the resource of sewage becomes the subject of pricing. If a price is attributed to raw sewage and commodification follows, a Benthamite analysis would suggest that property will be born. 'Property and laws were born together and die together. Before laws there was no property; take away laws and property ceases.' (Bentham in Macpherson 1978: 52).

If property can exist in 'thin air', as it does in strata schemes, for example, there would seem to be little reason preventing wastewater from being construed as property.⁸⁴ Yet, the next question is, whose property is it? Is it the third-party accessor's, the sewer miner's, the incumbent wastewater-service provider's or the householder's, for example?

Further, if individuals find that sewage is valuable, this may result in them wishing to retain it as 'their property' rather than 'giving' it to wastewater-service providers, third-party access seekers or sewer miners. One possibility is that the desire to retain sewage could result in a trend towards individual households or neighbourhoods seeking to set up their own infrastructure to treat sewage in order to enjoy the benefit of recycled water or treated sludge themselves. Governments and legislators may need to consider the implications of this.

We also could find that sewer miners, third-party access seekers, infrastructure owners and individual households may all end up competing with each other for sewage. Sewer miners, such as local councils, may want sewage to recycle, with a view to using the recycled water in public spaces, such as parks and golf courses. Third-party access seekers who wish to pursue recycling businesses may wish to acquire sewage so that they can on-sell recycled water and treated sludge. Incumbent wastewater-service providers may wish to retain the sewage they collect and either enter into or expand their recycling activities while individual households and local communities may wish to retain sewage so that they can recycle it at a micro level. If so, all these parties could conceivably be in competition for the resource. However, this scenario is not likely to occur unless it seems a profit can be made out of entry into the market. At the moment, concerns about access pricing for third parties seem to be causing would-be investors to display timidity and tentativeness about entry into the market.

Of course, another scenario completely is that legislators may decide that there are strong policy reasons not to construe sewage as property 'owned' privately but, rather, to characterise it as a right akin to either *res nullius* (property belonging to no-one) or as *res commune* (property belonging to everyone). On one view, the present Australian passion for privatisation and the commodification evident in the water sector would seem to make this unlikely. However, on another view, if the assertion of proprietary rights by water utilities (public or private) were driving up the price of sewage as a resource and distorting the allocation of recycled water in times of water scarcity, then governments and parliaments may see the public-policy benefit in legislating to assert public ownership of sewage and regulate the allocation of this wonderful new resource!

Negotiating inexperience and customer protection

Another issue is whether the net has been cast widely enough to provide protections for smaller customers, on the basis of their negotiating inexperience. Smaller customers are probably more likely to lack information, be commercially inexperienced and not be equipped with a strong bank of negotiating skills. As a consequence they may find it more difficult to negotiate better alternative-supply arrangements (for services provided by third-party accessors). That would suggest that smaller customers should receive more protections than large consumers; however, public water utilities in the Sydney and Hunter regions currently must offer the same protections to *all* customers alike. One possible problem in creating two classes of customers, small and large, is where to draw the line between them and how to address the concern that some small customers might be well equipped to negotiate and other larger companies might be either inadequate or inexperienced as negotiators. Given that, it may be better for new, private suppliers to be forced to provide the same protections for all their customers. Such a method would ensure that more vulnerable customers, irrespective of size, received protection. It would also streamline the obligations of public and private service providers.

Leases and consumer protection

A further, very practical, problem arises in relation to *WICA*: who gets the protection afforded to customers of water and wastewater services when the property to which the service is supplied is the subject of a lease? In New South Wales, s 17 of the *Retail Tenancies Act 1987* (NSW) presently stipulates the allocation of charges between lessor and lessee. The lessor must pay the rates, taxes and charges specified under the Act, other than charges for electricity, gas, excess water and other prescribed charges. Changes are being mooted that would pass all water charges on to tenants, not just excess water charges (OFT, *A New Direction* 2007). The present scheme means that the lessor must pay the

base or fixed water charge and hence it is the lessor who contracts with the water- and wastewater-service provider. Further, when determining prices, IPART allocates costs between service charges — for which the lessor is liable — and usage charges — for which the lessee is liable (PIAC, *Creating a Dynamic and Competitive Water Industry* 2006: 16). Under the access regime, third-party providers will not have their prices regulated by IPART (unlike the public utility providers). They will be determined by the market. New providers will, therefore, need to undercut the IPART prices or, alternatively, charge more but lure customers by the provision of better or increased services. New providers will not be subject to IPART's scrutiny about cost allocation between landlord and tenant and this may mean that lessors enter into contractual arrangements with new providers that shift costs from lessor to lessee (PIAC, *Creating a Dynamic and Competitive Water Industry*: 16).

Conclusion

This chapter has provided an overview of the present institutional frameworks for water and wastewater management throughout Australia with the aim of identifying where opportunities might exist for third parties to compete with public utilities for service provision.

This was followed by an examination of the legal frameworks under which applications may be brought for access to monopoly infrastructure essential for competing in the upstream and downstream markets for service provision. The first considered was the Commonwealth legislation, contained in Part IIIA of the *Trade Practices Act* 1974, on which Services Sydney relied.

The *Water Industry Competition Act* 2006 (NSW) was then examined as the first example of state-based legislation designed, in part at least, to facilitate competition through the provision of third-party access to infrastructure services. The chapter observed the importance of *WICA* in its potential to serve as a model for other states' legislation.

The final part of the chapter provided a discussion of some of the key issues associated with third-party access to infrastructure services. They included: coverage declarations; access and resource pricing; building customer trust, step-in rights; property rights; negotiating inexperience; and leases.

What emerged is that legal regimes and frameworks are capable of being designed to facilitate third-party access by providing frameworks for the negotiation and arbitration of the terms of access to the essential infrastructure service, along with appropriate health- and consumer-protection safeguards, for example. However, it is possible that such regimes will still fail, often for reasons beyond the law. Third-party access regimes in the sewerage sector may flounder because of access-pricing issues, a lack of confidence in new entrants and market shrinkage due to shifts in favour of home- or community-based recycling

schemes, for example. The legal problems that potentially exist in relation to third-party access, such as ownership of the raw resource, would seem capable of being resolved. Some of the political, economic, social and cultural problems would appear to present greater difficulties.

The third-party access regimes may also fail in relation to sewer mining for a lack of coverage. If sewage appreciates in resource value, the sewerage-service providers, as potential 'owners' of the sewage, will have considerable power in allocating the resource to the highest bidder, especially if the regulatory authorities do not or cannot regulate the price of sewage to the sewer miners. In NSW, the current legislation authorises IPART to regulate pricing by governmental water agencies, but what will be the position for private sewerage-service providers? It is possible that there is a legislative gap, deliberately left because of notions of private property pertaining to ownership of sewage. Will governments and parliaments be forced, at some stage in the future, to legislate for a resource-regulation regime based on public ownership of sewage and governmental allocation of this fantastic new resource?

Although it is legally possible to 'unbundle' various aspects of the wastewater sector (for example, by separating out extraction, treatment, distribution, household connection, billing, maintenance and construction of infrastructure) in order to create spaces for competitive third-party involvement, problems may still emerge. For example, if obligation is broken up and shared along the supply chain, it may be easier to avoid responsibility for system failures. If there is a problem, it is always potentially the fault of someone else. Bearing in mind Godden's warning (in Chapter 8, following) that '[m]oves to deregulate urban water authorities have created models of governance that transcend the simplistic view of dichotomous public and private spheres and public/private property', it is perhaps still possible that David Hare captured some of the difficulties associated with the unbundling process in his play the *Permanent Way*, which dealt with the privatisation of British Rail. One of his characters observed:

Everyone knows: the Balkanisation was a complete disaster. The thing was broken up into 113 pieces, like beads thrown onto a table, all to be held together by local contracts and all in pursuit of the idea of competition. Well, competition on the railways is a great idea in the theory, hopeless in practice. (Hare 2003: 18)

On this analysis, an unbundled water sector may lead to enhanced competition, which, of course, is the aim of *WICA*, but whether that competition, in turn, leads to better outcomes for society, the environment and consumers is more problematic.

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ENDNOTES

¹ This poem is part of a collection of verses entitled *The Man from Snowy River*, which was reinterpreted in a film of the same name.

² See T. Bonyhady, *The Colonial Earth*, Melbourne University Press, Melbourne: 2000.

³ For a broad discussion of waste, see G. Hawkins, *The Ethics of Waste: How we Relate to Rubbish*, UNSW Press, Sydney: 2006.

⁴ The Bunbury Water Board, which trades as AQWEST, provides potable water to the Bunbury-Wellington Region. AQWEST does not provide wastewater services. Busselton Water Board, trading as Busselton Water, is another statutory authority providing similar services to AQWEST.

⁵ Apparently, 90 per cent of the Water Corporation's capital projects were put out to tender in 2006. See *Issues Paper, Inquiry on Competition in the Water and Wastewater Services Sector*, Economic Regulation Authority, Western Australia, 20 July 2007, p.2. Available at: <http://www.era.wa.gov.au/cp-root/5765/26496/20070720%20Issues%20Paper%20-%20Inquiry%20on%20Competition%20in%20the%20Water%20and%20Wastewater%20Services%20Sector.pdf>

⁶ United Water is 95 per cent owned by Veolia Water Australia.

⁷ As at July 2007, a review was in progress which would consider the amalgamation of councils responsible for providing water and wastewater services. See *Issues Paper*, op. cit. note 5.

⁸ These parasites can cause gastroenteritis in humans and as a result of unacceptably high levels being found in their drinking water Sydneysiders had to boil all drinking water while the problem lasted. See Sydney Water Inquiry (New South Wales Premier's Department, 1998). According to C. Sheil, (*Water's Fall: Running the Risks with Economic Rationalism*, Pluto Press, Sydney: 2000), McLellan noted that water from the privatised Prospect treatment plant was probably a source of the problem; but the company (Australian Water Services) which built and operated the plant denied all responsibility because its contract did not require that it test for *Cryptosporidium* or *Giardia*. The report itself noted two probable reasons for the presence of the *Cryptosporidium* and *Giardia*: heavy rains following a period of drought which transported the organisms from the catchment to the supply infrastructure, and operational difficulties at the main treatment plant. See also A. Gardner 2003, 'Law and Policy for Sustainable Water Quality Management: Focus on the Sydney Water Catchments', *The Australasian Journal of Natural Resources Law and Policy* 8: 99–128.

⁹ In 2007, 107 local and county councils provide water, sewerage and drainage services in rural and regional New South Wales. See Department of Water and Energy, *Water Industry Competition Act, 2006 Regulations and Consultation Paper*, June 2007. Available at: http://thecabinetoffice.clients.squiz.net/__data/assets/pdf_file/0008/7892/190615_WICA_Consultation_paper.pdf

¹⁰ There are five smaller public water-utilities supply authorities that operate water, supply, sewerage and or drainage function under the *Water Management Act 2000 (NSW)*. These include Gosford City Council and Wyong Shire Council.

¹¹ The third-party access regime is restricted to facilitating access to the excess capacity of the infrastructure in that existing user rights may not be disturbed without compensation: see *Trade Practices Act 1974 (Cth)* s 44W.

¹² *BHP Billiton Iron Ore v The National Competition Council* [2007] FCAFC 157, per Greenwood J at [125] explaining the purpose of Part IIIA of the *TPA*. See also *Water Industry Competition Act 2006 (NSW)* s 21.

¹³ Note that the term 'third-party access' covers 'access to essential facilities', 'common carriage' and 'mandatory unbundling'. Sewage sludge (the solids) may be disposed of in a variety of ways. For example,

see the work of Dr Sandra Maria Campos Alves — CSIRO Land and Water, the University of Adelaide, whose PhD thesis deals with sewage sludge application in corn cultivations. In Galway, Ireland, the sludge is thickened and pasteurised and the dried sludge is dewatered and transported to sites where it is spread on land as an organic fertiliser. See also *Issues Paper, Inquiry on Competition in the Water and Wastewater Services Sector*, op. cit.

¹⁴ See also *Application by Services Sydney Pty Limited* [2005] ACompT 7 at [45] and IPART's description of sewer mining; *Pricing Arrangements for Recycled Water and Sewer Mining*, September 2006: 65.

¹⁵ The authors wish to acknowledge the assistance of Dr Wendy Timms, Senior Engineer, Water Research Laboratory, UNSW School of Civil and Environmental Engineering, Manly Vale, NSW for her assistance in explaining the practicalities of sewer mining. Note that sewer miners in the Sydney region need to gain local council approval for the particular end-use of the recycled water.

¹⁶ Sewer-mining projects in Sydney include those at Kogarah Golf Course and the 'Olympic' suburb of Newington. Other such operations exist in Southwell Park in the ACT (which has been operating since 1995), Cranbourne Sewer Mining Facility near Melbourne (which has been operating since 1974), the Kings Domain Gardens in Melbourne and the Rocks Water Mining Project in Brisbane.

¹⁷ The draft agreement envisages comprehensive monitoring of the third-party access seeker's customer-input volumes. It also acknowledges that a certain level of flow is necessary for the sewerage system to operate effectively while, at the same time, the third-party access seeker needs to retain a certain volume of sewage to operate its plant. Accordingly, an interdependent Flow Management Agreement is contemplated in cl 8.1(b)(iv).

¹⁸ See Davison, Chapter 3 of this volume, for an historical discussion of the importance of piped and flowing water to sewerage systems.

¹⁹ The Australian Energy Market Commission sets rules and policy in the electricity sector. It operates in conjunction with the National Electricity Law, which is contained in a Schedule to *National Electricity (South Australia) Act* 1996. The NEL is applied as law in each participating jurisdiction of the NEM by application statutes; for example, the *National Electricity (Victoria) Act* 2005. In turn, the legislation is supported by regulation providing access regimes. Observe that less frequently third-party access has been applied to transport supply chains such as sea ports and airports. See Marsden and Associates, Research Paper prepared for the Australian Government Department of Agriculture, Fisheries and Forestry, *Third-party Access in Water and Sewerage Infrastructure: Implications for Australia*, 22 December 2005: 9. Available at: http://www.daffa.gov.au/__data/assets/pdf_file/0019/29260/3_water_sew_infr.pdf See also L. Flor and E. Defilippi 2003, 'Port Infrastructure: An Access Model for the Essential Facility', *Maritime Economics and Logistics*, 5 (2): 116–32.

²⁰ Economic Regulation Authority, Western Australia, *Inquiry on Competition in the Water and Wastewater Services Sector*, Draft Report, 3 December 2007 p.(v) notes that at least in the short term, the uncertainty of supply makes the water sector different from other utility industries such as gas and electricity. Available via link at: http://www.era.wa.gov.au/2/508/46/inquiry_into_co.pm

²¹ Department of Environment, Food and Rural Affairs (DEFRA), *Water Act 2003 — Water supply licensing: Response to the Consultation on Collective Modifications of Standard Licence Conditions of Water Supply Licences*, June: 1. For further discussion, see Marsden and Associates, Research Paper prepared for the Australian Government Department of Agriculture, Fisheries and Forestry, *Third-party Access in Water and Sewerage Infrastructure: Implications for Australia*, 22 December 2005: 17. Available at: http://www.daffa.gov.au/__data/assets/pdf_file/0019/29260/3_water_sew_infr.pdf

²² Ofwat is the water and sewerage-service regulation authority in England and Wales.

²³ Litigation has ensued. See *Metro, Water Dist.*, 96 Cal Rptr.2d at 316; *San Luis Coastal Unified School Dist. v City Morro Bay* S. B. 621 (2002) (as amended in the Assembly on 28 August 2002).

²⁴ Marsden Jacob and Associates, op. cit. (note 19)

²⁵ In October 2004, Lakes R Us applied to the NCC under Part IIIA of the *TPA*, 1974. The NCC recommended to the Premier that no declaration be made. Eventually Lakes R Us decided not to pursue its application.

²⁶ Note that the Economic Regulation Authority, Western Australia, *Inquiry on Competition in the Water and Wastewater Services Sector*, Draft Report, 3 December 2007, p. xi, recommends that a state-based third-party access regime be implemented in Western Australia.

²⁷ Officially known as the 'National Competition Policy Report'.

²⁸ The introduction of the *Water Management Act* 2000 (NSW) is an example of legislative change initially tied to NCC payments while the *Water Industry Competition Act* 2006 (NSW) follows up on the government's commitment to private-sector involvement found in Metropolitan Water Directorate, *Consultation*

Paper: Creating a dynamic and competitive metropolitan water industry, May 2006: 4. Available at: http://www.waterforlife.nsw.gov.au/_data/assets/pdf_file/0013/1444/smwp_consult_paper_1.pdf

See R. Lyster, Z. Lipman, N. Franklin, G. Wiffer and L. Pearson, *Environmental and Planning Law in New South Wales*, Federation Press, Sydney, 2007: 275.

²⁹ TPA s 44N provides for the Commonwealth Minister to declare that a State regime is an effective access regime.

³⁰ If more than one state provides the service for which access is sought, vested jurisdiction or other co-operative legislative schemes should be used so that parties need only deal with a single access process. See *Competition Principles Agreement*, April 1995, s 6 (4), a copy of which is available in National Competition Council, *Compendium of National Competition Policy Agreements*, 2nd edition, June 1998, available via link at: <http://www.ncc.gov.au/articleZone.asp?articleZoneID=16>.

³¹ The criteria are set out in TPA Part IIIA, Division 2, ss 44G(2) for the Council and 44H(4) for the Minister.

³² TPA s 44B; where "service" is defined for the purposes of Part IIIA.

³³ This definition is currently being litigated in the context of third-party access to a railway line used for the transport of iron ore in Western Australia's Pilbara region: *BHP Billiton Iron Ore v The National Competition Council* [2007] FCAFC 157. The issue there concerns the paragraph (f) exclusion of a production process from the definition of a service. The Full Federal Court held that the use of the rail line as part of a production process does not qualify for the exemption. The opposite conclusion could have significant implications for a similar argument by a sewerage-service provider that its sewerage network was part of a production process for recycled water.

³⁴ *Application by Services Sydney Pty Limited* [2005] ACompT 7.

³⁵ Postage-stamp pricing is uniform pricing, meaning that the same price per unit is charged irrespective of where the sewage is transported from across Sydney.

³⁶ The ACCC ruling did not determine a pricing formula for the interconnection services, because that issue was not ripe for determination.

³⁷ According to Andrew Stoner, Member for Oxley, Leader of the National Party, Legislative Assembly Hansard (Extract) 14 November 2006 (available at: <http://www.parliament.nsw.gov.au/prod/PARLMENT/hansArt.nsf/V3Key/LA20061114036>>), the New South Wales government spent approximately, \$1.6 million in legal fees opposing the application.

³⁸ For an analysis of the lack of economic viability, see National Competition Council's Draft Recommendations on the application by Services Sydney for Declaration of Sewage Transmission and Interconnection Services Provided by Sydney Water Corporation, November 2004: 30–1. Available at: <http://www.ncc.gov.au/pdf/DEWASSu-022.pdf>. A 'dependent market' is the defined market for the proposed services.

³⁹ The pricing methodology was set out in the Australian Competition and Consumer Commission's pricing determination of July 2007. See *Access Dispute between Services Sydney Pty Ltd and Sydney Water Corporation, Arbitration Report*, 19 July 2007, available via link at: <http://www.accc.gov.au/content/index.phtml/itemId/793015>

⁴⁰ WICA received assent on 27 November 2006 but will only commence once the Regulations have been drafted and finalised.

⁴¹ For example, Western Australia, where the Economic Regulation Authority is currently conducting an Inquiry on Competition in the Water and Wastewater Services Sector: see <http://www.era.wa.gov.au/>

⁴² http://www.waterforlife.nsw.gov.au/_data/assets/pdf_file/0015/1446/wfl2006.pdf at p.115.

⁴³ IPART, 'Investigation into Water and Wastewater Service Provision in the Greater Sydney Region-Final Report', October 2005 available at: <http://www.ipart.nsw.gov.au/files/Section%209%20Investigation%20into%20Water%20and%20Wastewater%20Service%20Provision%20-%20Final%20Report%20-%202028%20November%202005.PDF>. See also Metropolitan Water Directorate, *Consultation Paper: Creating a dynamic and competitive metropolitan water industry*, May 2006: 4. Available at: http://www.waterforlife.nsw.gov.au/_data/assets/pdf_file/0013/1444/smwp_consult_paper_1.pdf

⁴⁴ See long title of Act available at: http://www.austlii.edu.au/au/legis/nsw/consol_act/wica2006333/long-title.html

⁴⁵ Regulations for access are being developed in a separate process.

⁴⁶ WICA 2006 s 21, statement of the objects of Part III, Access to infrastructure services.

⁴⁷ See Indicative Sewer Network Access Agreement between Sydney Water Corporation and the Access Rights Holder, Discussion Draft, 1 August 2007. Under cl 8(2)(a) Sydney Water agrees to make available the Extraction Proportion/Volume for extraction by the Access Rights Holder while cl 8(2) (b) requires the Access Rights Holder to extract the agreed volume or proportion. It is possible, however, that 'ownership' of the sewage will first need to be clarified and resolved.

⁴⁸ WICA (NSW) s 23 (a)–(e) or if the access is declared from the outset s 22 and Schedule 1.

⁴⁹ Arbitration is governed by WICA (NSW) s 40, in conjunction with the Regulations and the *Commercial Arbitration Act* 1984, as well as s 24B–24E of the *Independent Pricing and Tribunal Regulatory Act* 1992. IPART must publish the arbitration determination on its website. See WICA (NSW) s 40 (11).

⁵⁰ Refer to earlier section in this paper 'Current Institutional Frameworks for Water and Wastewater'.

⁵¹ It is notable that in August 2007, SA Water and United Water were heavily criticised in a report based on a two-year study undertaken by the Total Environment Centre. It found that Adelaide's water-pricing scheme was the worst in the country and that the two above-mentioned companies were lacking in transparency and accountability. Adelaide's water-pricing process was also regarded as the 'worst in the nation'. See <http://www.abc.net.au/news/stories/2007/08/10/2001605.htm>. This was not the first time that the private operator, United Water, had been the subject of criticism. In 1996, one year after the United Water contract was signed, the company was also criticised for its part in what was colloquially known as Adelaide's 'big poo', when a 'widespread and offensive stench' covered the city. A team of Queensland University investigators ultimately traced the smell to raw sewage, which had accidentally been released into open treatment ponds at the city's Bolivar treatment plant. The lead investigator was quoted as concluding: 'It was dollars driving everything. The big emphasis was on minimising costs. The Bolivar incident is an illustration of what can happen when things like monitoring and maintenance are cut to the bone.' See P. Mac, 'Water Privatisation the problem, not the solution', *The Guardian*, 14 May 2003, Issue No 1137 available at: <http://www.cpa.org.au/garchve03/1137water.html>

⁵² The authors also wish to acknowledge their indebtedness to Luke Woodward, Partner, Gilbert + Tobin Lawyers, Sydney, for his discussions in relation to the WICA Licensing Scheme Regulations.

⁵³ NSW Cabinet Office, *Water Industry Competition (Access to Infrastructure Services) Regulation 2007* available at: http://www.cabinet.nsw.gov.au/__data/assets/pdf_file/0012/8400/Draft_Regulation.pdf

⁵⁴ NSW Department of Premier and Cabinet, Technical assistance for the Development of the Water Industry Competition (Access Regulation) Final Report, May 2007: 2. Available at: http://www.cabinet.nsw.gov.au/__data/assets/pdf_file/0011/8399/GHD_Report.pdf

⁵⁵ This concept is explained by R. Rhodes, 'The Hollowing Out of the State', 65 *Political Quarterly* 138 (1964).

⁵⁶ See N. Gunningham and P. Grabosky, *Smart Regulation: Designing Environmental Policy*, Clarendon Press, Oxford: 1988; Australian Government, Office of Best Practice Regulation, *Best Practice Regulation Handbook*: November 2006; Australian Government, *Rethinking Regulation, Report of the Taskforce on Reducing Regulation Burdens on Business*, January 2006. Available via link at: <http://www.treasury.gov.au/contentitem.asp?ContentID=1141&NavID=>

⁵⁷ J. Black, 'Tensions in the Regulatory State' 2007, *Public Law* 58–73: 62. See also J. Black 2002, 'Critical Reflections on Regulation' 27 *Australian Journal of Legal Philosophy* 1; and CARR Discussion Paper (2002) available at: www.lse.ac.uk/collections/carr

⁵⁸ Andrew Stoner, Member for Oxley, Leader of the National Party, Legislative Assembly Hansard (Extract), 14 November 2006. Available at: <http://www.parliament.nsw.gov.au/prod/PARLMENT/hansArt.nsf/V3Key/LA20061114036>

⁵⁹ See *Application by Services Sydney Pty Limited* [2005] ACompT 7 at [192]–[208], where the Tribunal discusses mainly arguments about the public interest in providing access under the then proposed state regime and potentially adverse impacts on service pricing.

⁶⁰ Personal communication from Dr Michael Keating, Chair of IPART to Alex Gardner, November 2007.

⁶¹ WICA s 41(3). 'Postage-stamp pricing' is defined in s 41(3) as the system of pricing in which the same kinds of customers within the same area of operations are charged the same price for the same service.

⁶² Based on private conversations between water law practitioners and Janice Gray on 7 August 2007.

⁶³ Andrew Stoner, Member for Oxley, Leader of the National Party, New South Wales Legislative Assembly, Hansard (Extract), 14 November 2006. Available at: <http://www.parliament.nsw.gov.au/prod/PARLMENT/hansArt.nsf/V3Key/LA20061114036> .

⁶⁴ For a list of independent reasons why opportunities for third-party access may not be taken up, see Marsden Jacob Associates, op. cit.: 86.

⁶⁵ See following discussion of property rights.

⁶⁶ See Department of Water and Energy, *Water Industry Competition Act 2006, Regulations Consultation Paper*, June 2007: 33. Available at: http://www.waterforlife.nsw.gov.au/___data/as-sets/pdf_file/0008/7892/190615_WICA_Consultation_paper.pdf

⁶⁷ Public Interest Advocacy Centre, *Submission to Consultation Paper: Creating a dynamic and competitive metropolitan water industry*, 7 June 2006: 5. Figures said to be based, in part, on research commissioned by IPART.

⁶⁸ Ibid.

⁶⁹ The circumstances included: (1) the high levels of dissatisfaction with the incumbent electricity supplier in South Australia; (2) the South Australian Government's offer to concession-card holders of a \$50 cash rebate to switch; (3) the existence of comparative price information services in Victoria and South Australia which do not exist in New South Wales; and (4) the fact that Victoria and South Australia are the second- and third-most active markets in the world. See IPART, *Promoting Retail Competition and Investment in the NSW Electricity Industry: Regulated Electricity Tariffs and Charges for Small Customers 2007–2010*. Available at: http://www.ipart.nsw.gov.au/investigation_content.asp?industry=2§or=3&inquiry=108&doctype=7&dockey=1&docgroup=1

⁷⁰ See <http://www.abc.net.au/news/stories/2007/12/08/2113412.htm>; for popular comment see: <http://www.crikey.com.au/Business/20071206-NSW-Electricity-privatisation-will-Luddite-economics-rule-in-NSW.html>

⁷¹ The Federal Minister for Communications implemented the 'Do Not Call Register' on 3 May 2007. The Register lists the telephone numbers of people and organisations that telemarketers are not to call.

⁷² Retail headroom involves making it easier for new retailers to enter the market and win customers, by raising the regulated price of water for consumers, above that which reflects efficient costs.

⁷³ This scenario also assumes that the public utility staff who were retrenched either took positions outside the industry or lost their skills in some way.

⁷⁴ See reference to Adelaide's 'big pong' under section 'WICA's relationship with other legislation'.

⁷⁵ Sydney Water's draft third-party access agreement asserts, in the recitals, its ownership of infrastructure. Draft agreement made available to Janice Gray, 17 September 2007.

⁷⁶ See D. E. Fisher, *Water Law*, LBC, Sydney, 2000; J. Gray, 'Watered Down? Legal Constructs, Tradeable Entitlements and the Regulation of Water' in D. Ghosh, H. Goodall and S. Donald (eds) 2008, *Sovereignty and Borders in Asia and Oceania*, Routledge, forthcoming.

⁷⁷ For example, if I collect urine to take to a pathologist for testing, the urine is most likely to be my property. (See *R v Welsh* [1974] RTR 478). If my hair is cut, the cut hair is my property to sell to a wig-maker, for example. (See *R v Herbert* [1961] JPLGR 12). See also *Venner v State of Maryland* 354 A2d 483 (1976) at 498–9 on the question of human waste. Note human bodily waste is literally created by the householder. It is certainly property after it has been treated as sludge and it is possibly property beforehand; but see *Moore v The Regents of the University of California* (1990) 793 P 2d 479. In that case the court had to decide on whether it was possible to have property rights in human tissue; that is, to be the owner of a cell line. In a split decision, it found that there was no property in the cell line but the decision in this case was influenced by the fact that legislation had taken property rights away from human body parts. See also *Doodeward v Spence* [1908] HCA 45; (1908) 6 CLR 406 (31 July 1908) per Griffith CJ for a discussion of property in the human body after death. Note also that even if the human bodily waste component of sewage is not property, property may still exist in the newly created product of sewage. To explain, although air itself might not be the subject of property, a sponge cake that is aerated is no less property because it contains air. Property exists in the new form of a cake.

⁷⁸ For example, Sydney Water Customer Contract — see <http://www.sydneywater.com.au/WhoWeAre/OperatingLicence/CustomerContract.cfm>. See also the *Sydney Water Act 1994* (NSW).

⁷⁹ Note that although the language of 'control' is used in relation to sewage, IPART does not go as far as saying that incumbent water agencies actually have property in the sewage. See IPART, *Pricing Arrangements for Recycled Water and Sewer Mining*, September 2006, p.66. Available at: <http://www.ipart.nsw.gov.au/files/Final%20Report%20-%20Pricing%20Arrangements%20for%20recycled%20water%20and%20sewer%20mining%20-%20September%202006%20-%20website%20document.PDF>

⁸⁰ See *Haynes' Case* (1614) 12 Co Rep 113, 77 ER 1389. *R v Edwards and Stacey* (1877) 13 Cox CC 384 at 385; *Tancil v Seaton* (1877) 26 AmRep 380 at 382, 28 Gratt 601; *Vincent State Bank of NSW Ltd* (Unreported, Supreme Court of NSW, 30 July 1993). Accordingly, K. Gray and S. Gray, *Elements of Land Law*, Oxford University Press, Oxford, 2004: 55, point out that one cannot abandon a chattel on one's own land.

⁸¹ Argued by parity of reasoning with *Munday v Australian Capital Territory* (Unreported, Supreme Court, ACT, 8 July 1998) per Higgins J.

⁸² See *R (Thames Water Utilities) v South East London Division, Bromley Magistrates' Court* (Environment Agency as interested party), Court of Justice of the European Communities, Second Chamber, Case C-252/05, 10 May 2007. (Environment Agency as an interested party), heard by the Second Chamber of the Court of Justice of the European Communities, on a reference for a preliminary ruling from the Queen's Bench Division (Administrative Court).

⁸³ In the Australian context, see *Drake v Minister for Planning* [2003] NSWLEC 270 for a discussion of (a) waste as something valuable and (b) 'goods'. Also see *Protection of the Environment Operations Act* 1997 (NSW).

⁸⁴ K. Gray 1991, 'Property in Thin Air', *CLJ* 252. Note, in a strata scheme there is property in a horizontal airspace.