Regulatory Pricing and Access Issues

by

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Introduction

The key issue in privatising infrastructure, and arguably the reason for it to be in public ownership, is the concern about natural monopoly. A monopolist is able to extract high prices by reducing availability of supply or access. This concern about "price gouging" and wasted supply is of long standing.

From modern economies' earliest stages, governments have exercised control over infrastructure pricing and access. In their World Bank Note *Back to the Future*, Klein and Roger document the first monopoly franchises in gas and water starting in the 1820s with rates of returns on gas, water, and rail introduced by the mid 1850s in England and North America.

The issues for Victoria and Australia are:

- the structure and powers of the regulatory agencies
- the services to be regulated
- the standards that should be regulated
- the "just" price for the regulated services
- ensuring information is available to make satisfactory regulatory decisions without imposing undue cost on the businesses and regulators.

The Relevant Institutions and the Regulated Services

Overall Regulatory Arrangements

Australia's federal Constitution has brought regulatory tiers operating at the national and State levels. Although the federal (Commonwealth) Government could probably assume overall regulatory control through its powers over trade and corporations, in practice inter-governmental agreements of 1995 have divided the regulatory tasks.

These agreements by the Council of Australian Governments (CoAG) established a National Competition Policy (NCP) for Australia. They cover seven facets of reform:

- the review and, where appropriate, reform of all laws which restrict competition by the year 2000;
- the restructuring of public sector monopoly businesses;
- the introduction of competitive neutrality so that public businesses do not enjoy unfair advantages when competing with private businesses;
- access to nationally significant infrastructure services to promote competition in related markets;

- the extension of prices surveillance to government businesses to deal with those circumstances where all other competition policy reforms prove inadequate;
- the extension of the operation of the *Trade Practices Act 1974* to government business enterprises and unincorporated businesses; and
- the implementation of reforms agreed to by COAG covering the electricity, gas, water and road transport industries.

The centrepieces of the reform agenda were the opening of access for monopoly facilities, general deregulatory prescriptions and the insistence that governments ensure equivalent treatment for their own business enterprises with those that are privately owned. The bulk of the documentation of the agreements covered specific matters on electricity, gas, water road transport.

Victoria's Regulator

The Office of the Regulator-General (the Office) was established on 1 July 1994 under the Office of the Regulator-General Act 1994 (the Act). The Office's corporate objective is to give effect to the Government's micro-economic reform agenda by regulating the electricity, water, gas, grain handling and ports industries and other industries which the Government may include within the Office's mandate.

The regulatory framework[1] sets both general and industry specific objectives for the Office is:

> to promote competitive market conduct;
> to prevent misuse of monopoly or market powers;
> to facilitate entry into the relevant markets;
> to facilitate efficiency in regulated industries;
> to ensure that users and consumers benefit from competition and efficiency.

Regulated industries comprise:

- The Victorian electricity industry which is regulated with respect to:
    - price regulation
    - standards and conditions of service and supply
    - licensing market conduct
    - access

- The Melbourne water and sewerage industries which are regulated with regard to
    - standards and conditions of service and supply
    - licensing
    - market conduct

- Gas which is to be regulated with regard to:
    - price regulation
    - standards and conditions of service and supply

[1] http://www.reggen.vic.gov.au/docs/about/offobj.htm

    - licensing
    - market conduct
    - access

- The industry of facilitating export shipping of grain where regulations cover:
    - price
    - access

- Certain services in the ports of Melbourne, Geelong, Portland and Hastings where regulations cover
    - price regulation
    - standards and conditions of service and supply
    - access

- Rail Track covering access

Commonwealth Regulatory Agencies and Responsibilities

Three institutions have been established to administer the National access regime (and the other elements of the National Competition Policy reforms):

- *National Competition Council (NCC):* the Council is an independent advisory body for governments involved in implementing competition policy reforms. In relation to access, the Council recommends to relevant Ministers which infrastructure services should be declared under the National regime. It also considers whether other access regimes are *effective* (i.e. acceptable).

- *Australian Competition and Consumer Commission:* the ACCC administers various parts of the *Trade Practices Act* and the *Prices Surveillance Act.* In relation to Part IIIA, the ACCC can arbitrate the terms and conditions of access if, after a service is declared, the businesses involved cannot agree. It also registers contracts arrived at by the businesses themselves. And it decides whether or not to accept undertakings offered by infrastructure owners.

- *Australian Competition Tribunal:* this body hears appeals on ACCC decisions regarding certain trade practices matters. It also hears appeals on certain decisions made by relevant Ministers

In addition, there are other institutions with responsibilities which fall under the general oversight of the ACCC. In the case of electricity, these are the National Electricity Code Administrator (NECA), which is the controlling authority for the code and rules governing the Market; and the National Electricity Market Management Company (NEMMCO), which is the administrator of the Market. The ACCC has authorised the general market rules and the access code.

Coordination and Division of Responsibilities Between Commonwealth and State Regulators

At both the State and Commonwealth levels, the regulators have been consolidated into single agencies so that they assume responsibility for all the regulated businesses. This is to avoid what are seen to be inconsistent approaches from the UK arrangements where separate agencies handle gas, water, electricity and telecommunications.

Through the Australian Competition and Consumer Commission, (ACCC), the Commonwealth jurisdiction extends over telecommunications, airports, inter-State rail, and the transmission components of gas and electricity. State jurisdiction is over ports, water, intra-State rail, and the distribution components of gas and electricity and in Victoria falls under the Office of the Regulator-General (ORG). Roads also fall under State regulatory control but are not administered by the ORG.

Further to facilitate greater regulatory consistency between the different jurisdictional regulators, the heads of the State regulatory agencies are Commissioners of the ACCC. In addition, the regulators have established a Public Utility Regulators Forum to bring about an integrated approach to regulation. Establishing a pricing regime for Victorian gas distribution and transmission is the first matter covering both State and Commonwealth jurisdictional areas. In their draft determinations the ORG and ACCC cooperated closely and came to a common view.

The Australian Access Regime

The National access regime contained in Part IIIA of the *Trade Practices Act* sets out three mechanisms to assist businesses to obtain access to infrastructure services:

- *declaration (and arbitration):* under this approach, a business which wants access to a particular infrastructure service applies to have the service “declared”. If it is, the business and the infrastructure operator are then required to negotiate terms and conditions of access. If they fail to reach agreement, the terms and conditions are determined through legally binding arbitration.

- *other “effective” regimes:* where an “effective” access regime already exists, a business seeking access must use that regime.

- *undertakings:* this approach allows infrastructure operators to make a formal undertaking setting out the terms and conditions on which they will provide access to their services. If accepted, these undertakings are legally binding, so other businesses can use them to gain access.

Under the declaration procedure, a third party may request the NCC to recommend declaration of the services of the facility to the Minister who, in deciding whether to declare, must be satisfied on certain matters, including that:

- access would promote competition in at least one other market;
- it would be uneconomic to develop another facility;
- the facility is of national significance;

- access would not be contrary to the public interest; and
- the service is not already subject to an "effective" access regime.

Although the regime excludes a facility already covered by a State regulatory regime, in effect such a facility would be brought within the national regime if it departed markedly from the National principles.

The NCC recognised that access regulation can also entail costs if it is applied inappropriately or too widely:

- it may diminish incentives for businesses to invest in infrastructure facilities and thus limit, rather than enhance, overall competition and economic efficiency;

- compelling infrastructure owners to provide access to others necessarily can impinge on their private property rights;

- legislated access regimes may represent an overkill and engender further market distortions in some situations.

The NCC issued a guide to the National Access regime[2] which described “essential” infrastructure, like gas and water pipes and electricity wires, as a special case where competition is likely to be absent. It saw such facilities as having substantial market power, which their owners could exploit by charging monopolistic prices to user businesses and hence consumers.

In addition, it saw the possibility of a business which operates essential infrastructure and a commercial arm in upstream or downstream markets discriminating against upstream or downstream competitors by denying them access or offering them access to its infrastructure only on unfavourable terms and conditions.

Structural separation of the industry is one solution to this. This leaves the essential facility as a stand-alone business. The issue of whether and how far to de-integrate the previously integrated monopolies is one of contention world wide. In Victoria, the electricity supply was divided into three components: generation, transmission and distribution/retailing. In the case of gas, retailing and distribution have been structurally separated. Disagreements between the Victorian Government and the regulatory authorities over the price base for the pipeline services delayed the privatisation of the gas industry.

Although structural separation offers greater certainties that a business will not abuse its monopoly over essential facilities to benefit an affiliated retailing arm, de-integration can impose administrative costs. The benefits of requiring a separation of retailing and distribution, while conceptually present, are less apparent in practice. In Victoria, there has been a remarkable absence of claims of the two arms of the same

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[2] *The National Access Regime: A Draft Guide to Part IIIA of the Trade Practices Act*, August 1996.

business in electricity colluding so that the retail arm wins business either by having an excessive amount of shared costs loaded on to the monopoly or by using information to its competitive advantage.

Further evidence of a lack of monopolistic abuse is seen in customer switching. If the incumbent distributor/retailer were to enjoy strong market advantages, we would expect to see little change in market positions where customers are made contestable. In fact, the experience in Victoria and the UK has been that some 40 per cent of customers have switched retailer once given the opportunity.

It may be that an even higher degree of churning would have occurred had the nexus between wires and retailing been forcibly severed. But there have been few voices claiming this in Australia. There is, in addition, no apparent call for such separation in either the US or UK. Indeed, there has been little discussion of these matters in the material addressing the Californian nor the Federal US regulations.

Regulation, the Inferior Substitute for Market Disciplines

Forcing Competition or Maintaining Secure Property Rights

Competition policy often means balancing property rights against a requirement on owners to make their property available to others. It is therefore a conflict, clearly recognised by the NCC, between two facets of efficient operations involving capital assets:

- the incentive to minimise costs, seek out more valued uses and commit to capital expenditure that absolute control over a property offers individuals; and
- the downward cost pressures and increased innovation that the rivalry of many different suppliers and many different customers brings.

In the past, government ownership provided the means of overcoming this conflict when inherent natural monopoly was perceived. But the deficiencies of that ownership–high costs, lack of innovation, exclusion of alternative suppliers–has been the stimulus to privatisation and its cousin corporatisation.

In general regulation is a poor substitute for market disciplines on efficiency because regulators are:

- ill-placed to determine the price and service levels that the market would prefer;
- call for vast amounts of information in an attempt to reconstruct the costs of provision and in doing so divert the most capable resources in the businesses from meeting consumer needs towards meeting their needs of regulators and seeking to outmanoeuvre them; and
- become captive either of the businesses they regulate or of politico/consumer interests rather than those of overall economic efficiency.

For these reasons, few would argue for the regulated route to be used except as a last resort where competitive provision is not possible. And the competition policy carefully limits the application to facilities that are not "economically feasible to duplicate"[3], where access is "necessary in order to permit effective competition in an upstream or downstream market"[4] and where "the facility is of national significance"[5].

Many go further and argue against forced de-integration. Thus, Crews[6] argues that electricity networks do not have natural monopoly characteristics anyway. He maintains that the potential for competition in network industries is greater than is usually acknowledged, and that regulation for open access (ie mandatory separation of network businesses) is tantamount to an "uncompensated taking" of private property. Crews's major recommendation therefore is the abolition of monopoly franchises and the removal of regulation altogether.

In the same vein, Pleatsikas and Teece[7] argue that vertical integration allows greater control of production, better integration of the delivery of the final product, and reduced risk. They develop their theme from the traditional "make or buy" decisions that all firms face noting that no firm does everything in-house nor do many firms subcontract all their output. They recognise that costs will be shifted to competitors' outputs where there is monopoly, but consider the benefits outweigh these costs.

Similarly, several papers by Moran[8] have pointed out that regulation may also reduce efficiency if it prevents backward and forward linkages by requiring common carriage when risks may be reduced by integration. These argue that risk is the most important feature of major capital investments and can be reduced by forward and backward linkages.

Developments in Competitive Provision of Infrastructure

The Victorian Office of the Regulator-General is examining a by-pass proposal by one distribution business seeking to push new competitive lines into the territory of another. This is a potent discipline on a business to price its services at levels that reflect cost of service. At the present stage the proposal has not been accepted due to doubts about the conditions under which the distribution assets were sold.

Even though by-pass is not forbidden and provides a strong market based discipline on providers, the ORG proceeded with excessive caution. It asked such questions as:

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[3] Competition Policy Agreement April 1995, Clause 6(1)(a).

[4] ibid, Clause 6(1)(b).

[5] ibid, Clause 6(1)(c).

[6] Clyde Wayne Crews Jr, *"Why Open Access Can't Compete",* April 1998, Cato Policy Institute, Washington DC

[7] Pleatsikas C. and Teece D, *The Competitive Implications of Mandatory Vertical Disintegration in Network Industries*, Ninth Annual Workshop of the Competition and Law Policy Review, July 1998

[8] Submission to the ACCC: Access Arrangements by Transmission Pipelines Australia, Energy Forum Issues Paper no. 9, Institute of Public Affairs, June 1998

· *Would overlapping distribution areas impose an appropriate level of "competitive discipline"?*
· *Can the Office be satisfied that sufficient or effective competition will exist with more than one licensee approved to supply the Docklands area to enable the relaxation of price controls?*
· *What considerations need to be addressed in assessing the competition efficiency trade-off?*
· *Should the Office allow more than one network service provider to distribute electricity in the Docklands?*
· *Is the development of dual (or more) networks in the Docklands likely to be economically efficient?*
· *How will the approval or otherwise of Powercor's licence variation affect the financial viability of the industry?*

These are early days in the Victorian electricity market and the nature of these questions indicates that the ORG is not yet convinced of the merits of competition as the superior regulator. Instead of seeking to improve on competitive outcomes, the regulator should be simply saying, "We are in business to promote competition. We are not about protecting one set of shareholders or second guessing whether a by-pass makes economic sense. The ability to offer competition is the ultimate test of whether the regulated price is appropriate and the provider has every opportunity to selectively reduce price to meet competition. An application for a new line is automatically accepted." Hopefully, with greater experience the regulator will move to this position.

Australian Regulators' Approaches to Pricing Issues

Models of Different Regulatory Approaches

The main price and access regulatory decisions are to be made in future years. Integral to the privatisation of electricity was a five year Government determination of the prices for the "essential" facilities. For electricity, a post 2001 review is to establish prices on the basis set by a regulator rather than governments.

There are three models under which network facilities might operate:

1. the no-regulation option where market forces are left to determine price and service levels;
2. the incentive based model under which some standard overall level of productivity is expected and price caps are set to allow any profits over and above this for the line business (CPI-X[9]);
3. a model where the regulator carefully examines all required expenditures of each line business and determines the necessary expenditure and, in effect, profit levels.

[9] Usuallly attributed to Littlechild, S. *Regulation of British Telecommunications' Profitability*: Report to the Secretary of State, February 1983.

The no regulation model is the preferred approach but the issue is how practicable is it? How much is the provision of infrastructural services open to competition or contestable?

Although there is no substantial regulation of generation or retailing, the networks were envisaged as indefinitely remaining natural monopolies. This requires a regulator to determine the "just" price, one that mimics the outcome that would be expected to arise is the market were competitive. As is being observed in the applications to by-pass established facilities, the assumption of natural monopoly must be subject to doubt.

Nonetheless, the Victorian intent is to pursue a regulated price path. The specific approach offered by draft proposals by the ORG[10] is for CPI-X price regulation, but the complexity and the forward looking and individual business based nature of the present proposal places it some way between the CPI-X price cap and the third model of profit regulation. This approach, which tends to be that followed in the UK, will require considerably more information to be generated than one (referred to in Victoria as US style price capping[11]) that sets future prices based on the overall industry trends.

Recent Decisions on Pricing

A pointer for the future philosophy of price setting is offered by the draft decisions of the Victorian ORG and the ACCC on the Victorian gas distribution and transmission systems. Those draft decisions set reference tariffs and overall revenue levels based on:

- a DORC valuation for the existing assets with optimisation bringing the value of those assets down by 9%;
- consistent with the Victorian Access Code, a DAC valuation adjusted for inflation for new facilities and for future reviews;
- O&M costs are to be reduced by 2.3% per annum over the next five years (the Government proposal was for a real annual reduction of 1.5%);
- a WACC at 7% compared to the value of 9.73% proposed by the Government; this level is designed to apply both to the existing network and extensions;
- an X factor defining the increase in productivity required year by year and consequent price reduction of 3.7% (compared to the Government proposal of 3.4%, with the differences attributable to different inflation forecasts).

The ACCC estimates are that this will bring a price reduction of 17% on the proposal of the Victorian Government which itself was for a substantial price reduction. The

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[10] Consultation Paper No. 1 2001 ELECTRICITY DISTRIBUTION PRICE REVIEW, Framework and Approach, June 1998

[11] Kaufmann L, and Lowry M. N., *Updating price controls for Victoria's power distributors: analysis and options*, Laurits R. Christensen Associates, Sept. 1997

draft is estimated to reduce the value of the Victorian gas distribution businesses by some $800 million.

The rates specified apply both to the existing pipes and to new connections and augmentations.

Addressing the Appropriate Price Regulation Philosophies

Existing Networks

For the existing systems, customer commitments were made on the basis of some predictable level of price trends that were controlled by political decisions. These offered some assurances that the network service provider (NSP) would not embark upon a process of raising prices once customers were captive. An implicit contract was in place. In spite of the fact that the networks themselves are now duplicable, this could justify a regulatory regime to restrain existing network owners' abilities to extract excessive profits.

Requiring lower prices than those set under the implicit regulatory contract of government ownership (or some lower level specified by the government-owner) could distort the arrangements that have been established. If the regulator requires lower prices, he is seeking to redistribute the respective parties' long standing shares in the gains from trade. This is not an appropriate role for regulators. The distortions that follow from it will rebound on the overall levels of efficiency.

The approach proposed on gas has inevitable ramifications for all infrastructure. The price path proposed is a major departure from the much-vaunted "light handed" approach. This would remove barriers to rival suppliers wishing to contest the market and offer incentives to NSPs to operate efficiently by lowering costs and winning new business. The regulators' most appropriate role is to set rules that prevent a monopolist from unfairly preventing competitive entry. Such rules would, for example, forbid the incumbent from combating potential new competitive threats by refusing to allow a connection or pricing a competitive connection at a level that effectively denies it.

If the regulator attempts to control price to reduce the returns beyond a level that the incumbent considers appropriate, several adverse effects are likely to follow:

- the network provider will see little merit in maintaining the network to standards expected and the network reliability will progressively decline;
- the prices will be set so low as to prevent profitable by-pass and therefore competitive provision, an outcome at variance with the basic goals set for the regulatory authorities.

In addresses to the Energy Forum Conference[12] *Regulating Electricity Utility Monopolies*, the Deputy Chairperson of the ACCC (Mr Asher) and the Victorian Regulator-General (Dr Tamblyn) stressed that the decisions on gas networks were *draft* decisions. Mr Asher said that the 7% capped return on the Victorian gas network system may be realistic for that particular network given its established and stable throughput. He said that:

- "new pipelines would be addressed quite differently from the well established Victorian system. …. Under the tender provisions of the National Gas Access Code, as replicated in the Victorian Access Code, a regulated WACC does not apply to the establishment of reference tariffs. Instead the regulator merely monitors the competitive bidding process to ensure the bidder that offers the lowest expected tariff levels over the lifetime of the pipeline wins the contract. … As such (the procedure) automatically takes account of any special risks that may be associated with a greenfields project."
- "the WACC derived for the Victorian access arrangements (need not apply) to other industries like telecommunications, airports, rail or electricity." He said a case by case approach would be applied to provide the right incentive for investment.

The statements of the regulators clarifying their draft decisions on Victorian gas offer some comfort, but they do rely either on a competitive tender establishing a market price or a regulator having the same view of the risk/return requirements as a commercial entity.

In the first case, requiring competitive tenders rules out an entrepreneur simply spotting an opportunity and proceeding to profitably serve it. A requirement for tenders is likely to reduce incentives to search out such opportunities.

As far as the regulator establishing a fair return is concerned, the draft decision setting a 7% WACC for the Victorian has not given investors a great deal of confidence in the regulators' commercial judgements. And, notwithstanding the regulators' statements, the draft decisions inevitably have implications for all gas and electricity carriage businesses and extend into other network providers like telecommunications and water. This is certainly perceived to be the case by investors, who have sharply marked down the share value of other carriers like United Energy.

Wider Implications of Recent Decisions

The regulators see their role as the prevention of possible price gouging by businesses controlling "essential facilities". However, the lines businesses in gas and electricity are not immune from competition, as is evident by the plans of rival Victorian electricity distributors to drive new lines into each others' territory. The nightmare for a utility business is that a hard-nosed approach to pricing and service this will call forth competition and leave the existing asset "stranded". Fear of having "stranded"

[12] The Shell Theatrette, Melbourne 24 July 1998.

assets means that little by-pass is actually likely to eventuate. But the control over excess prices that competition brings does not require that a competitor physically emerges. Contestability for the market is quite adequate.

It might be said that if the price is set low, the customer will obtain benefits. But prices set artificially low will prove self-defeating. Suppliers will seek to incur only minimum expenditures to maintain and expand the facilities, which will eventually become less reliable. Artificially low prices also offer unfair advantages to existing generators facing possible competition from co-generators able to locate in areas where they avoid transmission charges. And customers will not have an opportunity to seek out an alternative wire or gas source of supply, because the regulator's decisions ensure such sources will be unprofitable.

New Network Facilities

Australian regulators have not always been keen to abandon controls even where there is adequate competition[13]. Where there is more than one facility or the possibility of more than one facility regulatory action should be a mere formality. To date, the regulators have indicated a wish to maintain regulations even where supply is from two sources.

This is excessive. Indeed, with an absence of exclusive franchises, there is no case for regulatory control over a new facility. After all a new facility serves a market that by definition was previously unserved. The customers of that facility can only be made better off. And regulating a proposed new line may undermine its profitability and result in fewer pipelines being built or being built at a lower than optimal capacity. The builder may not wish to be hostage in future to regulatory decisions over what is a fair price for carriage.

Concluding Comments

Pricing of "essential' facilities is likely to be the most controversial aspect of the Victorian privatisation process. It is already requiring vast amounts of information and heated debate over the appropriate approach (setting prices based on industry averages versus business-by-business) and the appropriate rate of return. These are issues of vast importance in view of the "sunk" nature of the costs of provision.

The key task for a regulator is to determine the "just" price–the price that would emerge if the market were fully competitive. A test in determining whether a regulated price for a sunk asset provides the correct incentives is to ask whether that price would have been sufficient to justify the investment had it been stipulated prior to the system being built. This can be supplemented by assessing the costs today of undertaking the sunk investment and deducting that part of the investment that has not proved appropriate.

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13 See Australian Competition Policy: Deregulation Or Reregulation, Institute of Public Affairs, Melbourne 1998.

Had the proposed price regime been in place when the gas pipelines were being planned, no commercial organisation would have considered the proposed 7% return sufficient to justify the risks of building them. This is of crucial importance to the future competitive process and incentives to develop the systems.

Victoria's privatisations and utility de-aggregations have been an immense success in delivering lower prices and greater efficiency. This success will be jeopardised if the regulatory arrangements suppress competition and divert firms' resources into combatting the regulator rather than better serving the market.