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**UTILITY REGULATION
IN
NEW ZEALAND**

***BY DR A E BOLLARD
Chairman, New Zealand Commerce Commission***

Wellington, New Zealand

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1. Reform of the Utilities Sector

The term 'utility' is difficult to define precisely, but generally it is applied to the communications, energy, transport, and 'public amenities' sectors, including telecommunications, broadcasting, electricity, gas, railways, sewerage and water (Kahn, 1995). These industries usually exhibit two characteristics which may be shared by the ports, airports and roads. Firstly, utilities provide a distribution, transmission, or transport service through a network of cables, pipes or other facilities which tend to enjoy such large scale economies as to become natural monopolies. Secondly, since the service they provide is often regarded as an 'essential' input to other industries, the efficiency of utilities has a widespread impact on the efficiency of other firms. A further characteristic in New Zealand, and often elsewhere, is that historically the social importance of such industries, and doubts about their ability to function in competitive markets, have resulted in a history of public ownership.

Until the mid-1980s, utilities in New Zealand were generally statutory monopolies under state ownership, and run by Government trading departments or divisions. In the early 1980s the Treasury estimated that public sector enterprises in New Zealand, which covered but were not limited to utilities, accounted for about 12 per cent of GDP, and for some 20 per cent of investment in the economy (Treasury, 1984).² Since they often produced 'essential' inputs used by firms in the private sector, their efficiency, price-setting and investment behaviour had a major impact on the competitiveness of the economy as a whole. However, their performance was judged by critics to have been poor:

Over the twenty years to 1985/86 the government invested \$5,000 million (in 1986 dollars) of taxpayers' money in the departmental trading activities of the Airways System, the Lands and Survey Department and Forest Service, the Post Office, the State Coal Mines, and the Electricity Division of the Ministry of Energy. In 1985/86 these organisations managed assets valued at over \$20 billion but returned no net after tax returns to taxpayers.³

Several reasons have been adduced for the inadequate performance: the conflict they faced between various commercial and social objectives; an operating environment in which competition was usually lacking; access to funding from government sources at favourable rates of interest; lack of accountability to, and inadequate monitoring of performance by, government; and political interference.⁴

As part of wider economic liberalisation policies, these industries were progressively reformed in the years following 1985. The most important steps were:

- the removal of nearly all statutory monopoly rights so as to expose utilities to competition;
- the corporatisation (and in some cases, privatisation) of numerous state trading departments so as to place them in a company form of organisation, with commercial objectives;
- their restructuring to isolate the natural monopoly elements from the more contestable parts of the industries;
- the abolition of social service obligations or their explicit funding by government rather than, as previously, by cross-subsidy with profits earned by the business in incontestable markets (Duncan and Bollard, 1992).⁵

Under the State-Owned Enterprises Act 1986 the major government trading departments were corporatised on 1st April 1987, from which time they were required to operate as profitable and successful businesses, comparable with their private sector counterparts. Goods and services were to be marketed on a user pays basis, unless an explicit subsidy was provided to finance non-commercial activities. Regulatory barriers were dismantled, thereby exposing the new corporations to private sector competition, and other forms of special assistance - such as subsidised government loans - were removed. Taxes and dividends had to be paid to the government. In short, “competitive neutrality” was to apply.

Monitoring of performance was enhanced by the establishment of measurable targets based on profitability, although asset values were hard to assess. Departmental organisation was replaced by a company (limited liability) structure with the government as sole shareholder. Managers were given greater independence in decision-making, but were accountable to boards of directors appointed

from the private sector, and ultimately to Parliament through the minister of finance and the responsible minister. The intention was to remove decision-making in state-owned enterprises (SOEs) from direct political interference.

While these reforms marked a major step forward, it was argued that certain problems remained with the SOE model (New Zealand Business Roundtable, 1988). Firstly, since the ownership rights in SOEs are diverse and cannot be transferred (ownership being vested in the Crown), managers lack the incentives to perform normally provided through the share market. They face no threat of take-over, and the monitoring of performance by shareholders and investment analysts is attenuated (the free rider problem). Secondly, the incentives provided by the possibility of bankruptcy are regarded as minimal because of an implicit government guarantee. By reducing risk, this may distort the cost of capital in a downwards direction. Finally, some claim that SOE decision-making is subject to residual government interference, since the directors are political appointees, and an annual “statement of corporate intent” has to be approved by the government. Moreover, interest groups may pressure the government to hold inquiries into particular management decisions, as happened with the pricing of the Electricity Corporation (ECNZ) and New Zealand Post’s rural mail charges in the early 1990s.

Such considerations have been argued as justifying privatisation of the SOEs, as has happened in many cases, including Telecom and New Zealand Rail.⁶ Competition and other concerns have hindered moves to privatise other major utilities such as Electricity Corporation, Coal Corporation, and Television New Zealand.

2. The Problem of Utility Regulation

In most Western countries the regulation of utilities poses more complex problems than the regulation either of non-utility SOEs, or (generally) of private sector firms through competition policy. This is partly because utilities - particularly those in the energy sector - have intrinsic features which, by leading to small numbers of industry participants and by raising significant barriers to entry and exit, serve to attenuate competition.

These features include: substantial economies of scale, sometimes to the point of natural monopoly (eg high voltage electricity transmission lines); economies of scope (eg in the provision of different telecommunication services); and large, lumpy, immobile investments in sunk assets (eg natural gas production facilities and distribution networks; railway networks).

Further regulatory problems are raised by networks and plants (eg hydro-electric dams) typically having low marginal costs of expanding output up to full capacity, but high fixed costs associated with that capacity; by the potential for substantial externalities, especially environmental (eg coal mining, power stations); and in some cases, by inelastic demand curves (eg for electricity because of appliance ownership), which raise the gains from the exercise of market power.

The utility problem is most acute in those industries which provide a basic service for consumers and an essential input for other firms, and where production involves the use of non-contestable or non-economically reproducible facility services owned by incumbents, to which access is required by entrants in order to compete with the same incumbent in upstream or downstream markets.

Typical examples are in local electricity supply, where independent retailers need access to the vertically integrated incumbent's local distribution lines; or in the case of a geographically isolated port, where an independent stevedoring company needs access to the wharves to be able to compete with the horizontally integrated port company's stevedoring service. It is in these sorts of areas that regulators encounter most difficulties, both in the technical, legal and economic aspects, and also frequently in trying to deal with asymmetric information, conflicting objectives, aggressive and sophisticated incumbents, politically astute entrants, and technological change.

In terms of Western economies, these problems of utility regulation are probably at their most acute in New Zealand, given the small size of the economy and the difficulty of gaining the economies of scale needed for the efficient operation of many utilities. In addition, the country's geographical isolation removes any possibility of international trade in utility services with adjoining countries. Thirdly, the state has throughout New Zealand's colonial history traditionally played a major role in

the utilities sector, initially because the fledgling capital market was not prepared to bear the risk in major developmental projects, such as the building of the main trunk railway network. By the 1970s almost every utility was occupied by a large state trading organisation, usually operating with statutory monopoly rights, and suffering from political interference in terms of price-setting, investment planning, and other operating conditions. Deregulation was required as a first step, but this tended to generate problems for the regulator in that the industry was thrust into an initial state of disequilibrium, with incumbent and new firms both struggling to come to terms with an unfamiliar competitive environment, and sometimes with individual markets being difficult to discern after years of statutory, vertically integrated monopoly.

Left to themselves, such deregulated utilities may generate significant resource misallocation and inefficiency from their monopoly pricing, and from exclusionary behaviour aimed at deterring competition from new entrants. A totally 'hands off' approach is not considered an option. At the other extreme, direct control imposed by an industry-specific regulator will likely generate its own inefficiencies. These are likely to include: the costs of operating the regulatory body; the 'paper burden' or information supply costs imposed on the regulated firm; the scope for it to engage in 'opportunistic' behaviour; the compliance costs arising from the distortions caused by imperfect regulation; the losses associated with the possible corruption of the system through 'regulatory capture'; and dynamic losses associated with the control by regulators of industry structure and conduct, which may inhibit new entry, competition, investment, and innovation.

The design of a regulatory regime must therefore weigh up the potential costs and benefits involved. Success in this area is a relative concept, and has to be judged against the background of a realistic counterfactual, rather than some sort of ex-post, socially-optimal nirvana. All forms of regulation, including non-regulation, produce adverse outcomes; the relevant question is which form produces the least adverse result when assessed over a range of criteria.

3. Light-handed Regulation in New Zealand

Utility regulation has been approached in New Zealand in a characteristically straightforward manner, using the same set of competition principles used to regulate other industries, together with some additional light-handed elements. The concept of 'light-handed' regulation emerged from the policy debate concerning the deregulation and privatisation of telecommunications during the period 1987-90. Given the market power which a deregulated Telecom would wield, alternative regulatory regimes were evaluated. Conventional 'heavy-handed' forms of regulation were rejected in favour of a novel approach, support for which was reiterated in a policy statement by the Government in December 1991:⁷

The Government sees competition as the best regulator of telecommunications markets. Accordingly, there will continue to be no statutory or regulatory barriers to competitive entry into (the) . . . market . . . To maintain the conditions of effective competition, the Government places primary reliance upon the operations of the Commerce Act 1986 . . . The following supplementary measures will continue to apply: (a) the Telecommunications (Disclosure) Regulations 1990; and (b) the Telecommunications (Internal Services) Regulations 1989. If it proves to be necessary, the Government will consider the introduction of other statutory measures or regulation.

The overall thrust of the policy, in common with that in other Western countries, is to encourage competition where markets are potentially contestable, and to focus regulation on the non-contestable markets controlled by incumbent utilities.

This regulation takes a number of forms:

- There is a reliance on general competition law, as expressed in the Commerce Act 1986, under s.36 of which dominant firms must not (in general terms) behave abusively towards actual or potential competitors. Contravention of s.36 exposes dominant firms to court action by private parties or by the Commerce Commission.

- Information disclosure regulations, on an ascending scale of detail for telecommunications, natural gas, and electricity, require the disclosure of accounting and other information annually by incumbent operators of ‘essential facilities’ with market power. This is intended to encourage self-regulation through the market and to underpin the effectiveness of the Commerce Act. The regulations are administered by the Ministry of Commerce, which publishes key pricing and performance data.
- In addition to being required not to misuse their dominant position under the Commerce Act, utilities also face the standard legal requirement that they should not lessen competition through their trade practices.
- Utilities involved in business acquisitions which lead to the acquisition or strengthening of a dominant position breach the Commerce Act, although such acquisitions may be sanctioned under the standard authorisation procedure.
- Regulatory barriers to entry have been minimised through the termination of statutory monopoly rights for almost all utility areas (although they still exist to some degree in postal services), so as to encourage the entry of new competitors. Entry has occurred subsequently in the case of telecommunications, television and radio broadcasting, and domestic airlines. These industries, all formerly state-owned statutory monopolies, are thus now treated like any other industry.
- In the regulatory reform of some utilities, there has been separation of contestable and non-contestable elements of the utility’s activities, either by the core non-contestable business being established as a separate company (eg the separation of Trans Power, the high voltage electricity transmission system, from the electricity generator), or by the accounting ring-fencing of the two businesses (as required of local electricity distributors who are also electricity retailers).

- In cases where there has been no such separation,⁸ incumbents who refuse to provide access to natural monopoly facilities on reasonable terms may breach s.36 of the Commerce Act, which can result in punitive damages being imposed.
- A further possibility is to break up the state-owned utility into competitors; this has happened in the case of state-owned electricity generation. A wholesale electricity market has recently been established to facilitate competition between the two generators, while allowing technical co-ordination of generation and transmission from the company's major hydro and thermal power plants.
- Competition from substitute goods, or from new technologies has been encouraged. Industries which historically have been the preserve of regulated monopolists, such as long distance transport (New Zealand Rail) and parcel post (New Zealand Post), have experienced intense competition from road freight and courier services respectively. In other industries, like telecommunications, technological advances in cellular, radio and satellite-based technologies are undermining the advantages of network ownership.
- In addition to these generally light handed forms of regulation, there is a more heavy handed measure of last resort: the use of price control as provided for in Part V of the Commerce Act (or potentially some other form of statutory regulation which the government may wish to introduce). The Commerce Commission can recommend to the government that it impose price control. In addition there have been specific warnings of direct regulation for particular industries. However, there are no goods currently subject to price control, and the government has historically shown no desire to re-introduce such controls into the newly deregulated environment.
- In some cases the Government has retained a "Kiwi share" to prevent changes to the Articles of Association (eg to maintain a 49 per cent domestic ownership of Air New Zealand to allow the government to negotiate international bilateral access agreements). Government trading enterprises have statements of corporate intent which may also limit the scope of their operations. For example, they may be prevented from diversifying their investments.

In addition, there are other forms of regulation in New Zealand which are of a social or safety nature, rather than being a form of light-handed regulation. Some privatised enterprises are required to meet particular service obligations (eg the universal service obligation on Telecom), or social obligations agreed with the government (eg New Zealand Post's obligations include six day delivery and a universal service requirement).

While the emphasis is to admit and encourage competition wherever possible, New Zealand's policy of light-handed regulation clearly does not mean zero regulation, as has sometimes been asserted.

4. The Role of Competition Law and Information Disclosure

As indicated above, the critical elements of the policy of light-handed regulation are competition law and information disclosure. These two elements are now examined briefly in turn.

Under New Zealand's light-handed policy, owners of natural monopoly networks are likely to be in a dominant position in a market, and thus to be subject to the s.36 prohibition of the Commerce Act that they must not use that position for the purpose of limiting competition. Specifically, firms which have a dominant position in a market must not:

. . . use that position for the purpose of -

- (a) Restricting the entry of any person into that or any other market; or
- (b) Preventing or deterring any person from engaging in competitive conduct in that or in any other market; or
- (c) Eliminating any person from that or any other market.

While section 36 prohibits dominant firms from using a dominant position for the purpose of restricting competition, it does not prohibit the dominant firm from using its market power for other than anti-competitive purposes. For instance, the charging of a 'monopoly' price in itself is not prohibited, although the inference is that monopoly profits should be competed away where entry is possible.

There has been considerable discussion in the courts about the meaning of a “dominant position in a market”, how the presence or absence of dominance may be determined, and what constitutes “use” and “purpose”.⁹

In the utilities area, access by Clear Communications (the new entrant) to the local telephone network of Telecom (the incumbent) has been the subject of extensive litigation, which has potentially important ramifications for other network industries. Telecom put forward the Baumol-Willig rule (Baumol and Sidak, 1994) as the way of setting the interconnection price; it states that monopolists are entitled to provide services to competitors at the same price they implicitly charge themselves, including monopoly profits. This rule was accepted by the New Zealand High Court, rejected by the Court of Appeal, and finally in 1994 sanctioned by the Privy Council, New Zealand’s highest court. Critics of the rule have argued that it has undermined the effectiveness of s.36 as a mainstay of light-handed regulation.

In 1995 Government officials undertook an “analysis of the experience of telecommunications interconnection negotiations in New Zealand”, produced a detailed report, and invited submissions (Ministry of Commerce/The Treasury, 1995). After lengthy consideration, the Government issued a media release on 26th June 1996 in which it pledged “to continue, for the time being, with the present regulatory regime based upon the Commerce Act.” (Minister of Commerce, 1996). In addition, it stated that:

... developments since the Privy Council decision demonstrate that the major telecommunications industry players do not support the Baumol-Willig rule as a satisfactory basis for interconnection pricing. The Government considers that the ... rule has the potential to lessen competition, thereby limiting the rate of introduction of new products and services and lessening the benefits to users. The Government would be concerned to see the ... rule being applied in future.

Note, however, that this statement has not yet been enshrined in statute.

Information disclosure has been developed to its greatest extent in the electricity industry. This reflects the relative lack of competition and of substitute forms of energy in electricity, and the relative slowness of technical change which might otherwise serve to undercut market power.

The Electricity (Information Disclosure) Regulations 1994 introduced the requirement to disclose information, along with the accounting separation of distribution and retailing activities. Two years information is now available, including line charges to all consumers, prices, and other key conditions of contract; costs and revenues by load group; separate financial statements from line owners on generation, line and retailing activities; and financial and other performance measures (with assets valued at optimised deprival values). By facilitating comparisons of the prices and performance between different power companies, this information is intended to discourage monopoly pricing, excessive cross-subsidisation and uneconomic generation, and to promote competition by facilitating access to distribution lines. Any cross-subsidisation, which occurs between commercial and domestic consumers, and between urban and rural areas, will be vulnerable to price undercutting by a competitor.

Where a business in either electricity or gas combines activities which have natural monopoly characteristics and others which are potentially competitive, separate audited statements are required, in order to detect instances where market power in the latter is enhanced by the use of monopoly leverage in the former. Consumers' bills must be unbundled so as to reveal the separate line and energy components, undermining the scope for price discrimination or cross-subsidy. However, comparisons between companies will have to make allowance for the scope in the regulations for companies both to define their businesses and to allocate assets and costs between them, as well as standardising for regional variations in network density, geology, and customer profile.

So far the Commerce Commission has had to resolve three main competition issues involving utilities: business acquisitions; the price and other terms of access to network facilities; and complaints of monopoly pricing. As an example, in the local markets for the supply and distribution of electricity, the Commerce Commission has received a number of complaints alleging inability by one com-

pany to gain access to another's network, usually because of onerous terms and conditions in the 'use of system' agreements. To date, the Commerce Commission has taken the view that such difficulties can often be resolved by negotiation, and by further refinement to access agreements, during the 'shakedown' period of industry adjustment to developing competition; but it also acknowledges that persistently anti-competitive behaviour (whether by a network owner towards an entrant seeking access, or by arrangements between incumbent suppliers and downstream buyers) may have to be taken to court. The Commission monitors industry developments continuously, and is currently investigating some more serious cases.

¹ This section has been drawn from Bollard A and M Pickford, *Utility Regulation in New Zealand*, Institute of Economic Affairs Lectures on Regulation, London, 1996.

² In 1995 the three sectors accounted for the following percentages of GDP: 'Electricity, Gas and Water', 3.4%; Transport, 6.8%; and 'Communications', 6.0%.

³ S. Jennings and R. Cameron, "State-Owned Enterprise Reform in New Zealand", in: A. Bollard and R. Buckle (1987).

⁴ See previous footnote; also Farrar and McCabe (1995) for an agency cost approach.

⁵ A social service obligation is an activity undertaken by a government enterprise which meets a social objective required by the government, but which makes a financial loss at current prices.

⁶ However, SOEs typically are both large and complex organisations, which would tend to make them more resistant to take-over (and bankruptcy), and more difficult for the capital market to monitor because of information asymmetries and possible managerial opportunism. Thus privatisation may not be able to solve all of the incentive problems posed by large, complex SOEs.

⁷ Quoted in Ministry of Commerce (1995b), pp. 21-22.

⁸ Examples include the major gas and telecommunication utilities, which were sold complete with networks. While there may be efficiency reasons for this integration, it has complicated the entry conditions for potential new competitors (see below).

⁹ An excellent review is given by McGechan J in: *Commerce Commission v Port Nelson Ltd.*, CP NO 12/92 (NN), June 1995, pp.39-53.

TABLE 1: REGULATION OF UTILITIES IN NEW ZEALAND (1996)

Utility	Sector	Companies ¹	Ownership ²	Source of Natural Monopoly ³	Type of Natural Monopoly	Information Disclosure Required ⁴	Other Regulatory Requirements ⁵
Electricity	Generation Transmission	ECNZ, Contact Trans Power	SOEs SOE	- High voltage lines	- Stand alone	Financial and operational Financial, performance and operational	Price undertakings -
	Distribution	39 local companies	L.A., trusts, private	Low voltage lines	Vertically integrated	Financial, performance and operational	Transitional price control available
Gas	Extraction Transmission	Petrocorp, Shell, Todd NGC	Private Private	- High pressure pipes	- Vertically integrated	- Accounting & performance	- None
	Distribution	NGC & 4 companies	L.A., trusts, private	Low pressure pipes	Vertically integrated	Accounting & performance expected to be finalised in 1997	Price control until 1990
Telecommunication	PSTN	Telecom, Clear	Private	Local loop	Vertically integrated	Inter-connection & prescribed service terms	Universal service obligation, price undertakings
	Cellular Distance	Telecom, Bell South Telecom, Clear	Private Private	- -	- -	Inter-connection Inter-connection & prescribed service terms	- -
	International	Telecom, Clear, Telstra, Sprint	Private	-	-	-	-
Ports, airports	Ports	13 companies	L.A., some private	Some wharves	Horizontally integrated	-	-
	International airports	4 companies	L.A., govt, private	Some runways	Horizontally integrated	Under review	Price consultation required
	Domestic airports	Many	L.A., govt, private	Some runways	Horizontally integrated	Under review	Price consultation required
Water, etc	Water	Many	L.A.	Pipes	Vertically integrated	Local government requirements	Local government requirements
	Sewerage	Many	L.A.	Pipes	Vertically integrated	Local government requirements	Local government requirements

¹ Only major operators mentioned

² L.A. = Local authority, SOE = State-owned enterprise, Govt = Central government

³ Principal areas of economic activity with some natural monopoly characteristics

⁴ In addition to normal Companies Act requirements

⁵ In addition to standard requirements of State-Owned Enterprises Acts