The Economic and Market Benefits of By-Pass

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Competition and Regulation

Over the longer term, successful economic performance requires market competition with established property rights. Competition means a ceaseless striving to steal a march on rivals by cost-cutting and better pleasing the customer. Established, secure property and contract rights offer the incentive of personal gain from searching out new and changing needs of consumers and continuously seeking ways to meet these more cheaply. The socialist economies collapsed under the weight of bureaucratic controls and lack of incentives that are the inevitable corollary of attempts to improve upon the outcomes of market processes.

Stable institutions with the ultimate backing of law are essential to sustained growth in living standards. Government intervention, whether through owning businesses, directing resources into favoured areas, or reviewing commercial decisions will detract from and possibly arrest this process.

At issue is the scope of government-backed rule of law. As stable property rights and competition are the twin engines of prosperity, is there a role for government to intervene to promote competition? If such a role exists, it is necessary:

- to examine where there might be a conflict between the exercise of private property rights and the assurances of workable competition;
- to determine, if such a conflict occurs, the criteria for overriding property rights; and
- to establish institutional arrangements that generate the minimum of waste and paperburden costs in addressing the issue.

Generally, the rationale for government intervention, aside from its wish to buy votes with benefits directed to certain parties from others which are either politically unimportant or unaware, is market failure. Market failure is a rather misunderstood term. It is a precise term in economics that refers to the inability of markets to provide the lowest cost solution because of the occurrence of monopoly. It is sometimes used by regulators as a term to portray a market outcome that does not accord with what they expect to occur.

Competition is not valued as an end in itself but as the means of promoting efficiency. Narrowing the scope for monopoly is at he heart of the Hilmer type reforms that are most evident in gas and electricity. Monopoly is likely to mean a waste of resources because the producer's natural interest in maximising profit can be married with an ability to do so through forcing up the price by restricting supply.

While the remaining monopoly facets of gas and electricity facilities have pre-occupied policy over the past five years, the injection of regulatory agencies into the vacuum left by the disengagement of the political arm of government threatens to create new forms of inefficiencies. These stem from poor decisions, a wish to ensure lower prices irrespective of costs and a massive increase in the paperburden.

While competition undoubtedly generates increased efficiency, will government intervention select the appropriate competitive model? And will it lead to the diversion of entrepreneurial energies into avenues that are unproductive?

Competition in the Electricity Supply Industry

Generation and retailing

Each of the jurisdictions in NSW, Victoria and South Australia have split up their generation businesses in a way that allows a considerable degree of free competition. By and large within each electrical region, the spot price for electricity reflects supply and demand and is not normally subject to any one player being able to exercise market power. This is a sweeping statement that needs to be mitigated somewhat by the limited number of competitors in both Queensland and SA but for the most part prices are the outcome of competitive forces.

With regard to the retailing part of the supply, the developments in Victoria and NSW have led to a great deal of customer migration from their host retailer, indicating a ready contestablilty of the market. Out of State retailers report some considerable difficulty in cracking the Queensland market but it is early days there.

Transmission

In general, the development of market systems in Australia and elsewhere assumed that the "poles and wires" business would be a natural monopoly other than in exceptional circumstances. The UK system had no provision for what we now call entrepreneurial links and the Californian system which was leading the pack in North America similarly assumed transmission would remain a regulated monopoly.

For the most part the Code took the view that interconnectors and network augmentations would be established following recommendations of the Inter-regional Planning Committee (IRPC). The IRPC would develop a *statement of opportunities* and an annual review recommending augmentation options to NEMMCO (5.6.5). Provision was made for augmentations that are not deemed justified by NEMMCO to be undertaken. These provisions were spelled out more in the section covering interconnectors across regions (5.6.6). But it was left, under clause 3.12.2, to NECA to establish rules for non-regulated interconnectors.

The relatively low share of transmission in total supply costs, the abundance of capacity for most purposes, and the inevitable co-mingling of electrons brought the general view that, aside from shallow connection and some other participant specific costs, the service should be charged as a compulsory levy on customers. This has started to break down as:

- embedded generators object to having their customers pay for a service they do not require;
- participants substitute a regulated “free” good for one that they must pay for directly; one notable example was the $104 million augmentation linking Tarong power station which was paid for by customers;
- the SANI debate and the recognition that the producer beneficiaries could be paid by customers, including customers that may be prejudiced by an augmentation;
- the TransEnergie proposal for an entrepreneurial link indicated that commercial opportunities are a potential option for the construction of new links.

The SANI case brought into full relief the fact that interconnection and generation are competing ways of supplying the market. They are the difference between buying a product and transporting it over some distance and making it closer to the market. If different regulatory rules and payment approaches are used, there is a considerable incentive for distortion. Where a supplier can shunt off transmission payments to third parties he will tend to locate closer to the raw materials.

A considerable amount of ink has been spilled on the estimates of net benefits to customers in the SANI case in order to justify the construction of a regulated link. But the adding of all the costs and benefits that is part and parcel of a regulated approach is not the same calculation that is undertaken with the construction of a merchant facility.

The proponents of a new plant do not seek to estimate the full benefits to society of their expenditure. They simply estimate what their own costs would be, the likely price and quantity they will sell and proceed if they see a profit.

In addition to these private benefits, the proponents of a new regulated link would estimate the effect it has on customers generally in lower prices for the existing supplies which its construction will bring about. A new generator, a new car plant or a new biscuit factory would have analogous effects on overall prices but it would not be able to claim these as part of its justification..

The potential distortion from applying different decision criteria to transmission and generation has brought increasing calls for the abandonment of all new regulated transmission links. A NECA Working Group at the end of last year set down “Safe Harbour Provisions” under which entrepreneurial interconnectors could proceed with confidence.

Distribution

In the case of distribution, State based regulation presently rules. In Victoria, by-pass was not ruled out, but the likelihood of it occurring was thought to be negligible. This has given rise to the claims by Citipower in its spat over the Melbourne development at Docklands that it had an exclusive franchise.

The regulator has been remarkably slow in adjudicating this matter and has thrown up a formidable series of questions.

These include fears that the outcome will be an increase in prices to existing customers. This certainly would not eventuate where there is a close proximity of alternative lines. In such circumstances, raising prices to existing customers is likely to be a prelude to the incumbent losing even more of the market and converting a partially stranded asset to one that is fully stranded. It is far more likely that the two sources will provide on-going competition to the benefit of consumers. In this respect, the evidence is that prices tend to be lower in those US locations where electricity is supplied by more than one line, than where a monopoly is mandated.

Similarly, the ORG seeks views on how the proposal will affect the financial viability of the industry. This stems from section 157 of The Electricity Industry Act, which requires him, inter alia, "to facilitate the maintenance of a financially viable electricity supply industry". But financial viability is not an issue–should a business face lower profits its capital value will be reduced. The ORG's role is to act as a surrogate for a market outcome where competition is considered unlikely to provide this. To frustrate the development of competitive provision is not only inimical to the ORG's charter but extends the Office's role into that of a central planner.

Again, the ORG ponders whether there might be too many competitors and whether the incumbents should be protected in some way.

But the ORG is not alone among government bodies seeking to seize a role in selecting the winners.

The ABARE Submission to NECA says*, The scope for inefficient bypass could thus be reduced through a regulatory system which allows bypass only when it can be shown that the net public benefit of bypass is positive. This will require that regulators be able to identify the costs and benefits of bypass proposals on a case by case basis.*

Determining where by-pass is *efficient* opens up great vistas for the regulatory agencies to vet proposals and cast competitive provision in the image they prefer. The scope for by-pass is a far more potent tool for bringing prices into line with costs than pushing new proposals through a regulatory adjudication process. By-pass or its potential forces firms to bring prices into line with costs. It also offers new players the opportunity to avoid high cost, low profit customer segments. The ability of the incumbent to subsidise these customers is undermined, bringing pressure on governments to unwind them.

Price Decisions and the Effect on Competition

The ACCC and the ORG set prices on Victorian gas transmission and distribution below the levels sought by the Government and below the prevailing prices implied within the gas tariff. Many would argue that the high price received for Westar/Kinetic justifies the decisions of the regulatory authorities. But the point is that prices set too low will pre-empt the possibility of competitive provision. Low prices will also reduce the incentive of the owner to undertake optimal maintenance expenditure.

It is certainly the view of the Victorian industry that the ORGs's 2001 price setting exercise is designed to anticipate all possible cost savings with the result that prices will be set so that the regulator rather than rival provision forces prices to a minimum. The problem with this is the disincentives it brings to upgrade quality and maintain lines in area where the price squeeze is overdone.

The possibility of by-pass can have a significant effect in undermining politically determined prices that are excessive. The Docklands issue has made all distribution businesses conscious of their own vulnerability to by-pass. That vulnerability is threefold. First, because distribution line prices are often uniform within each area, those parts close to major centres tend to subsidise those located more remotely. Secondly, under the Code one half of the TUOS charges are postage stamped (in Victoria this is only one quarter), which gives rise to cross subsidies. Thirdly, the political agenda in most jurisdictions involved a further cross subsidy of line charges to rural consumers. In Victoria, the fixed charge was set at a maximum of $20,000 per MW. As a result, users in low cost areas are overcharged. This also meant some rural users, like those in close proximity to generators not being able to capitalise on their favourable location.

In Victoria the TUOS charge for the DBs was revised from the optimised charges as follows:

TUOS Equalisation Adjustments, 1994/95 $'000			
	Uncorrected TUOS	Equalisation Adjustmentmnt	Corrected TUOS
CitiPower	21,070	5,920	26,990 (+28.1%)
Eastern Energy	17,640	(4,939)	12,701 (-28.0%)
Powercor	45,270	(19,011)	26,259 (-42.0%)
Solaris Power	14,180	5,171	19,980 (+36.5%)
United Energy	26,540	12,859	39,450 (+48.5%)

Thus, based on replacement costs, the capital component of United's charges are 48.5 per cent above the optimised replacement value, while that of Powercor incorporates a 42 per cent under-recovery.

Similarly, the write-up and -down of the distribution lines has created distortions as follows:

Asset Value Adjustments at Privatization (1994/95 values), $m				
	ODRC Value	Adjustment	Adjustment %	Regulatory Value
CitiPower	482	129	26.8%	$611
Eastern Energy	1046	(218)	(20.8)%	$828
Powercor	1227	(161)	(13.1)%	$1066
Solaris Power	361	61	16.9%	$422
United Energy	743	136	18.3%	$879

Thus, CitiPower charges were set at 26.7% above costs, while those of Powercor were set 20.8% below costs. These subsidies were to be unwound over a period of 20 years. This makes CitiPower and the other urban based distributors vulnerable to by-pass, because its charges are artificially boosted.

DUOS rebalancing can take place but is limited to 2% per annum.

These provisions mean that there is excess charges in some areas and undercharging in others. Governments have sought to obscure the extent of the excess charge by not requiring specification of the breakdown of costs on bills. Nonetheless, businesses on the periphery of predominantly rural businesses are able to discover the savings they might make if located only a few kilometres away and will seek out alternative arrangements. Aware of this, with the possibility of by-pass, their host DBs will be forced to restructure prices to keep the business.

Hence, as well as forcing firms to keep their prices competitive, by-pass unravels the cross subsidies. It means that the standard charges for regulated lines within any given region will be undermined. The ability of a rival lines business to link up a customer within a particular distribution business's territory means we will see cherry picking. This is already evident in telecommunications.

The Natural Gas Pipeline Code

Gas pipelines remain regulated both with price caps and the requirement that the potential new links be put out to tender.

Price capping has already been referred to. It is the epitome of the central planning which we are seeking to avoid.

In the case of a new line, approvals are necessary. Thus, an entrepreneur is not allowed to spot an opportunity for profit, build a line and charge what the market will bear. Instead the proposal must go to tender, with the line charges being developed based on the costs estimated by the lowest tenderer. This creates considerable disincentives for a business to undertake the initial work of seeking out markets, assessing pioneer customers and building costs.

If a private business were to spot an opportunity and subsequently be required to tender for the right to provide the means to meet it, that business will have incurred costs on which other businesses would free ride. To require the opportunity to be tendered would be analogous to placing similar requirements on the proposers of a new paper mill or smelter. It would discourage market searching activity and innovation.

The Issue of New Versus Existing Pipelines

Existing pipelines which serve as non duplicable facilities and which face no competition from other pipelines, present a case for regulation of some sort. Where no pipeline currently exists, the regulation on a new line should be minimal. Yet, in the draft Code, the onus is reversed. A new entrepreneurial pipeline is required to prove that it should *not* be covered, and the Code itself would appear to offer few circumstances when this will be accepted.

The outcome of an entrepreneurial pipeline is seen in Goldfields where WMC/BHP/Normandy took the risks and built a pipeline to supply their own needs[1]. Having done so, the consortium is relatively unconstrained in charging others, including Alinta Gas, a price that is close to what the market will bear. This appears to be unacceptable under the Code. Thus, under s.3.28, the arrangements are designed to preclude a pipeline from obtaining any greater profits than the regulator anticipated, and this is further amplified in s.3.33(e) which requires a tenderer to produce a policy regarding "additional revenue", a provision that does not seem to have a reciprocal arrangement where there is *negative* additional revenue.

Yet the Goldfields Pipeline was itself a form of by-pass. The major motivation was to bring gas to the area so that the mining businesses could generate electricity locally to avoid the excessive charges imposed by SECWA.

Where There is Pipeline on Pipeline Competition

The foregoing highlights a further issue. Where there is adequate competition, no regulation is necessary–after all, the regulation proposed is nothing other than synthesised competition.

In this respect, the provisions for revoking coverage are unclear. Although s.1.30 says revocation must be recommended if it is no longer uneconomical to have another pipeline provide the services, the services are not defined. Revocation is only unambiguous where another pipeline parallels the existing line and there is surplus capacity. It would not therefore automatically apply to the Duke Energy Longford to Wilton line which provides competition to the Cooper Basin suppliers for the Sydney market. It is likely that if the line is to be covered under the Code, its design and capacity would be affected.

If the Code is not to be an impediment to efficiency and to businesses striking their own deals as they do in other areas of commerce, it should ensure that regulatory oversight is confined to the core areas and does not attempt to provide an insurance to "fairness" or some other notion where rival suppliers are in place. It follows that where there is more than one pipeline serving an area or passing relatively closely to the same area, unless one of the pipelines is unable to provide competition (because its capacity is trivial compared with the other) coverage should automatically be revoked.

Concluding Comments

The Hilmer recommendations (Hilmer et al., 1993) rightly focus upon the importance of competition in bringing about a more efficient and productive economy.

1 In fact, following their original proposal going to tender.

The codes covering access and pricing to gas and electricity networks are subject to requirements on price and access which presume that they are monopolies. Yet recent events have demonstrated the potential for active competition in this area of supply. In Victoria, rival electricity distributors are planning to drive new lines into each other's territory. Further evidence of the potential is observable in the skill that AGL has shown over many years in setting its New South Wales pipeline charges at a level that allows it profitably to ward off rival facilities. AGL has responded to competitive threats by reducing prices in areas where those threats have greatest potential.

The nightmare for a utility business is that if it adopts too hard-nosed an approach to pricing and service, it will call forth competition and leave the existing asset 'stranded'. Fear of having 'stranded' assets means that little by-pass is 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.

No facility---at least no facility unprotected by government franchise---has untempered monopoly powers. Many facilities can be by-passed and almost all others supply products, like gas, that compete with electricity. That facilities have an element of natural monopoly is not cause of itself for the suppression of property rights. Nor is it incompatible with the concept of access for others' product. Where excess capacity exists, access can be marketed at a price which reflects the tremendous level of capital and expertise necessary to construct a large-scale system. The alternative to a market based on the assignment of property rights may be under-investment, at a significant loss to suppliers and consumers.

Unfortunately regulators are notoriously reluctant to allow their powers to lapse and we won't see them willingly exit areas of control in favour of allowing by-pass to discipline the market provision. But the task of regulating will become increasingly difficult as networks become multi-purpose. Williams, one of the largest US gas pipeline businesses, is a major telecommunications carrier. United and other electricity businesses in Australia have also entered this field. Multi-purpose lines are is likely to be increasingly seen among the lines delivering gas, water and electricity into the household.

How then do we regulate what we define as the natural monopoly? Some work has suggested we deduct that part of the cost of a facility that is not dedicated to providing the supposed monopoly services–if $100 million out of a $500 million facility is estimated to be recouped from competitive services, the regulated prices would be set on the basis of a $400 million asset. Such processes offer scope to the ingenuity of regulators seeking to hold their jobs. But they are likely to prove unworkable in practice - and unnecessary because <u>competing</u> utilities will do a much better job than regulators is establishing the "just price" which is the regulators' goal.