Submission to the Productivity Commission

Legislation Review of Clause 6 of the Competition Principles Agreement and Part IIIA of the Trade Practice Act 1974

Prepared on behalf of

Law & Economics Consulting Group

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1. Introduction and Summary

The Productivity Commission (the Commission) has commenced a public inquiry into Clause 6 of the Competition Principles Agreement (CPA) and Part IIIA of the Trade Practices Act 1974. The Commission has released an issues paper and invited public submissions to the inquiry.

Clause 6 of the CPA requires the Commonwealth to establish a national access regime, explains when the regime will apply and sets out the principles for an effective State or Territory access regime. Part IIIA provides the legal framework for a national access regime and discharges the Commonwealth's obligations under Clause 6.

This submission, prepared on behalf of Freight Australia, considers the following issues:

- What is the public policy rationale and objective of the national access regime?
- Given this policy rationale and objective, has the experience to date met with expectations?
- Given this policy rationale and objective, what is (are) the appropriate threshold test(s) for determining the applicability of an access regime to a given facility or service?
- What are the regulatory costs associated with an access regime?
- Should an access regime include explicit pricing principles and – if so – how and what principles should be specified?

The main points of our submission are as follows.

1. **The national access regime should be confined to addressing the problem of potential market foreclosure by owners of essential facilities who also operate in upstream or downstream markets.**

2. **The national access regime should apply only to facilities with the following characteristics of "essentiality":**
- **there are no substitute facilities that competitors can use to supply equivalent final goods/services to downstream markets at competitive prices;**
- **there are no substitute final goods/services in downstream markets whose production does not require the services of the facility in question; and**
- **the owner of the facility in question is a vertically integrated natural monopoly.**

3. **The national access regime has the effect of restricting the right of private owners to use their assets freely. As with any other infringement of private property rights, an access regime can reduce investor confidence, and may have far reaching consequences for the proper functioning of the market system.**

4. **A properly designed access regime which prevents market foreclosure can also create disincentives for firms to integrate vertically on efficiency grounds. The disincentive effect may be exacerbated by current regulatory approaches which**

target vertically integrated firms regardless of whether such firms satisfy an "essentiality" test. The potential gains from economies of scope, and transaction cost savings from vertical integration are lost as a consequence.

5. To the extent that an access regime is to deal with the problem of monopoly pricing, it should be designed on the basis of sound pricing principles. Regulators should be mindful of the limitations and potential adverse effects that flow from a pragmatic but poor choice of pricing principles. Pricing principles that dampen incentives or undermine investor confidence would detract from the efficiency objective of access regulation.

6. Pricing principles should allow facility owners to recover all opportunity costs, including the cost of sunk capital investment; and should eschew a regulated cost base that creates disincentives for cost saving innovations.

2. Profile of Freight Australia

Freight Victoria Limited, trading as Freight Australia, is wholly owned by the US-based RailAmerica.

Freight Australia purchased the business of the Victorian government-owned V/Line Freight Corporation on 1 May 1999. This transaction did not involve a franchise agreement and no Government subsidies are provided for the normal running of the business.[1] Instead, Freight Australia took out a long term lease of the non-urban rail infrastructure as well as a major portion of the Dynon Container Terminal. The infrastructure lease is for an initial term of 15 years with options to renew for two further terms of 15 years each.

Freight Australia is an integrated track operator and rail freight service provider. It is the single largest freight transport company in Victoria, hauling on average some 7 million tonnes of freight per year. Most of this tonnage is carried on rail but the company also spends about $22 million per year on road freight contracts. Many of these are very successful "intermodal partnerships", in which road operators bring consignments to a railhead for line haul by rail to the ultimate destination. Freight Australia therefore has an interest in both road and rail infrastructure.

2.1 Freight Australia is an access provider

As part of the sale agreement with the Victorian Government, Freight Australia is obliged to provide access to various passenger train operators and rail heritage groups. The passenger train operators include V/Line Passenger, West Coast Railway, Hoy's Coach Lines and Great Northern Rail Services – a minor freight and charter train operator.

The access arrangements with V/Line Passenger and Great Northern Rail Services are on commercial terms. The non-commercial access arrangements with West Coast

[1] Freight Australia receives a subsidy from the Victorian Government to provide non-commercial light freight and parcel services which comprise the 'Fast Track' business.

Railway and Hoy's Coach Lines were inherited from arrangements entered into by the Victorian Government. Freight Australia also provide 30,000 km per year of free access to heritage rail operators.

Other entities have applied for access to the non-urban rail network under Freight Australia's control – notably the NSW government-owned Freight Corp and ATN (a subsidiary of Wisconsin Central).

2.2 Freight Australia is also an access seeker

Freight Australia has, for the last 12 months or so, been negotiating access to the trackage of Australia Southern Railroad in SA.

Freight Australia has also negotiated access to the Australian Rail Track Corporation (ARTC) trackage for the purpose of operating interstate and intrastate rail freight services.

Freight Australia has been granted access to the Rail Access Corporation's trackage in NSW on commercial terms.

3. Access Pricing Principles – The Case of the Victorian Rail Access Regime

The Victorian Government has announced recently that it intends to declare the non-urban network under the control of Freight Australia for open access by other freight operators. The proposed access regime and the attendant pricing principles are described in an exposure draft Orders-in-Council prepared by the Department of Infrastructure. Under the proposed regime, the Office of the Regulator General (ORG) is given the role of arbitrating disputes when commercial negotiations between the track operator and rail service providers fail.

In a negotiate-and-arbitrate access regime, it is important that all relevant parties – including the regulator – have a clear understanding of the 'market rules' for determining commercial terms and conditions. In this regard, there is guidance value in having a set of clear and robust pricing principles. That said, the pricing principles in the draft Orders-in-Council are so specific as to constitute a prescribed pricing methodology rather than a set of guiding principles.

Under the proposed pricing principles, the determination of access prices involves calculating a cost base for each declared rail line, and the price an access seeker pays an access provider is a share of the cost base of that line, calculated on the basis of an average use. The principles specify in detail what items should be included in the cost base, and how average use is determined. In particular, it is proposed that the cost base for a line will include:

- operations and maintenance costs.
- a capital charge in relation to capital enhancements on the line to enable the access provider to recover the cost of an enhancement – and to earn an appropriate rate of return over the effective life of the enhancement. No allowances are provided

with respect to infrastructure existing at the time the infrastructure lease was entered into by the access provider.

- an allowable margin of 10% of operations and maintenance costs (or such other amount as ORG allows).

It is further proposed that, if a line is used by both passenger and freight operators, the cost base would be split between passenger operators and freight operators on a half gross tonne kilometre (***GTK***), half train kilometre basis.

It is questionable whether pricing principles articulated at the level of specificity described above were ever countenanced under the terms of Clause 6 of the *Competition Principles Agreement*. The desired level of specificity obviously depends on the trade-off between regulatory certainty on the one hand, and guidance value and robustness of the rules on the other. That aside, we consider it important to ensure that pricing principles, specific or otherwise, are consistent with the broad efficiency objective of promoting and supporting competitive outcomes in related markets.

Judged by the efficiency criterion, the proposed pricing principles for rail services in Victoria have some significant drawbacks.

First of all, the access price determined by the principles is based on fully distributed costs. While pricing at marginal cost has its well-known efficiency enhancing property, the economic logic for pricing at fully distributed cost is less clear. Fully distributed cost pricing is probably used as a substitute for marginal cost pricing, given the acknowledgment that in the context of the rail industry where economies of scale are prevalent, marginal cost pricing is unlikely to generate sufficient revenue for track operators to remain financially viable. It is our view that fully distributed cost pricing is a poor access pricing principle for at least four reasons:

(1) Since fully distributed cost has no direct relationship with marginal cost, pricing based on fully distributed cost does not promote economic efficiency.

(2) Pricing based on actual costs reduces access provider's incentive to invest in cost-saving innovations.

(3) Fully distributed cost pricing does not promote productive efficiency and is inferior to the efficient component pricing rule in this respect.[2]

(4) Fully distributed cost pricing does not take into account any demand side information, which makes it inferior to the Ramsey pricing principle.

Secondly, the cost allocation between passenger and freight transport is arbitrary. Given that the shared cost cannot be easily identified with either traffic, the arbitrariness of the cost allocation is inherent to cost based pricing. The arbitrariness

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[2] Such pricing of bottleneck facilities does not place additional competitive pressure on pricing to final consumers, since it is based on the contribution that could be earned from the final service at the extant market price. However, it does generate incentives for efficient combinations of freight transport services to become viable in the final market, provide quality and cost competition among potential and actual participants for the role of being part of the efficient mix of freight service providers, and it does help to ensure that those with efficient innovations in logistics or in marketing of transport services will be able to work with an integrated carrier to implement their ideas.

implies that it is hard to judge whether cross subsidies exist and that it is likely that the allocation is not optimal from the efficiency point of view.

Thirdly, the principles exclude from the cost base infrastructure that exist at the time of lease. The rationale for this exclusion appears to be that the infrastructure that exist at the time of lease are sunk investment and therefore should not be treated as part of the economic cost. This reasoning, in our view, is based on a serious misunderstanding of the sunk cost concept. It is the case that the cost of sunk investment is typically *not* taken into account when a track operator makes a short run decision, for instance a decision on whether or not to add a service or increase the level of an existing service given the current capacity. However, when the track operator makes a decision on whether or not to replace or expand a portion of the rail network, the cost that enters the decision is the total cost of replacement or expansion including those fixed investment costs that will be sunk once the investment is made.

Thus whether a cost is truly "sunk" depends on the perspective of the decision maker. Clearly if investors are not allowed to recover the costs of investment which became sunk once they are incurred, their incentives to make investment in the first place will be greatly reduced. If investors lease out their facilities, part of their sunk investment will be recovered through the payment for the lease, consequently the cost of lease becomes part of the economic cost to the firm leasing the facility. Thus regardless of how the sunk investment is used, the cost of the investment should be counted as part of the cost to the firm that makes use of the investment, and that cost needs be recovered to preserve the incentives for future investment.

The pricing principles proposed in the draft Orders-in-Council do not allow Freight Australia to recover its past investment in the infrastructure. We consider that this would act as a disincentive to further investment in the infrastructure, either by Freight Australia or any other potential investor. More generally, the efficiency objective of an access regime is likely to be undermined if the regime relies on market rules that flow from a pragmatic but poor choice of pricing principles.

4. The National Access Regime – Rationale and Objective

4.1 The Hilmer Report revisited

The public policy objective of a national access regime, as envisaged in the Hilmer Report, is to promote and support competitive outcomes in markets which rely on the intermediate services provided by an infrastructure facility owner or operator. This stems from the recognition that

> in some markets the introduction of effective competition requires competitors to have access to facilities which exhibit natural monopoly characteristics, and hence cannot be duplicated economically (p. 239).[3]

[3] A *natural monopoly* is generally understood as an industry in which one supplier can serve the existing market more cheaply than two or more firms competing with one another. It is not usually considered desirable – in the overall economic welfare sense – to duplicate the infrastructure of a natural monopoly technology.

Although the technology is such that having one firm, in principle, leads to the lowest cost for a given output level, a natural monopoly will have little external pressure (and incentives) to minimise costs of production. One policy alternative would be to maintain the monopoly and introduce regulation with its attendant costs.

The Hilmer Report recognised that a subset of natural monopoly technologies occupies a "strategic" or "bottleneck" position in key infrastructure industries. This strategic positioning is due to the *essentiality* of the services provided by the infrastructure facility – without such services, production of outputs in an upstream or downstream market (hereafter referred to as a *related* market) would not have been possible.

Natural monopoly and essentiality of the service, taken together, underpin the essential facilities concept in Australia. These two conditions are interdependent – whether a particular industry is a natural monopoly is dependent upon the relevant range of market demand, while the degree of essentiality of the service – in the sense of available substitutes – determines the level of market demand for that service.

The Hilmer Report envisaged two scenarios in which owners of a vertically integrated natural monopoly technology can, through strategic positioning in a market, charge monopoly prices for the (intermediate but) essential service and/or restrict access to the end-user or final market. The first scenario is the classic case of monopoly pricing whereas the second scenario is the case of market foreclosure. *The necessary conditions for an access regime are present only in the second scenario.*

Where the owner of an essential facility does not compete in a related market, the owner has an incentive to maximise the competitiveness of the related market in order to maximise the monopoly rents that could be earned from the facility. That said, the owner may still use its strategic position in the market to charge monopoly prices, restrict throughput and extract further monopoly rents. The problem of access regulation in this situation, as identified in the Hilmer Report, is strictly a problem of pure monopoly pricing. As such, prices monitoring or surveillance would be sufficient to remedy the problem.[4]

Where the essential facility owner also participates (ie. does business) in a related market, the owner may have incentives to restrict access to the essential service *for the purpose of reducing effective competition in the related market.* The first-best option for addressing the market foreclosure problem is structural separation of the integrated business.[5] The Hilmer Report argued that

[4] An access regime may be applicable in limited circumstances. For instance, in the case of a private monopoly, the information required for pricing regulation may be unavailable, in which case an access regime *may* be a second best option. That said, there may also be significant information requirements were an arbitrator required to determine access prices when commercial negotiation fails.

[5] Structural separation may, however, result in deadweight welfare losses. Geroski *et al* (1989) suggest that vertical separation may lead to a loss of economies of scope, lower the incentives to invest in infrastructure, contribute to lower quality service due to free rider effects and impede the use of socially desirable (ie. efficiency enhancing) price discrimination strategies. Welfare losses may also occur with structural separation, especially where the gains in total profits from separation are outweighed by higher prices or poorer services and therefore losses in consumer welfare (King and Maddock, 1996, p. 91).

> the preferred response … is usually to ensure that natural monopoly elements are fully separated from potentially competitive elements through appropriate structural reforms (and) … where structural reforms have not occurred, the challenge from a competition policy perspective is to provide a mechanism that will support competitive market outcomes by protecting the interests of potential new entrants while **ensuring the owner of the natural monopoly element is not unduly disadvantaged** (p. 241-42, our emphasis).

4.2 Incentives for access provision

In designing access rules for a vertically integrated facility formerly subject to direct government controls – such as the non-urban rail network under Freight Australia's control – regulators should focus on the basic problem of how to ensure that the pricing and terms of access to the monopoly portion of the facility *will permit competition on the merits to encourage the emergence of efficient alternatives in the supply of end-user services*. Ideally, the terms and compensation for access should not distort the competitive process by which prices are adapted to consumer (ie. shipper) preferences and demands in the end market. Prices for the facility service should be sufficiently high to compensate the facility owner adequately, yet not so high as to preclude efficient operations by those who rely on the facility to serve the end market. Where incentives are significantly adverse to these goals, protracted disputes will detract from the efficiency enhancing purpose of access regulation.

In our opinion, the key to formulating appropriate access rules lies in an understanding of an integrated facility owner's incentives to accommodate others who wish to and are able to participate efficiently in a related market.

In general, a vertically integrated facility operator – such as Freight Australia – would not deny access to the facility if the price paid by the access seeker fully compensates all the operator's costs, including opportunity costs. For example, if a new operator sought access to rail from Freight Australia in order to participate in the freight market, providing access would then be a new business opportunity for Freight Australia. As a profit-seeking integrated carrier, we can be expected to take advantage of this opportunity and provide the new operator access if an agreement could be reached that would at least cover the incremental costs of the integrated carrier.[6]

If the new operator sought to handle some freight that the integrated carrier would otherwise handle itself, then it is to be expected that the integrated carrier would take into account the potential loss of its own business in its negotiation with the new operator. The integrated carrier would provide access if the new operator is willing to pay a price that both covers the cost of providing access and compensates the loss of business. In the absence of access pricing regulation, the new operator – if it were more efficient than the integrated carrier – would be willing to pay for access that fully compensates the integrated carrier's costs. In other words, there would be scope for the vertically integrated facility owner and the new operator to successfully negotiate mutually beneficial terms. Cooperation would not only lead to higher returns from the facility – enabling more profit to be earned by the facility owner; it

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[6] Given the existing capacity of the facility, the incremental costs of servicing a new customer are those costs which would be avoided if the service was not provided. In other words, they are the additional costs that are directly attributable to the new customer.

would also improve overall economic welfare by permitting the efficient entry of a new operator into the final market.

If pricing of the essential service were overly constrained by regulation, the scope for voluntary and mutually beneficial agreement would be reduced. The facility owner will have an incentive to undermine or avoid efficient cooperation in order to enlarge his share of the final market. An integrated facility owner would also be motivated to undermine an efficient participant in the final market if – by so doing – the owner believes it could weaken the competitive impact of that participant in the final market.

5. The Legal Framework

The Hilmer Report considered that access seekers should be provided with a statutory right to negotiate access with facility owners or operators. This legal right – established in Part IIIA of the *Trade Practices Act* (TPA) – is given effect through a declaration process that can be activated by access seekers, subject to the satisfaction of a set of criteria which mirrors Clause 6 of the *Competition Principles Agreement.*

Section 44H(4) of the TPA states that

> the designated Minister cannot declare a service unless he or she is satisfied ... of the following matters: (a) that access (or increased access) to the service would promote competition in at least one market (whether or not in Australia), other than the market for the service"; and (b) that it would be uneconomical for anyone to develop another facility to provide the service.

Sub-clause (a) is – roughly speaking – the legislative counterpart of the bottleneck aspect of the essential facilities concept, while sub-clause (b) reflects the natural monopoly aspect.

In relation to s44H(4)(a), it has been suggested that definition of the relevant market "will be crucial to the determination of what is, or is not, an essential facility" (Industry Commission, 1995, p. 17). The narrower the definition, the more likely a facility will be declared in accordance with the criterion in sub-clause (a). This has, in turn, potentially large downside risks for long term investment.

The meaning of the phrase "would promote competition" has also been problematic. An imprecise interpretation of that phrase can arbitrarily raise or lower the hurdle for meeting the test of an essential service. This will, in turn, exacerbate the risk of socially undesirable outcomes with either too few or too many services declared for third party access.

In relation to s44H(4)(b), there is a potential for the legislative wording to be interpreted literally to include non-natural monopoly technologies. It should be noted that the expression "uneconomic to duplicate" has been extended to mean "uneconomical for anyone to develop another facility to provide the service" in s44H(4)(b).[7] This extended form of wording provides for the possibility of declaration

[7] The intent of the original expression "uneconomic to duplicate" is to rule out declaration of a facility for open access in situations where there exists another facility embodying a *different* technology which can provide a service similar to that provided by the facility in question.

of access where it may be uneconomical to develop another facility, even where two or more facilities presently exist (ie. duopoly and oligopolistic industries).

The potential widening of the scope of access regulation may discourage competition in the long run because of the chilling effects on investment decisions. According to Hole *et al* (1998), "widening the scope of access beyond natural monopolies could actually reduce the potential for competition if it discouraged investment in an additional facility on grounds that it may subsequently be declared for access." (p. 21).

In s44H(4)(a), the definition of the market in which the service is provided is fundamental to determining whether access would promote competition in at least one market, other than the market for the service. However, the definition of a market under this section may be pre-empted by a prior definition of the *declarable service* (under section 44B(1)) for which access is sought. For example, an access seeker may request declaration of a service defined as "an airfreight service between Melbourne and Sydney". This definition of a declarable service may implicitly define the market in terms of its product, function, and geographic dimensions. In particular, by describing the service narrowly, the likelihood of satisfying the criterion is raised, since the number of potential related markets generated by a narrow service description has been artificially raised.

An unintended consequence of defining a service consistent with section 44B(1) may be to undermine the rigour with which issues of market definition are analysed. This may bias market definitions towards that of a given service definition, thereby increasing the risk of socially undesirable declaration decisions.

The main concern with the current legal framework relates to whether the legislation is worded in such a way as to provide too much discretion for interpretation by the relevant regulator, thereby increasing the likelihood that the regulatory outcomes will deviate from the policy intent of access regulation.

The manner in which certain provisions of Part IIIA are interpreted could favour the satisfaction of a particular declaration criterion while creating a systematic bias *against* the satisfaction of another criterion. Although it is difficult to say – on *a priori* grounds – how or whether such interpretative effects will offset one another, it has the potential of adding to the degree of regulatory uncertainty.

For example, where the definition of a market for the purpose of 44H(4)(a) is narrowly defined, it is more likely that the criteria will be satisfied, since the field of markets in which competition may be promoted is artificially expanded. However, if this market definition is accepted, the requested declaration may artificially understate the economic significance of the facility and therefore the application may fail the national significance test in s44H(4)(c).

6. Part IIIA Declaration: The Experience to Date

The National Competition Council (NCC) has acknowledged that where the owner or operator of the infrastructure *does not* also compete in a related market, the regulatory issue is basically one of monopoly pricing. By inference, this recognises that – from a

policy perspective – a right to negotiate access should be confined to natural monopoly facilities that have upstream or downstream subsidiaries. The idea here is that while a non-vertically integrated natural monopolist will choose a price and quantity which maximises monopoly rents from related markets, the monopolist has no incentive to raise any barriers to entry into those markets as this would reduce the total profit that could be earned for the bottleneck facility.

Notwithstanding the NCC's acknowledgment, a number of declarations to date have recommended the right to negotiate access to natural monopoly facilities which do not operate in related markets. These include:

- the NSW Minerals Council case in which the Hunter Railway Line owned and operated by the Rail Access Corporation (RAC) in NSW was recommended for declaration. The RAC did not operate in any upstream markets (coal mining) nor in any downstream markets (coal haulage, freight forwarding, domestic and international energy markets);

- the Specialised Container Transport (NSW) case in which the Broken Hill - Sydney rail service operated by RAC was recommended for declaration. The RAC did not participate in upstream markets (coal mining) nor in downstream markets (coal haulage, freight forwarding, domestic and international energy markets).

- the Australian Cargo Terminal Operators case in which freight aprons and hard stands owned by FAC at both the Sydney and Melbourne airports were recommended for declaration. Although cargo terminal operators licensed by the FAC participate in upstream and downstream markets within the airport perimeter (eg. freight loading and unloading), FAC do not have business operations in these or other upstream and downstream markets (eg. freight forwarding outside the airport perimeter, domestic and international markets for time dependent goods).

The issue of concern to Freight Australia – and probably other infrastructure owner or operator – is whether these declaration decisions reflect a departure from the access principles in Clause 6 of the *Competition Principles Agreement* and/or a shift in the NCC's approach to applying access regulation as a means of dealing with simple (as opposed to natural) monopoly pricing problems.

The Hilmer Report emphatically states that the "fundamental principle based on notions of private property and freedom to contract … (is) ***one not to be disturbed lightly***" (p. 242, our emphasis). Departures from this fundamental principle of private property, such as those resulting from a legal obligation to provide access to third parties, can result in substantial efficiency and welfare losses with little or no countervailing benefits in the long run if extended to non-natural monopoly facilities. Freight Australia is of the view that regulators should be held accountable for decisions which have the effect of widening the scope of the national access regime.

If facility owners believe that their property rights will be abrogated, incentives for investment and innovation will be reduced as the returns from such activity become more uncertain. Hence, although mandating access might be motivated by the desire to enhance competition, the result will be quite the opposite if investments in competing facilities are discouraged for fear that such facilities may become the subject of declaration under Part IIIA of the TPA.

Another important reason why an access regime should only be applied to facilities with natural monopoly characteristics is that some form of competition must already exist if there is more than one facility in the market. In this regard, it should be noted that the number of participants in a market is not necessarily an indicator of the level of extant competition. Market concentration is not the sole determinant of the effectiveness of competition. The latter will also depend on the internal workings of the particular industry and the ease with which potential competitors can enter and leave the market. If concentration causes concerns about potential abuse of market power, these should be addressed under general competition law. The introduction of an access regime is a much less desirable way of dealing with anti-competitive behaviour having regard to the disincentives it may have for investment and innovation.

7. The Case for a Discrete *Essentiality Test*

An important element of any well functioning market economy is that owners of assets are allowed to deal with whom they choose and are permitted to fully dispose of their assets at any point in time. Since access regulation represents a departure from this important principle of private property, it should be applied prudently. Otherwise, regulators risk exacerbating the disincentive effects associated with actual or potential violation of the private property principle.

From a policy and regulatory perspective, there are good reasons for separating out the test for essentiality from the test for natural monopoly and applying the tests in that order.

In practice, the information needed to identify a natural monopoly is unlikely to be readily available. Neither the courts nor regulators have had much success in identifying natural monopoly cost structures. The threshold for establishing essentiality, on the other hand, is generally measurable and relatively easy to apply. There is much case law arising from the application of Part IV of the *Trade Practices Act* that has required the establishment of market definitions. Consequently, there are test cases available that can be used as a basis for determining the essentiality of services.

Access issues arise because the services of a particular facility are necessary for other firms to participate in a related market. If the services are not essential, in the sense that an equivalent service can be purchased at similar cost from other producers, or alternatively, if the service provided by the facility is necessary for only one of a number of competing final goods, then effective competition will already be extant and little or no benefits will be generated by extending access. Under these conditions, the natural monopoly question is only relevant for the purpose of price regulation but *not* for the purpose of access regimes.

This is not to say that the essentiality test alone is sufficient for establishing the need for an access regime - both the essentiality and the natural monopoly tests should be met. *The point is that, to the extent that it is relatively easier to apply the essentiality*

test, it makes sense to use this as a first step to eliminate cases that are irrelevant for access regimes.[8]

Determining whether particular facilities are essential and the decision to apply an access regime involves some uncertainty. This uncertainty arises mainly because of the absence of 'perfect' information which may result in incorrect regulatory decisions. It is important therefore to examine the implications of making errors and to establish a burden of proof for those situations that may lead to a more 'serious' error.[9]

If the facility in question is *not essential*, then it should *not* be subject to an access regime because doing so would add little – if at all – to the promotion of competition in a related market. Applying an access regime incorrectly to a non-essential facility is – to use the statistical parlance – a form of Type I error. A Type I error would abrogate property rights and contravene the fundamental principle of private property. This can create undesirable demonstration effects and severe disincentives for investment in competing facilities and in the economy more generally.

Likewise, if the facility in question is essential, then it should be subject to an access regime. A Type II error would result if an essential facility is left unregulated, with significant economic consequences. First, the operator of the essential facility will be able to exercise market power and this will entail the conventional monopoly problems of output restriction, higher prices and appropriation of monopoly rents. Second, without an access regime, entry into a related market that relies on the essential service would be foreclosed. Hence, all the economic benefits of competition will be foregone.

There is a trade-off between the two types of regulatory errors. From the standpoint of public policy, the greater the weight of evidence that is required to establish that a facility is essential, the less likely will be the occurrence of a Type I error. This approach would place the burden of proof on arguments (legal and/or economic) that a facility is essential for effective competition in a related market. Alternatively, if a greater weight were to be placed on avoiding a Type II error, the burden of proof would be on demonstrating that the facility in question is not essential.

It is important to make some judgement about which of the two types of errors is potentially more costly. This judgement should be guided, among other things, by a comparative institutional analysis of the strengths and limitations of markets and governments in allocating resources efficiently.[10]

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8 While this may hold as a general rule, there may be certain situations where cost structures are easy to identify in which case the sequence of tests will not matter.

9 See Cheah and Haralambopoulos (1998).

10 In this respect, it should be noted that modern economic theory has led to a better understanding of competition as a process, with a focus on whether high prices and other excesses of monopoly can be sustained against the pressures of competition. The existing number and size of firms in a market are no longer regarded as adequate indicators of extant competition. Moreover, competition *for* a market (through franchising arrangements, for example) is now considered as being as important as competition within markets.

In our view, there is a good reason for placing a greater weight on the avoidance of Type I errors. Access is only one arm of monopoly regulation – monopoly concerns can be and are indeed addressed through general competition law. However, no immediate remedies are available if non-essential facilities have been subjected to an access regime, while the disincentive effects on investment can be quite direct and severe. A Type I error does not confer any benefits but entails significant costs.

The Industry Commission (1997) appears to have adopted a similar position when it observes

> that widening the potential infrastructure eligible for declaration considerations ... could have deleterious effects on risk-taking in the Australian economy. In particular, investment incentives may be reduced if firms operating non-natural monopoly infrastructure are concerned that their property rights could be eroded. ... a willingness to consider wider parameters than natural monopoly for declaration could increase uncertainty about future returns from investment and lead to unforeseen negative impacts on competition.
>
> While access regulation can be an extremely useful tool in the appropriate circumstances, it is only one of many pro-competitive tools. Other tools include the application of Part IV of the TPA [Trade Practices Act] (which deals with restrictive practices), the introduction of prices oversight, price regulation or deregulation. In many circumstances, one of these alternative tools may be a lower cost and more efficient alternative to mandatory access for dealing with competition issues associated with non-natural monopolies (pp. 12-13).

Adopting the approach advocated here – that is, having a higher burden of proof for the presumption that a facility is essential – requires considerable discipline on the part of regulators. Although the chilling effect on investment can be quite severe, its negative impact on economic welfare is prospective and therefore not immediately observed or felt. It is difficult to measure the foregone benefits to the economy resulting from the deterrence of investment activity. Conversely, committing a Type II error – not declaring an essential facility – will result in more immediate and tangible costs. Regulators who consider themselves proactive have a natural inclination to 'uphold the public interest' by avoiding Type II errors.

For a facility to be identified as being essential, the services of a natural monopoly must be necessary for the development of effective competition in a related market.[11] This will – in turn – depend on the degree of substitution at two levels:

(i) if there are alternative (that is, substitutable) inputs or processes available to downstream competitors which enables the production of an equivalent final good or service at a competitive price, then the essentiality test is *not* met; **and**

(ii) if there are other final products available that are in competition with that of the firms requiring access to the facility in question but which do not use the input produced by the monopolist, then the essentiality test is *not* satisfied (King and Maddock, 1996a).

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[11] Note again that the natural monopoly facility must be essential for promoting and supporting competition in related markets and *not* merely treated as a convenient facility to enable a (potential) competitor to enter the related market.

The above two-pronged test is a familiar one in Australian trade practices law. Essentially, the test seeks to identify whether there are substitution possibilities in production *and* consumption.

The courts have been doing a similar thing in interpreting the definition of the market under section 4E of the TPA. The definition provided by Wilcox J in *Trade Practices Commission v Australia Meat Holdings Pty Ltd* (1988) ATPR 40-876 at 49 is typical of the approach adopted by the courts:

> A market is the field of activity in which buyers and sellers interact and the identification of market boundaries requires consideration of both the demand and supply side. The ideal definition of a market must take into account substitution possibilities in both consumption and production. The existence of price differentials between different products, reflecting differences in quality or other characteristics of the products, does not by itself place the products in different markets. The test of whether or not there are different markets is based on what happens (or would happen) on either the demand or the supply side in response to a change in relative price.

The essentiality test, therefore, will require some judgement about the relevant market. The following two examples illustrate the type of economic matters which bear on the essentiality test.

Example 1. It is generally accepted that the distribution network for gas is a natural monopoly. If a separate gas market existed with consumers having no possibilities for using other energy sources, then it could be argued that access to the network would be necessary for effective competition at the retail level. However, in many instances gas is more appropriately viewed as one of a number of substitutes available in a broader energy market. Electricity, coal, oil and other fuels may be ready substitutes for gas in some areas in which case there would be adequate competition and therefore no need to provide access to the gas distribution network. Arguments for extending access in this case would merely be those of 'convenience'.

Example 2. Freight Australia's operation of the non-urban rail network in Victoria is often considered to involve natural monopoly 'production'. However, in some situations there are a number of cost effective alternatives to rail transport which would render access regulation unnecessary. In the haulage of certain types of freight, shippers may have the option of – and perhaps a preference for –using road, air or sea transport.

In both examples, the first but not the second prong of the essentiality test would have been met.

While an entity wanting to retail gas may need access to the gas distribution network, it is not obvious how allowing access would promote competition downstream. Access to the network may be a necessary *input* for providing gas but there are other *final* products (electricity, oil and other fuels) which are in competition with gas in the end-user market. Stated otherwise, there are substitutes available in consumption.

Similarly, an entity wishing to transport goods by rail will require access to the network under Freight Australia's control but this may or may not add to the extant

competition in the freight transport market if there are other transportation modes available.

It may still be necessary in cases such as those above to have some form of monopoly price regulation, particularly if the substitutes are not seen to be an effective or credible competitive 'threat' to the existing monopolist. However, the point remains that access is neither the most appropriate, effective nor desirable form of regulation in these circumstances – general competition law is arguably the more appropriate and less costly regulatory alternative.

8. The Cost of Access Regulation

8.1 Regulatory creep and duplication

The potential chilling effects of access regulation on investor confidence and infrastructure investments have been alluded to on several occasions in the preceding sections. In this section, we draw attention to the cost of regulatory creep and regulatory duplication.

The current legal and institutional framework has led to regulatory duplication and/or overlap at a number of levels:

- overlap of regulatory functions, for example, the ACCC and most other State-based regulators have a role in arbitrating access disputes.
- duplication of regulatory structures, bodies and institutions – every jurisdiction has created a competition regulator to administer a range of industry-specific access regimes established by State law.

A firm which operates on a national or interstate basis will, of necessity, have to contend with different regulators charged with different legislative mandates to achieve a different (and often conflicting) mix of competition and consumer protection objectives. Duplication can contribute to regulatory uncertainty significantly – primarily because of the potential for inconsistent treatment of access providers and/or access seekers.[12] This creates perverse incentives for market participants to substitute predictability with regulatory gaming and 'forum shopping'. Favourable treatment (or otherwise) of a regulatory issue may have less to do with the merits of the case than with the predisposition of the regulator involved.

There could be value in having regulators "compete" to facilitate a process of discovering the best regulatory practice, but this requires a far higher degree of coordination and information sharing among regulators than is currently the case.

Regulatory creep occurs when areas that were previously unregulated are included, either inadvertently or by design, within the scope of access regulation. This include the expansive use of prescriptive rules and procedures and the imposition of intrusive information disclosure requirements.

[12] The available evidence suggests that the impact of regulatory uncertainty on investment could be sizeable (see for example, EPAC, 1995).

An access regime that relies on private negotiation with the 'threat' of arbitration requires an 'information-rich' environment. In this regard, we note that economic transactions are – more often than not – motivated by *private* information that is known to one party and unknown to the other. It is through such transactions that resources are transferred to those who know how to use them most productively, thereby raising overall economic welfare. For transactions involving access contracts, information may be incomplete or lacking because it is strategically withheld by one party (to gain an advantage in bargaining) or because people simply fail to transmit information to save communication costs. Seen from this perspective, disclosure rules may facilitate the discovery and transmission of relevant information.

That said, regulators have yet to display – in our view – a full appreciation of the difference and economic significance between "productive" information and "redistributive" information. The former is the sort of information that generates more wealth whereas the latter creates a bargaining advantage to redistribute wealth in favour of the party who is to be informed through mandatory disclosure requirements.[13]

In a 'negotiate-and-arbitrate' access regime, efficiency is best served by balancing the benefits of mandatory disclosure against the costs of foregone efficiency enhancing access contracts.

8.2 Disincentives for vertical integration on efficiency grounds

The national access regime is designed to prevent market foreclosure by an *incumbent monopoly that is already vertically integrated.* In other words, access regulation is meant to deal with the potential anti-competitive effects that emanate from a *pre-existing structural problem.*

Similar anti-competitive effects may arise when a firm turns to vertical integration as a *strategic means* of market foreclosure. For example, the firm may seek to limit competitors' access to the supply of inputs by integrating into upstream activities. The same firm may also seek to limit competitors' access to customers by integrating into downstream activities. The potential anti-competitive effects that emanate from such *conduct* are best dealt with through general competition law rather than through access regulation.

An indiscriminate application of access regulation could deter vertical integration motivated by reasons that have nothing to do with market foreclosure.

There are a number of efficiency reasons why firms may want to integrate vertically. Firstly, vertical integration may be motivated by a desire to economise on transaction costs (Williamson, 1979). For instance, when substantial specific assets are required in different stages of a production process, investors may be reluctant to make a specific investment in a single stage of the production process for fear of being held 'hostage' by owners of other specific assets. Vertical integration removes the

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[13] It could be argued that in the absence of disclosure requirements, the misuse of market power or position by an access provider could result in one-sided access terms and conditions. In such cases, a remedy is available under the common law doctrine of *unconscionability* which enables courts to scrutinise the substantive terms of access contracts.

incentive for opportunistic behaviour through single ownership of related specific assets.

There are other circumstances where it may be cheaper to coordinate the vertical production process within the firm than through arms-length contracts or through market transactions. For example, vertical integration may achieve cost savings when asymmetric information makes contracting and contract enforcement costly, or when uncertainty concerning future events makes it difficult to allocate risks between contracting parties efficiently *ex ante*. Vertical integration may also be advantageous when coordination requirements between different stages of the production process are high.[14]

Secondly, there may be substantial economies of scale and scope associated with vertical integration. The economies may derive from various sources. For instance, the integrated firm can achieve cost savings by reducing duplication or by increasing collaborated efforts. Vertical integration can also internalise any technical externalities that may exist between the upstream and downstream activities, and improve efficiency of the production process as a whole.

Thirdly, vertical integration eliminates the problem of "double marginalisation". Double marginalisation occurs when the upstream monopolist makes a profit by charging a price above marginal cost. Since the downstream firm does not take into account the profits made by the upstream firm in its consumption decision, its perceived marginal input cost is the price charged by the upstream firm, which is higher than the "true" marginal cost of the input. At the perceived higher marginal cost, the downstream firm tends to consume too little of the input, and as a result, the aggregate profit for the two firms is lower than a vertically integrated entity. The elimination of double marginalisation is unambiguously welfare enhancing.

In summary, vertical integration can improve welfare through transactions cost saving, economies of scale and scope, and internalisation of externalities. Unfortunately, regulators are not renowned for their 'success rates' in second-guessing the commercial decisions of private firms. In the absence of evidence that firms have integrated strategically to foreclose markets, an "unqualified hostility toward vertical restraints [and vertical integration] is inappropriate." (Tirole, 1988, p.181)

The national access regime – even when applied properly to deal with a pre-existing structural problem – has an intrinsic effect of discouraging other firms from integrating vertically for efficiency reasons. As firms move away from the decision to vertically integrate because of concerns over regulatory risks, potentially large efficiency gains from vertical integration may be lost. This foregone benefit should be taken into account when assessing the full impact of the national access regime.

[14] Kaserman and Mayo (1991) suggest that the cost of electricity generation and distribution is more than 11 per cent higher with arms-length contracting between generators and distributors than with vertically integrated production.

9. Conclusion

Access regulation is a useful means of promoting and supporting competition in related markets, while preserving the efficiency benefits of a natural monopoly infrastructure. However, our assessment of the regulatory approach and experience to date suggests that – in the long run – these benefits are likely to be jeopardised unless:

- the objective of the national access regime is clarified, with reference to both the spirit and intent of the original Hilmer Report recommendation;
- regulators refrain from implementing access regimes indiscriminately and bluntly to deal with matters that are best dealt with through prices surveillance (eg. monopoly pricing issues) or general competition law (eg. abuse of market power);
- the legal framework is tightened to limit the discretion of regulators or – obversely – to make regulators more accountable for their regulatory actions;
- regulators place greater weight on the guidance value of clear and robust pricing principles to enhance the scope for commercial negotiation between parties, and eschew those which dampen incentives and undermine investor confidence; and
- access regulation is balanced with a better understanding of a facility owner's incentives to accommodate others who wish to and are able to participate efficiently in a related market.

It is also our view that consideration should be given to modifying the 'bottleneck' criterion in Part IIIA of the TPA (*viz.* s44H4(a)) along the lines of the discrete 'essentiality' test outlined in this submission. As argued previously, this discrete 'essentiality' test will help to eliminate cases that are irrelevant for access regimes. This would boost the confidence of investors and reduce the regulatory risks that a non-bottleneck facility will be subject to an access regime with all its attendant costs.

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