Submission to the Productivity Commission Inquiry into Part IIIA

18 January 2001

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Executive summary

The Network Economics Consulting Group ('NECG') welcomes this opportunity to put its views to the Productivity Commission Inquiry into Part IIIA of the *Trade Practices Act 1974* and Clause 6 of the Competition Principles Agreement. Twenty major Australian corporations and leading industry associations have jointly endorsed this submission.

The objective of this submission is to focus the attention of the Productivity Commission on the critical role that Part IIIA and Clause 6 have assumed as the primary vehicles for utility regulation and the reforms that are required to ensure that this role is fulfilled in a way that promotes the long-term economic welfare of all Australians.

The importance of Part IIIA lies less in *ad hoc* declaration decisions, such as the Sydney Airport case, than in the fact that the State and Territory access regimes that have been certified under Part IIIA or the undertakings that have been given under it are now the primary vehicle for regulating access to assets conservatively estimated to be well in excess of $50 billion. NECG and the parties that have endorsed this submission have significant concerns about the adequacy of Part IIIA, as currently drafted, to fulfil its role as the framework for access regulation in Australia.

To begin with, Part IIIA should ensure that all access regimes apply to bottleneck services and bottleneck services only. It is critical that the scope of an access regime is constrained to those services where there is demonstrable market failure. As currently drafted, Part IIIA does not operate as an effective brake on the growth of access regimes in this respect. More specifically, it has only limited power to constrain the scope of Commonwealth access regimes or industry codes. NECG recommends a strengthening of the certification process and the processes for acceptance of industry access codes and undertakings to ensure that *all* Australian access regimes (including **all** Commonwealth regimes) are required to have in place tightly focused declaration criteria.

No less importantly, Part IIIA, as currently drafted, fails to impose any significant discipline on the principles that guide regulatory access pricing. This is a substantial flaw in the regime. Ideally, regulatory access prices should remove any monopoly rents from access prices, while ensuring that asset owners retain the incentives to invest efficiently in regulated facilities. In practice such precision is not possible. Reflecting this, policy makers often have a choice between erring on the side of rent removal by setting access prices too low, or ensuring investment promotion and preserving incentives for efficiency gains by setting access prices in a way that does not fully or immediately eliminate the firm's economic profits.

NECG submits that the importance of ensuring incentives for ongoing efficient investment is easily overlooked when the focus is on removing the potential for monopoly rent. However, it is important to remember that facilities are regulated because they are essential and are of national significance. These characteristics mean that ongoing investment and the access revenues required to support such investment are of great significance to the performance of the Australian economy. More generally, the economic loss associated with under-investment is almost always likely to outweigh any losses associated with above-cost pricing. When under-investment leads to poor quality of service or unreliability of supply, the flow-on effects to the community tend to be very significant indeed. To ensure that regulated firms continue to face incentives to undertake efficient investments, NECG submits that legislative guidance needs to be inserted into Part IIIA so that policy takes account of the need to ensure ongoing efficient investment.

1 Introduction

The Network Economics Consulting Group ('NECG') welcomes this opportunity to put its views to the Productivity Commission Inquiry into Part IIIA of the *Trade Practices Act 1974* ('Part IIIA') and Clause 6 of the Competition Principles Agreement ('Clause 6'). The following major Australian corporations and industry associations from across a range of industries have endorsed this submission:

- AGL
- AlintaGas
- Australian Council for Infrastructure Development
- Australian Gas Association
- Australia Pacific Airports (Melbourne Airport)
- Australian Pipeline Industry Association
- Australian Pipeline Trust
- Brisbane Airport Corporation
- CMS Energy Gas Transmission Australia
- Duke Energy International
- Electricity Supply Association of Australia
- Energex
- Envestra Limited
- Great Southern Energy Gas
- Integral Energy
- Rail Infrastructure Corporation
- Telstra Corporation
- TXU Networks
- United Energy
- Westralia Airport Corporation (Perth International Airport)

These parties represent the bulk of suppliers in the airport, electricity, gas, rail and telecommunications industries in Australia. While the style of access regulation that affects each of these different entities can vary significantly, each is concerned to ensure that all access regimes in Australia are carefully targeted and, when implemented, generate appropriate investment incentives, ensuring that the interests of consumers are protected over the longer term. The principles recommended in this submission represent common ground between these various parties.

NECG and each of the parties that have endorsed this submission believe that this Inquiry is critical to the future of infrastructure regulation in Australia. Part IIIA and Clause 6 form the bedrock of most access regulation nationally. As the Government itself has indicated, this review also forms part of a 'package' of reviews relating to infrastructure regulation.[1] Reforms made to Part IIIA and Clause 6 are likely to flow through to these access regimes. It is essential that any reforms to Part IIIA and Clause 6 recognise this broader impact and ensure that Part IIIA and Clause 6 are able to fulfil their roles in an efficient and effective manner.

The objective of this submission is to highlight for the Productivity Commission ('the Commission') the critical role that Part IIIA and Clause 6 have assumed as the primary vehicles for utility regulation and the reforms that are required to ensure that they fulfil this role in a way that promotes the long-term economic welfare of all Australians.

Part IIIA was initially developed in response to growing uncertainty over the ongoing operation of the essential facility principle at common law, and is the legislative expression of the Commonwealth's agreement to implement the more general principles set out in Clause 6. The Part IIIA declaration process continues to have an important role in regulating access in situations where an effective access regime or other arrangements are not in operation, as the Sydney Airport case demonstrates.[2] However, the overwhelming importance of Part IIIA lies less in these *ad hoc* cases than in the fact that Part IIIA and the State and Territory access regimes that have been certified or the undertakings that have been given under it are now the primary vehicles for regulating access to infrastructural assets conservatively estimated to be well in excess of $50 billion.[3]

NECG has significant concerns about the adequacy of Part IIIA, as currently drafted, to fulfil this wider role. To begin with, in order to maximise economic welfare, it is critical that access regimes be applied only to those services where there is demonstrable market failure and where the risk from regulatory intervention is small relative to the benefits regulation is likely to bring. In broad terms the declaration criteria contained in Part IIIA and the certification criteria in Clause 6 limit regulatory intervention to such services. However, the criteria for accepting undertakings and industry access codes have been less successful in constraining the scope of other access regimes, and the certification criteria in Clause 6 have had no role to play in relation to Commonwealth access regimes. NECG recommends a strengthening of the certification process and the processes for acceptance of industry access codes and undertakings to ensure that *all* Australian access regimes (including Commonwealth regimes) are required to have in place tightly focused declaration criteria.

More importantly, as the Commission notes in its Issues Paper, Part IIIA, as currently drafted, fails to impose any significant discipline on the principles that guide regulatory access pricing. There is only limited guidance in respect of access arbitrations and arbitrations under certified regimes, and no guidance at all in respect of industry access codes and undertakings. Once assets are brought within an access regime, it is important that the prices charged for access to those assets send efficient signals, both in terms of current usage and future investment.

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1 Assistant Treasurer, Press Release of 10 October 2000, Review of Part IIIA (Access Regime) of the *Trade Practices Act 1974*, and extension of reporting date for the review of the *Prices Surveillance Act 1983*.

2 *Sydney International Airport; Re Review of Declaration of Freight Handling Services (2000) ATPR 41-754.*

3 See section 2 below.

An important objective of this submission is to provide a perspective on pricing issues that is perhaps not evidenced in the Issues Paper, and which may not have been anticipated by the Commission, but which NECG believes is nevertheless at the heart of appropriate access regulation. More specifically, it will be argued that while the elimination of monopoly rents is a sound objective of public policy, there are strong economic reasons in many regulated industries to place a greater emphasis on ensuring incentives for efficient investment and for continued productivity growth than on ensuring low access prices *per se*.

To ensure that regulated firms continue to face incentives to undertake infrastructure investments efficiently and to raise productivity, NECG submits that greater legislative guidance needs to be provided than is currently the case.

2 The role of Part IIIA

Part IIIA has two distinct roles. First, it was developed as a legislative response to the common law essential facilities doctrine, the applicability of which in Australia was placed in some doubt after the Queensland Wire and Pont Data decisions.[4] This role ('the competition policy role') operates mainly when no effective access regime has been put in place. Second, and more importantly, Part IIIA has become the primary vehicle for utility regulation in Australia ('the utility regulation role') via the certification and undertakings processes contained in the regime or more generally through the patterning of federal access legislation – such as the *Airports Act 1996*, and to a lesser extent Part XIC of the *Trade Practices Act 1974* – on the provisions of Part IIIA.

2.1 Competition policy role

The competition policy role of Part IIIA is fulfilled via the two-step declaration and arbitration process. Services are 'declared' by the Commonwealth Minister or relevant State or Territory Premier or Chief Minister upon receipt of a recommendation from the National Competition Council ('NCC'). Declaration 'opens the door' to access seekers wishing to negotiate terms and conditions of access with the infrastructure owner or operator. Once a service has been declared, failure to achieve a negotiated outcome may lead to compulsory arbitration by the Australian Competition and Consumer Commission ('ACCC').

An important feature of the regime is that it separates jurisdictional responsibility for assessing the question of whether access should be granted (the competition question), from the question of appropriate terms and conditions upon which access should be granted (the regulation question).[5] Moreover, it makes regulatory determination of the terms and conditions of access a last resort, triggered when negotiation fails. This allows for negotiated outcomes to be agreed upon where this is possible, thereby avoiding unnecessary regulation. The declaration process also establishes a common and expert regulator to determine the issues in each stage of this two-step process. Overall, the process is likely to be more efficient than relying on courts to determine these matters and is likely to provide for greater consistency in regulated outcomes.

Declaration applications have been relatively infrequent, and successful declarations even more so. To some extent, this reflects the relative youth of the regime and the nature of the declaration criteria, which necessarily confine the scope of the legislation to large and nationally significant infrastructure services. It may also be a reflection of the fact that declarations have, in many cases, been sought in respect of services provided by facilities owned or operated by State or Territory governments, that may have been reluctant to declare such services. To a much greater extent, however, it is a reflection of the fact that most access regulation is conducted via certifications and undertakings under Part IIIA, as well as through industry-specific access legislation, such as Part XIC of the *Trade Practices Act 1974*.

2.2 Utility regulation role

The utility regulation role of Part IIIA is fulfilled mainly via the certification and undertaking processes.

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4 *Queensland Wire Industries Pty Ltd v BHP Ltd (1988) 17 FCR 211; (1989) 167 CLR 177. Pont Data Australia Pty Ltd v ASX Operations Pty Ltd (1990) 21 FCR 385.*

5 Two exceptions to this general approach are the telecommunications-specific provisions of Part XIC of the *Trade Practices Act 1974* and the *Airports Act 1996*. These give the regulator the power to both declare a service and then set the terms and conditions of access to that service.

Certification refers to a decision by the Commonwealth Minister under Part IIIA that a State or Territory access regime is 'effective'. The decision is made upon the receipt of a recommendation from the NCC and has the effect of precluding declaration of the services covered by the regime. Currently, certification is only required in respect of State and Territory regimes. Certification may only be granted to regimes that conform to the principles set out in Clause 6 of the Competition Principles Agreement.

Under Part IIIA, the ACCC may also accept a voluntary access undertaking by a service provider or someone who expects to become a service provider. The ACCC may not accept an undertaking in respect of a declared service. An undertaking accepted by the ACCC is enforceable in the Federal Court.

Similarly, the ACCC may accept a voluntary access code prepared by a representative industry body. The code can then form model rules of access in an industry, and industry participants may submit enforceable undertakings to the ACCC to comply with the code provisions.

These sorts of arrangements currently apply to the electricity, gas and transport industries:

- Electricity: The bulk of Australia's electricity networks are regulated under access arrangements comprising an industry code and undertakings under Part IIIA. The access regime for electricity networks in jurisdictions belonging to the National Electricity Market comprises chapters of the National Electricity Code that have been accepted by the ACCC as an industry access code under s.44ZZAA of the *Trade Practices Act 1974*. Networks submit applications to the ACCC for access undertakings under s.44ZZA stating that they will comply with the rules of access in the Electricity Code. The ACCC's acceptance of undertakings protects the networks from a declaration recommendation. It is also a precondition for the networks to participate in the National Electricity Market. The Electricity Code contains detailed specifications for connection to and use of the physical wires infrastructure for the transport of electricity, including pricing rules;

- Gas: All jurisdictions have enacted legislation adopting the Gas Pipelines Access Code[6], and many of these have had this legislation certified under Part IIIA. The Gas Code covers most existing pipelines. A new pipeline can be covered under the Gas Code in a number of ways, including upon application to the NCC and decision by the relevant Minister. The criteria adopted by the NCC for coverage are set out in s.19 of the Gas Code, and are broadly similar to the declaration criteria under Part IIIA.

  Under the Gas Code, owners of covered gas pipelines must establish access arrangements complying with the provisions of the Gas Code, and submit these to the relevant regulator. Access arrangements are not operational until they have been approved by the relevant regulator following public consultation;

- Rail: The Commonwealth Minister has certified the New South Wales (until 31 December 2000) and Northern Territory / South Australia Rail Access Regimes. The Western Australian and Queensland applications have not gone ahead and these regimes are not yet certified; and

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[6] This Code is not an industry access code in the sense that it has been accepted by the ACCC under s.44ZZAA.

- Ports: The Commonwealth Minister has certified the Victorian Access Regime for Commercial Shipping Channels ('the Victorian Regime'). The Victorian Regime provides a mechanism for access to Victorian commercial shipping channels covering the ports of Melbourne, Geelong, Hastings and Portland.

In addition, under the Commonwealth *Airports Act 1996* operators of the privatised airports were allowed one year (with a possible one-year extension) from when their leases began to have an access undertaking accepted by the ACCC. Only two undertakings were submitted (Melbourne and Perth Airports) and these were not accepted. Consequently, various services at the airports ('aeronautical services') were automatically declared by the Minister.

NECG estimates that, in combination, approximately $50 billion worth of assets are materially affected by Part IIIA or its subsidiary regimes (see Table 1). This is a very conservative estimate and would be greatly increased if the assets covered by Part XIC of the *Trade Practices Act 1974* were also brought formally within the scope of Part IIIA.

Table 1: The scope of Part IIIA and its subsidiary access regimes (at March 2000)

Infrastructure	Estimate value of assets covered (million)
Airports	$3,071
Ports	$369
Rail	$7,110
Electricity	$27,120
Gas	$12,920
Total value of assets covered	$50,590

Note: This calculation is derived from aggregating the best publicly available information on the valuation of infrastructure that is affected by Part IIIA. The valuations range from balance sheet to regulatory account estimates. The infrastructure, to be deemed affected by Part IIIA, must be either (i) regulated by a State's legislation that is certified by the NCC; (ii) regulated by a State's legislation that is currently under investigation by the NCC, with the likelihood of that investigation resulting in the legislation being certified; (iii) declared; or, (iv) have had undertakings submitted to the ACCC.

3 The scope of access regimes

NECG submits that economic efficiency requires that the scope of the various access regimes under Part IIIA (whether established under the declaration procedures, certifications or undertakings) be confined to areas where market failure is a strong likelihood. In broad terms the declaration criteria contained in Part IIIA and the certification criteria in Clause 6 have in part constrained regulatory intervention to those instances. However, the criteria for accepting undertakings and industry access codes have been less successful in constraining the scope of other access regimes, and the certification criteria in Clause 6 have had no role to play in relation to Commonwealth access regimes. NECG recommends a strengthening of the certification process and the processes for acceptance of industry access codes and undertakings to ensure that *all* Australian access regimes (including Commonwealth regimes) are required to have in place tightly focused declaration criteria.

It is also important that there is a high degree of consistency between the different routes to access, whether under Part IIIA or elsewhere. For this reason, Part IIIA should be sufficiently robust to support certification of Commonwealth access regimes. This will guard against the continued growth of industry-specific legislation that deviates from the principles in Part IIIA and Clause 6 (see below).

3.1 Importance of constraining access regimes

In assessing the scope of any access regime, NECG concurs with the guidelines issued by the Office of Regulation Review:

> While some regulation is necessary and beneficial, there are some cases where it may not be so or where it could be better designed. Regulation should not only be effective, but should also be the most efficient means for achieving relevant policy objectives....
>
> Determining whether regulation meets the dual goals of 'effectiveness' and 'efficiency' requires a structured cost-benefit approach to policy development. The relevant problem to be addressed and subsequent policy objective should be identified as a first step in the policy development process, followed by consideration of a range of options (including no action) for achieving the objective. The benefits of any regulation to the community should outweigh the costs.[7]

More generally, in designing efficient regulatory responses to access problems, policy makers need to (1) carefully define and assess the market failure(s) they are seeking to address and (2) assure themselves that any regulatory intervention can be sufficiently well calibrated so that the likely costs of intervention are not so great as to outweigh the likely benefits of ameliorating any identified market failure. Policy that is not based upon such careful assessment risks imposing upon society regulations the costs of which far exceed any potential costs from the market failure at issue.

Access regimes are designed to minimise the market failure associated with bottleneck services. Specifically, the access regimes operate to address the situation where an upstream firm controls an essential input for downstream firms (i.e. an economically significant input into the production process that cannot efficiently be substituted against) and the input cannot efficiently be replicated. It is important to note that this problem can arise whether or not the owner of the bottleneck facility is vertically integrated, contrary to some recent suggestions. Analysis and

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7 Office of Regulation Review, 1999, *A Guide to Regulation*, 2nd Edition, www.pc.gov.au, pp. A1.

experience suggests that access pricing issues can be as contentious for unintegrated as for integrated owners of a bottleneck facility.[8]

The problem for policy makers is to determine what is and what is not a bottleneck service and ensure that access regulation is strictly limited to the former. Extending access regimes beyond areas where there is demonstrable market failure is a costly decision. To begin with, access regulation alters industry dynamics, as it changes market participants' perceptions of the choices and instruments open to them. As a result, the outcomes that can be observed in the supply of declared services will always differ from those that market forces, left to their own devices, would have yielded. Declaration therefore forecloses the option of allowing market forces to develop unhindered. A regime that allows declaration to proceed **before** there is compelling evidence of market failure risks preventing markets from ever being allowed the time they need to do their work. The costs this imposes are all the greater as regulation is necessarily itself a highly imperfect instrument.

Moreover, an access regime that makes regulatory intervention an easy option is likely to distort incentives in important ways. For example, over-reaching access regulation will alter the incentives bearing on potential entrants. In particular, while entrants might otherwise have developed facilities alternative to those of incumbent suppliers, an access regime with low hurdles for intervention will encourage reliance on re-supplying the facilities already in place. As a result, the community can be deprived of genuine rivalry in supply.

Finally, there are the compliance costs associated with regulatory over-reach –these are the costs involved in actually administering and fulfilling the requirements declaration brings. These costs can be substantial.

This does not mean that access regulation is never required or appropriate – far from it. NECG reiterates, however, that Part IIIA and its subsidiary regimes need to be carefully constrained such that regulatory access is only provided to areas of demonstrable market failure.

3.2 Declaration and certification criteria

The declaration criteria in ss.44H and 44G of the *Trade Practice Act 1974* represent a broadly sensible approach in this respect, and operate effectively to exclude contestable and relatively insignificant infrastructure services from the purview of the regime. These criteria are the legislative expression of the principles agreed upon in Clause 6 of the Competition Principles Agreement, although they do not replicate the criteria exactly. They do not need to be altered substantially.

The criteria in Clause 6 are themselves required to be used by the NCC and the Commonwealth Minister when deciding upon the effectiveness of a State or Territory access regime (a 'certification' decision), although Part IIIA makes it clear that these are guidelines and not binding rules.[9] Like the declaration criteria, the requirements of Clause 6 are reasonable in their scope and do not require fundamental reconsideration.

It is acknowledged, however, that there may be room for improving some of the processes relating to declaration. In particular, the Minister should be required to provide reasons for all

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8 Narrow application of Part IIIA to vertically integrated firms would only produce strong incentives for vertical separation and significantly undermine the efficacy of the access regime.

9 See s.44DA of the *Trade Practice Act 1974*.

decisions under Part IIIA. This would have the effect of encouraging greater transparency of decision-making.

Similarly, it is important to strengthen appeal rights. There is, currently, no provision for a merits review of the ACCC's decision to accept or reject an undertaking. There should be scope for full merits review of such decisions by the Australian Competition Tribunal. A right of appeal in respect of ACCC decisions with respect to undertakings is currently provided under Part XIC of the *Trade Practices Act 1974*; there is no reason in principle why such a right is more readily justified in that context than in respect of Part IIIA.

Finally, the legislation should be strengthened to prevent unnecessary delays. There are a number of instances where no time limits apply to the making of a decision by the regulators or the Minister. By contrast, access seekers and providers are subject to strict time limits in relation to appeals and applications. NECG recommends consideration of imposing reasonable time limits on the Minister and the decision-making bodies.[10] If this requires the provision of additional resources to the NCC and the Australian Competition Tribunal then that should also be considered.

3.3 Certification of Commonwealth regimes

While the declaration and certification criteria are themselves relatively satisfactory, a major deficiency in the scope of the Part IIIA regime is the failure to provide for certification of Commonwealth access regimes or to require that all Commonwealth access regimes conform to the principles in Clause 6 in the manner in which State and Territory regimes must conform before they may gain protection from declaration applications. This may account for the growth in regimes such as Part XIC of the *Trade Practices Act 1974* (telecommunications specific access), and the access provisions of the *Airports Act 1996*, which differ from Part IIIA in the hurdles they put up to the regulation of services.[11]

Had the Commonwealth been required to submit itself to the scrutiny of the NCC in the introduction of these regimes, in the way that the States and Territories must, it is less likely that they would depart significantly from the principles in Part IIIA. It is even conceivable that they would never have been introduced, and that the Commonwealth would have instead continued to rely on Part IIIA itself. Had this happened, Australia would currently have a simpler and more uniform system of Commonwealth access regulation. Alternatively, had the Commonwealth nonetheless proceeded with separate regimes but submitted these to certification, it is likely that differences in the approach adopted would have been more clearly limited to issues where a strong policy case could be made for differentiation and that stricter time-lines would have been imposed for a move back to a uniform, economy-wide approach.

Unfortunately, the differences are marked and open the way for regulation of services that would rarely pass the criteria in Part IIIA. For example, under the *Airports Act 1996*, the ACCC may – in the absence of an undertaking – issue a determination stating that a service at a core regulated airport is an 'airport service' that is necessary for the purposes of operating or maintaining civil aviation services at the airport and is provided by means of significant

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10 NECG accepts that issues of the scope of an access regime require detailed consideration and should not be unduly rushed. However, it is questionable whether almost three years was required to determine the issues in the Sydney Airport case.

11 It is interesting to note that the Commonwealth had proposed a similar approach in relation to postal services, although the bill for the proposed Part XID of the *Trade Practices Act 1974* was withdrawn from the Senate late last year.

facilities at the airport that cannot be economically duplicated. These are far less stringent requirements than those embodied in Part IIIA for declarations, or Clause 6 for certifications; moreover, the relevant decisions are not subject to appeal. Importantly, there is no requirement that the facility be of *national* significance, nor that access or increased access is necessary in order to permit effective competition in upstream or downstream markets.

There is a similar problem in telecommunications. Under Part XIC of the *Trade Practices Act 1974*, the most important route for declaring a telecommunications service involves the ACCC deeming (following a public inquiry) that declaration will promote the long-term interests of end users. The legislation expands the test to require that the ACCC have regard to whether the declaration will:

- promote competition in markets for carriage services and services supplied by means of carriage services;
- promote the achievement of any-to-any connectivity; or
- encourage the economically efficient use of, and economically efficient investment in the infrastructure by which telecommunications services are provided.

An important point to make is that these are only matters which the ACCC must 'have regard to', whereas with declaration under Part IIIA, there is a series of matters of which the NCC and the Minister must be satisfied before the service can be declared – a much stricter and a more cautious approach to regulation, and one that allows less discretion. Again, the Commonwealth regime set out in Part XIC therefore represents only a very loose approximation of the principles in Part IIIA and of the constraints imposed on the States and Territories by the Competition Principles Agreement.

It is a matter for some concern that the trend towards specialised Commonwealth regimes that do not conform to the principles in Part IIIA appears to be continuing. Under the proposed Part XID of the *Trade Practices Act 1974*,[12] the ACCC will be able to declare a postal service for access. The proposed criteria for declaration are, as with Part XIC, much weaker than in Part IIIA. In particular, there is no 'uneconomic to duplicate' criterion, and rather than a 'national significance' criterion, the test is merely that the service is 'significant to the provision of postal services in Australia'.[13]

Clearly, there are significant differences in the principles embodied in these Commonwealth regimes and Part IIIA. It is unlikely that these regimes would be acceptable if the Commonwealth were required to undergo some sort of certification process, following an independent recommendation from the NCC and requiring conformity with the principles in Clause 6. Unless the Commonwealth is able or required to certify its regimes, there is a risk that the growth of disparate industry regimes will continue unabated. This will be detrimental to the industries concerned, and exposes the participants to significantly higher regulatory risks than reasonably necessary.

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12 This section was to be inserted by the Postal Services Legislation Amendment Bill 2000, but failed to pass the Senate at the end of 2000. It remains uncertain as to whether or not the Government will resubmit the bill.

13 The criteria set down in the *Payment Systems (Regulation) Act 1998* are even weaker, merely requiring that the provision of access be in the public interest. The Act provides very little guidance as to quite what this means.

3.4 'Deemed' declarations

Unfortunately, Part IIIA itself also exhibits some significant gaps that allow for regulation of services in areas in which there may not be demonstrable market failure. This is evident in the case of electricity access regulation. As outlined in section 2.2 above, access to the bulk of Australia's electricity networks is regulated under an industry code and undertakings accepted by the ACCC under Part IIIA. It is a precondition to their participation in the National Electricity Market that the ACCC be satisfied with service providers' access arrangements. Therefore, in practical terms, the scope of application of the National Electricity Code is of considerable interest to infrastructure owners. There is, however, nothing to indicate that there is any sort of preliminary assessment about the appropriateness of exposing a particular service provider to access arrangements in the manner in which declaration applications are assessed.[14] Rather, there is a presumption that certain services should be the subject of access, and the onus is upon affected firms to rebut the presumption. There is no legislative protection for firms that may wish to exempt themselves from regulation.

The National Electricity Code sets out details of the terms and conditions on which 'Network Service Providers' are to undertake to provide access to network services. Network services are defined as either a transmission service or distribution service associated with the conveyance, and control of the conveyance, of electricity through the network. Therefore, coverage is quite prescriptive, and there is no need to show that it is uneconomic to duplicate the facility providing the service, or that the facility is of national significance, or that access to the service provided by the facility is necessary to promote competition in upstream or downstream markets.

It is true that, under the Code, the National Electricity Code Administrator may, in accordance with the guidelines issued from time to time, exempt any person or class of persons who is or are required to register as a Network Service Provider from the requirement to provide an access undertaking to the ACCC. The only restriction on National Electricity Code Administrator's decision, however, is that the exemption not be inconsistent with the Code's objectives or the market objectives of the Code. Neither limitation corresponds to the principles in Clause 6, nor the declaration criteria under Part IIIA.

Similarly the National Gas Code was deemed to apply to virtually all pipelines that were in existence in Australia at the time of the Gas Code's commencement. These pipelines were effectively declared through the administrative mechanism of including them in Schedule A to the Gas Code. No review of the merits of each pipeline's situation was undertaken prior to this action. Since that time a number of pipelines have applied to the NCC for revocation of Gas Code coverage. The fact that some of them have been successful suggests that their initial inclusion was inappropriate.

As a consequence of these provisions, many service providers across a range of industries are placed in the invidious position of being exposed to regulation, with the onus upon them to justify why they should not be so exposed, but without being able to point to any legislative principles that could exempt them from regulation.[15]

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[14] Under ss.44ZZAA, the ACCC is required to have regard to a number of criteria when deciding whether to accept an industry code. Absent from the criteria are any requirements (for example) that the code apply only to services that are 'of national significance', or that the facility providing the service is 'uneconomical to duplicate', etc.

[15] In the case of the Gas Code there are legislative principles which set out criteria for revocation of coverage.

The underlying problem is that Part IIIA does not limit the scope of services that may be contained in an industry access code. This is important, as industry codes may become increasingly widespread forms of regulation in the future. For this reason, it is suggested that the ACCC should not be allowed to accept an industry code under s.44ZZAA of the *Trade Practices Act 1974* unless there are provisions in the code that allow for affected service providers to escape coverage of the access provisions when certain criteria are met. The criteria should be broadly similar to those applying in declaration applications (for example, by only allowing coverage of services that are not economically feasible to duplicate and that are necessary to permit effective competition).

3.5 Summary of recommendations for amending the scope of Part IIIA

In summary, NECG submits that the following recommendations are essential if Part IIIA and its subsidiary regimes are to be constrained to areas of demonstrable market failure:

- The declaration criteria and processes in Part IIIA should be retained, with minor modifications that would:
    - impose reasonable time limits on the Minister and decision-making bodies;
    - require the Minister to provide reasons for declaration decisions; and
    - provide for merits review of the ACCC's decision to accept or reject an access undertaking.
- Consideration should be given to providing greater resources for the NCC and the Australian Competition Tribunal, so that decisions can be made more expeditiously.
- There should be provision for certification of Commonwealth access regimes such as Part XIC of the *Trade Practices Act 1974* and the access provisions of the *Airports Act 1996*, ensuring consistency with Part IIIA.
    - Certified Commonwealth access regimes would be required to conform to the same principles as certified State and Territory regimes.
- Part IIIA should be amended so that industry codes (and undertakings) may only be accepted if they provide coverage to services that would meet the strict criteria for declaration.

4 Access pricing principles

Part IIIA mechanisms are designed to prevent anti-competitive refusals to provide access to bottleneck facilities. High access prices can have the same practical effect as a refusal to provide access. In part, this is why regulation has tended to focus on reducing access prices.

However, the important role of ensuring incentives for ongoing efficient investment is easily overlooked when the focus is on removing the potential for monopoly rent extraction. It is pertinent here to emphasise that facilities fall under Part IIIA because they are essential and have a nationally significant character. Given this essentiality, ongoing investment and the access revenue required to support it are surely equally essential.

Ideally, access pricing of bottleneck facilities would involve prices low enough to protect access seekers and end customers from the exercise of monopoly power, but also high enough to support the investments needed to deliver the essential services at efficient levels of quality and quantity.

In reality, determining efficient costs with any degree of accuracy is very difficult, if not impossible. This is true in any area of economic activity; but the problems that confront administrative determination of costs are especially great in infrastructure industries. As a consequence, access price estimates are often the result of a series of subjective decisions. The problem is not one of inadequate or inappropriate regulatory behaviour, but rather of limited information. A regulator cannot be expected to know with sufficient precision the efficient cost of current operations or future investment requirements of the firm.

In using their discretion, regulators effectively face a choice between (i) erring on the side of lower access prices and seeking to ensure they remove any potential for monopoly rents and the consequent allocative inefficiencies from the system; or (ii) allowing higher access prices so as to ensure that sufficient incentives for efficient investment are retained, with the consequent productive and dynamic efficiencies such investment engenders.

There are strong economic reasons in many regulated industries to place particular emphasis on ensuring the incentives are maintained for efficient investment and for continued productivity increases. The dynamic and productive efficiency costs associated with distorted investment incentives and with slower growth in productivity are almost always likely to outweigh any allocative efficiency losses associated with above-cost pricing.

Unfortunately, Part IIIA, as currently drafted, fails to provide any significant guidance on how regulators are to exercise the discretion they are given. To ensure that regulated firms continue to face incentives to undertake infrastructure investments efficiently, NECG submits that legislative guidance needs to be provided, stressing the greater importance of longer-term factors such as ensuring that access prices provide the right incentives for efficient investment.

4.1 Policy issues posed by price regulation of infrastructure

Part IIIA has become a major instrument for price regulation of infrastructure. In considering its impact and how that could be improved it is important to examine the policy issues posed by the price regulation of infrastructure. In the following five subsections we outline the policy aims of regulation, the difficulties associated with access pricing, some defining characteristics of infrastructure assets, the consequences of incorrectly estimating efficient access prices on either the high or low sides and then the consequences of intervening in emerging markets.

4.1.1 The aims of regulation

Economic regulation of some industries is justified when competitive forces alone are insufficient to ensure that social welfare is maximised. The archetypal example is a monopoly supplier who, in the absence of regulation, may restrict output to below the competitive level, thus leading to a deadweight social loss. This emphasis on the containment of monopoly power is one possible focus of economic regulation. It is one means to the more general end of maximising social welfare.

Policy makers focus regulation on the issues that are perceived to be most important at any point in time. In the context of this Part IIIA Inquiry, which concerns access to bottleneck facilities, there is an apparent focus on the monopoly rent problem in access pricing—high prices being perceived as a means of impeding competitive entry and as a wider source of efficiency losses to the community.

While the need to constrain the exercise of monopoly power is a legitimate aim of regulation, this submission contends that the need to ensure adequate investment in infrastructure is an equally legitimate and often neglected aim. The practical application of regulatory policy places overwhelming emphasis on the elimination of monopoly rents, but the more serious problem is the potential for regulation to result in under-investment in infrastructure.

4.1.2 Determining the optimal access price in a regulated environment

Under ideal conditions, a regulator can determine efficient access prices with certainty. In such circumstances, monopoly rents will be removed from the system, consumption will increase, while sufficient incentives will be retained to ensure that access providers continue to invest in the efficient maintenance and upgrading of their facilities. [16]

In practice, such ideal conditions are seldom realised. In the first instance, it is highly unlikely that regulators will have access to sufficient sources of information be able to accurately determine the social costs associated with the supply of the facility at issue. Cost estimation is a formidable problem for regulators, even when the actual costs of the regulated firm are the focus. It is significantly more difficult to accurately estimate the capital costs of a hypothetical, efficiently configured, asset. In either case, crucial cost determinants include the amount of economic depreciation to be allowed and the weighted average cost of capital, neither of which can be reliably estimated without reference to demand for the regulated firm's services.

The estimation of operating costs is no more straightforward. While there is some logic in constraining the earnings of regulated capital to be consistent with those of an efficiently configured asset,[17] this does not apply to operating costs. The firm operates with its actual capital base, rather than the hypothetical one, and can only be expected to minimise the cost of operating this asset.

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16 This obviously assumes that the regulator can set a multi-part price, so that price at the margin of consumption reflects marginal cost, inframarginal prices do not exclude access seekers who would be willing to cover their incremental costs and prices overall encourage efficient entry decisions. Where multi-part prices are not possible, or cannot be fully efficient (for example, because they will affect entry decisions into downstream markets), then the different types of efficiency can conflict. As a practical matter, it is rarely the case that a price schedule can be determined that will simultaneously support in-period (allocative) and between-period efficiency in industries with lumpy investments.

17 This logic only applies to cases in which careful attention is given to the estimation of economic depreciation. Neglect of, or errors in, this estimation will deter efficient investment.

Finally, regulators are often required to determine whether proposed new or renewal investments are efficient. This involves second-guessing the owners of the assets and seeking to determine how best to run the business. This task is typically undertaken on the basis of very unreliable information, such as that derived from benchmarking studies. However, the comparability problem impedes and often reduces significantly the usefulness of most such attempts. Most new investments face a host of unique demand and supply conditions that simply cannot be captured by a benchmarking exercise.

In short, NECG submits that even the best-resourced regulators will find it exceedingly difficult to be confident that their estimates of efficient costs are neither too high nor too low. The need to establish future efficient costs, given the technical difficulty of doing so, introduces significant uncertainty into the regulatory processes in a number of jurisdictions in Australia.

There is evidence that uncertainty over regulatory pronouncements is negatively affecting investment decisions. For example, AMP has publicly announced that it has not invested in regulated firms for over two years now due to the considerable risk associated with regulatory uncertainty.[18]

There are also suggestions that the perceptions of problems of regulatory risk in one jurisdiction can flow over into other jurisdictions (and, by extension, from one industry to another). Recently, a study by the University of Melbourne and the Victorian Department of Treasury and Finance found that investors in Australia consider that Victoria is a high regulatory risk jurisdiction.[19] The Australian Council for Infrastructure Development has indicated, in its recent submission to the 2001 Electricity Distribution Price Review by the Office of the Regulator-General (Victoria) that there are significant concerns amongst investors about the Office's approach to electricity distributions and that:

> Should the Office continue with its current approach regulatory risk premiums will increase for other Australian jurisdictions as Victoria and Australia will be further perceived as a high regulatory risk jurisdiction. This is particularly true for foreign investors and financiers who often do not differentiate between the various State and Commonwealth regulatory regimes.[20]

4.1.3 The particular nature of infrastructure assets

In infrastructural industries, the determination of efficient access prices is more difficult and the consequences of getting access prices wrong can be much greater than in other industries.

Adequate levels of and incentives for investment are particularly important for infrastructure assets, which provide essential services to Australian consumers and businesses. These services must continue to be provided even after any particular asset or network has reached the end of its life. This means that infrastructure assets will need to be replaced, and their owners carry at least an implicit, and in many instances an explicit, obligation to renew or replace them.

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18 See, Australian Council for Infrastructure Investment Annual Forum, October 2000, Melbourne, reported in 'Regulation Deters the Investor', *The Age*, 30 October 2000.

19 Arndt, R. and Maguire, G., 1999, *Risk Allocation and Identification Project – Survey Report*, The University of Melbourne and the Department of Treasury and Finance, ISBN 073111406X, Melbourne.

20 Australian Council for Infrastructure Development, 2000, Submission to the Office of the Regulator-General, Victoria, *2001 Electricity Distribution Price Review*, May, p.3.

Failure to invest in timely renewal or replacement can have serious consequences. The continuity of key business and household inputs is often taken for granted, but the rare failures are dramatic and widespread in their effects. Recent examples that highlight the costs involved include the Longford gas plant explosion, the Auckland electricity blackout, and recent nationwide railway stoppages in Britain due to safety concerns over broken rails.

In many cases, public safety is compromised by infrastructure failures, such as train derailments, water contamination (e.g. Sydney Water cryptosporidium scare) or incidents that occur in distribution assets located in public streets or household premises. This makes the pressure on infrastructure providers to ensure continuity and security of service all the greater.

In seeking to achieve these goals, infrastructure providers operate within constraints that arise from the nature of infrastructure assets. More specifically, infrastructure assets are generally very long-lived and highly specific to the uses and places for which they have been provided – i.e. not fungible. A pipeline that has been placed at one location cannot be economically removed and re-used at another, any more than a duct through which telecommunications cables run can be transported from a site where demand has now fallen away to another where there are shortages of supply.

These characteristics mean that infrastructure investment, once made, is largely sunk. The parties making that investment therefore bear a high level of risk, including the risk that regulators – while requiring service to be provided – will not allow investment outlays to be recouped.

However, the very features that distinguish infrastructure investment make it difficult for regulators to ensure that regulated prices will be set on a genuinely compensatory basis. More specifically, it is especially difficult in infrastructure industries for regulators to accurately gauge the level of efficient costs and hence ensure the adequacy of the allowed revenue stream to the service provider.

This reflects the fact that there are rarely adequate bases for identifying efficient costs. Particularly for reticulation or distribution plant, and for other territorially specific systems, supply attributes will vary greatly across locations. In these circumstances, comparisons between firms, including by the most sophisticated methods now available, may provide some indication of comparative efficiency, but are simply not sufficiently robust to allow efficient cost levels to be determined. At the same time, the modelling of hypothetical 'new build' networks, as in regulatory asset optimisation exercises, particularly in the presence of technological change, is so reliant on assumptions and methodological choices as to again be indicative at best.

As a result, regulatory estimates of efficient costs inevitably involve a very high level of uncertainty and a high risk of error.

In most industries, errors in price determination are to a large degree self-correcting – or at the very least, market developments rapidly make it clear that prices have been set at unsustainable levels. Thus, if prices are too low, exit occurs, with the contraction in supply putting upward pressure on price levels.

In infrastructure industries, however, these self-correcting mechanisms work less well or at least far less quickly. Even putting aside the fact that price mechanisms are suppressed to a greater or lesser degree by regulation, the difficulties arise from the largely sunk nature of the relevant assets. At any point in time, demand in most infrastructure industries can usually be served from existing capacity, with the bulk of that capacity being accounted for by assets that have low or even negative salvage values. Moreover, the holding cost of these assets (that is, the sum of their capital charge and non-use related depreciation) makes up by far the greatest share of

the total costs of supply: that is, variable costs are relatively low. As a result, when revenues are forced below the level corresponding to the long-term costs of supply, capacity is likely to remain in use, so long as the allowed revenue exceeds the (relatively low) out-of-pocket costs of continued operation.

This is not to say that adjustment will not occur: but it can take many years before the full consequences of revenue inadequacy become apparent. Rather, what typically happens when regulated revenues are driven below long term costs is that service continues – but maintenance is cut back, new investments are deferred, the quality of service suffers, and it is only once the impacts of each of these has cumulated that the full extent of the problems becomes apparent.

Political reactions to the process set out above can further blunt the adjustment mechanisms. Both in Australia and in the UK, a marked tendency has developed for governments to respond to the service inadequacies that price distortions create not by dealing with those distortions directly but rather by seeking to compel investment and service performance. This adds to the direct economic costs of distorted prices the costs of politically mandated, generally inefficient, investment. Moreover, it is plainly only a short-term 'fix', as the failure to address the underlying issues means that the core problems have not been resolved.

The slow nature of adjustment in infrastructure industries means that it may be difficult to ascertain that prices have been set too low. This creates risks that are compounded by the political context in which the regulation of infrastructure industries inevitably sits. More specifically, price reductions always seem attractive, and understandably so – they appear to serve the public interest, are consistent with immediate community expectations and can give great legitimacy to regulatory processes and institutions. From an economic point of view, however, the costs of setting prices too low can be great relative to those of setting prices too high – if regulators must err, they would seem to do well to err at least slightly on the side of ensuring that needed investments can proceed. The reasons for this, and its implications, are the issue to which we now turn.

4.1.4 Consequences of under and over-estimating optimal access prices

Given uncertainty about efficient costs, policy makers face a choice as to whether they would prefer the regulator to err on the side of lower access prices and seeking to ensure that any potential for monopoly rents is removed or, on the other hand, allowing higher access prices in order to be confident that sufficient incentives have been provided for efficient investment with the consequent productive and dynamic efficiencies.

Setting low access prices will sometimes deliver better short-term outcomes by improving allocative efficiency. Whether there will be sustainable long-term gains is, however, more complex. In assessing these short run and long run effects it is important to distinguish income transfers between consumers and producers on the one hand and welfare gains on the other.

Commonly, monopoly pricing is attacked because it involves a transfer of wealth from consumers to the monopoly producer. However the most serious problem caused by monopoly pricing is the loss of social welfare, which results from the monopolist's profit maximising restriction of output.[21] There are parallel issues created by pricing below the competitive

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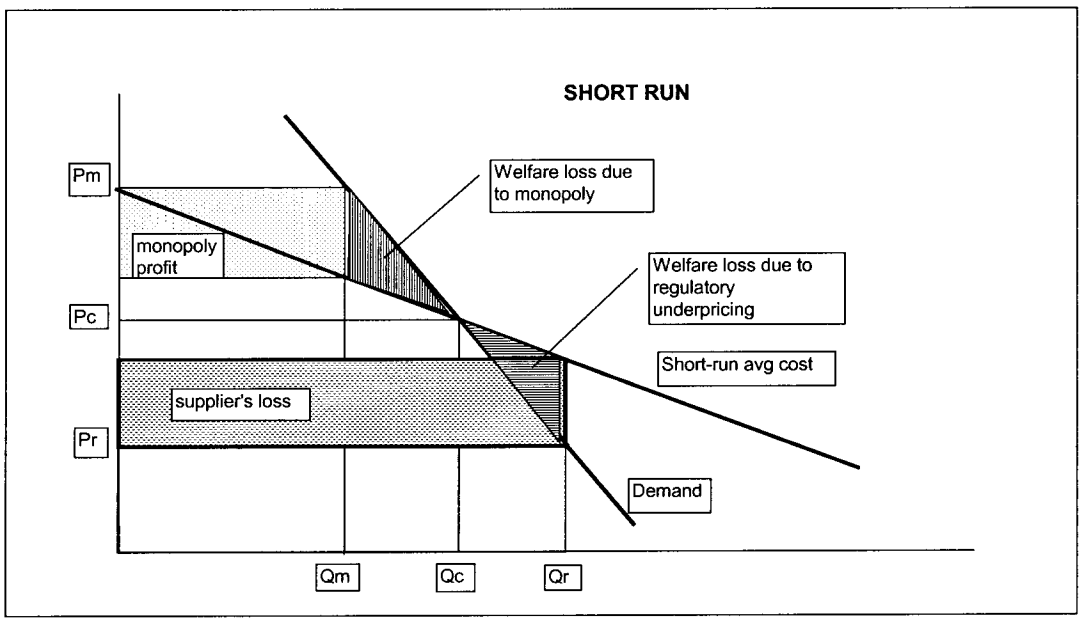
21 This is not to suggest that distributional issues are unimportant – they are important, and need to be addressed. However, concerns about income distribution are best dealt with through explicit distributional policies that rely on the instruments available through the tax and welfare systems. Additionally, in most circumstances, the prospect of earning monopoly rents will induce wasteful rent-seeking activities. In infrastructure industries, and notably in situations of natural monopoly, the concentrated nature of the market is inherent in the technology of supply. As a

equilibrium price level. When this occurs, output can be higher than the welfare-maximising level and the consumer gains are more than negated by the producer's loss. The transfer in this case is from the producer to consumers, but the net welfare effects in the short run for underpricing are negative in exactly the same way as they are for monopoly pricing.

The following diagrammatic representations illustrate that, within a regulated industry, the consequences, in the long run, of underpricing are likely to be more serious than those of overpricing.

The first diagram depicts the short run situation, in which infrastructure investments are sunk. Here the demand curve has the steep slope characteristic of essential services, reflecting low demand elasticity. The short run average cost curve displays the gradually decreasing slope typical of infrastructure investments, which often display economies of scale before capacity limits are approached. The conclusions drawn here are not affected if, instead, the short run average cost curve has an increasing slope.

Pc represents the competitive price level at which the supplier earns zero economic profit. Pm



represents the monopolistic price, at which the supplier earns monopoly rents and there is a deadweight welfare loss to society equal to the area of the upper triangle (vertical hatching).

If instead the price is set at a level Pr, which is as far below Pc as Pm is above it, then clearly the supplier will make a loss in the short run. This loss is significantly greater in magnitude than the monopoly profit, which would have been made at Pm. (Note the supplier's loss is given by the rectangular area which partly overlaps the lower triangle.) In the short run, a supplier is likely to continue to provide service even when the regulated price is below its average cost of supply, so long as the price exceeds the variable cost.

At Pr there is also a deadweight welfare loss, given by the area of the lower triangle (horizontal hatching). Under the assumptions used here, (i.e. linear demand and supply curves, and Pm – Pc

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result, there is less scope for rent-seeking investments aimed at converting potentially competitive activities into sources of monopoly rents. To the extent to which a risk of rent-seeking nonetheless exists, the access regime itself provides a means of controlling it.

= Pc – Pr) this welfare loss is equal to the monopoly pricing welfare loss. In this case the welfare loss arises because some customers (Qr – Qc) are supplied even though they value the service less than it costs to deliver – scarce resources are being diverted from the supply of services that customers value more highly - a classic allocative inefficiency.

In this short run situation, overpricing and underpricing by equal amounts relative to the competitive price level are equally damaging to welfare. In the monopoly pricing case there is a transfer of wealth from customers to the supplier. In the underpricing case there is a (much larger) transfer of wealth from the supplier to customers.

In the long-run situation, the welfare effects of overpricing versus underpricing are not equivalent. In the first place, it is no longer true in the long run that a supplier would continue to provide service when the regulated price is below its average cost. In the long run, all costs are variable, so a regulated price that is below average cost would be below variable cost.[22]

In the second place, the long run average cost curve may, at the point it is intersected by the demand curve, have a declining, level, or increasing slope, notwithstanding the short run economies of scale of some assets.[23]

If the long run average cost curve were downward sloping or flat, then the consequences of a regulated price which is below the equilibrium level would be very serious from a welfare perspective. There would be no level of output greater than zero at which the supplier could recover its long run variable costs (equal to long run average costs). Faced with this situation, the supplier would either exit the industry when reinvestment was required, or would attempt to modify its long run average cost curve by degrading service quality or investing in assets with low capital cost and high operating costs. If the output level is reduced to zero, then the welfare losses will be maximised.

If the long run average cost curve is upward sloping, then the supplier would continue to operate, but at a level of output which was reduced from the competitive equilibrium level by an amount needed to align long run average costs with the regulated price. This situation is depicted in the diagram below. In this diagram, as in the short run diagram, the demand curve is steep, reflecting the essential character of regulated infrastructure services.

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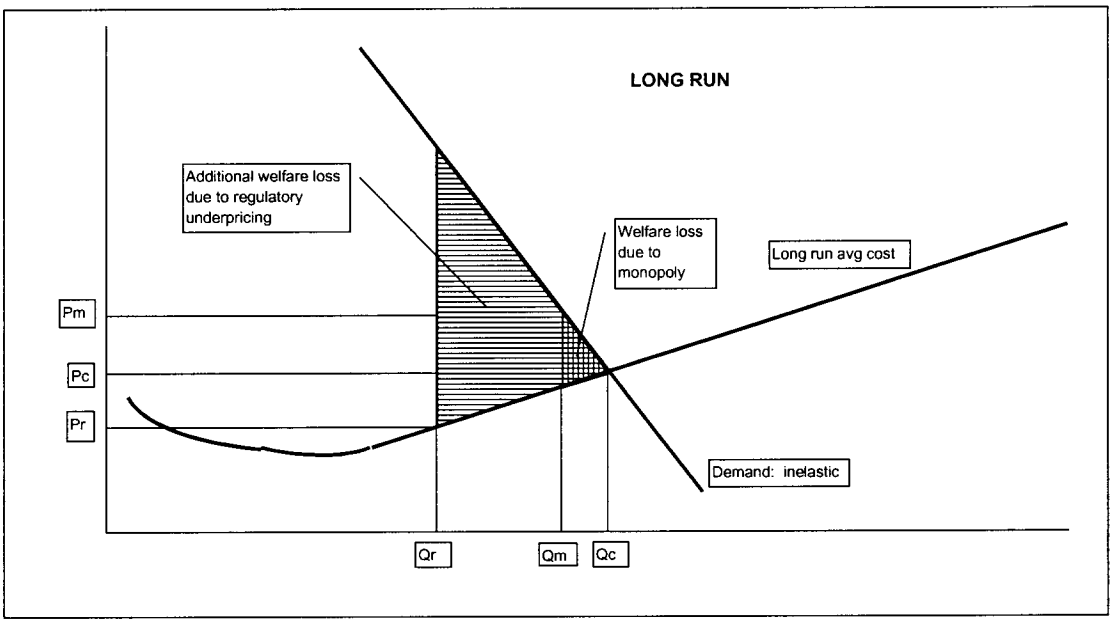
22 In practical terms, a supplier faced with a regulated price below average cost may not exit the industry immediately. Some alternatives include declining to invest in asset renewals when required, allowing service quality to degrade, or investing in new assets with lower capital cost but higher operating and overall life-cycle costs. Each of these alternatives is likely to be harmful to welfare.

23 Short run economies of scale are typified by the railway line or transmission link whose unit costs decline as utilisation increases because its fixed costs can be defrayed over a larger volume of sales. Long run economies of scale may be obtained by improving unit costs through investment in different technologies. For example, as telecommunications traffic density increases, unit costs could fall when copper cable is replaced with microwave transmission. If density continues to increase sufficiently, unit costs could be reduced further by replacing the microwave technology with fibre-optic cable. Whether the investment in different technology actually leads to a decrease in unit costs will depend on a number of practical issues. If strong economies of scale are only achieved at output levels which are much higher than current demand, then it is not clear that the firm's long run average cost curve would be declining in the vicinity of where the demand curve intersects it. In other cases, the only technology capable of achieving the required volume may involve higher unit costs. This could well be the case if ferry services were replaced with a large-span bridge.



Relative to the competitive equilibrium price, Pc, monopolistic pricing Pm would lead to a welfare loss equal to the area of the smaller triangle with cross-hatching. However this welfare loss is small compared to the loss arising from underpricing Pr, which is as far from Pc as is Pm. The welfare loss due to Pr is given by the large triangle (which overlaps the small triangle). The net welfare loss relative to monopoly pricing is equal to the horizontally hatched trapezoid.

Thus in the long run situation, for a pricing error of a given magnitude, the welfare loss will be significantly greater if the error is in pricing too low rather than too high. This conclusion holds for all average cost curves except those which rise more quickly than demand falls. Such circumstances are unlikely for regulated essential services where supply usually involves large fixed costs and hence declining average costs, and where demand for the essential service is typically inelastic (and hence steep). As has been noted above, the welfare losses associated with low access prices are not immediately apparent, in contrast to the short-term transfers enjoyed by consumers. Nevertheless, economic analysis suggests that these future welfare losses are likely to be extremely high.

This conclusion is surely consistent with every-day experience. When under-investment leads to poor quality of service or unreliable supply, the flow on effects to other businesses and the economy broadly are often extremely serious. One only has to remember instances in the past twenty years of blackouts and brownouts, gas supply disruptions, train derailments, or water contamination incidents to appreciate the severe consequences of service interruptions.

Addressing problems of asset degradation can involve very large sums of money and significant inconvenience to consumers. In 1999, Telstra invested a total of $4,274 million in fixed assets, which is equivalent to 24.3% of sales revenue – much of this was directed at rebuilding the rural network. Similarly, in the late 1980s and early 1990s, AGL was required to invest $400 million in rehabilitating its medium and low-pressure distribution system. These outlays were needed to revitalise a distribution system that was in the latter stages of decay due to insufficient maintenance and capital replacement over a long period of time.

In the UK, the recognition that infrastructure condition led to a series of recent derailments has seen the Office of the Rail Regulator take the nearly unprecedented step of permitting RailTrack (the privatised infrastructure owner) to earn higher revenues in order to pursue a rehabilitation program aimed at remedying a systemic broken rail problem. Ordinarily, an adequate standard of rail track would have been assured through periodic maintenance and renewal; this could

have been carried out with little disruption to track use. However, because these ongoing activities were not pursued when they ought to have been, the very large-scale rehabilitation work now required inevitably imposes significant disruption costs on rail users.

Asset degradation is beginning to become apparent in Australia and around the world, while new funds for investing in regulated infrastructure are far from assured. For example, the Institution of Engineers, Australia, recently prepared a comprehensive study into the 'health' of Australia's infrastructure assets. It concluded that in a number of sectors, urgent investments are needed to salvage disintegrating assets. Specifically, the Institution found:

> A persistent bias towards present-day consumption spending rather than long-term investment has been evident at all levels in Australia, and must be addressed by governments. Demand management, and improved efficiency in resource allocation, will have an important role. However, the present levels of infrastructure funding, from both private and public sector sources, must be raised if the standard of living is to be maintained.... Action should be taken by government at all levels to identify future community needs, set broad priorities for the investment of public funds, put in place effective planning and regulatory systems to remove unnecessary barriers to infrastructure development, and foster long-term partnerships between the public and private sectors.[24]

4.1.5 Consequences of intervening in emerging markets

The efficiency losses associated with inappropriate price regulation can be especially great in emerging markets – that is, those markets where changes in demand and innovation in supply are reshaping patterns of activity. These new or rapidly developing markets are subject to unusually high levels of uncertainty about future demand conditions, and sometimes also about future service costs.

As a general matter, it is not easy to make a case for intervention in markets such as these. It is difficult to see how serving new areas – be it through the provision of service at new localities or through the supply of new products in existing localities – can involve bottlenecks. The likelihood of these markets failing in such a way as to warrant regulation under Part IIIA therefore seems slight.

However, even if market conditions do seem to be such as to involve possible bottlenecks, policy-makers, before bringing these areas within the scope of regulation, need to be mindful of the special difficulties regulating emerging activities involves.

These difficulties are two-fold.

First, there is rarely sufficient information available to support even minimum levels of accuracy in regulatory decision-making. With likely demand and future costs often speculative, it seems unlikely that regulators can take decisions that are likely to bring any net improvements.

Second, much regulation – indeed, the bulk of the regulation carried out under Part IIIA and other Australian access regimes – operates by limiting the economic income that can accrue to regulated suppliers. This effectively truncates the distribution of returns investors can hope for. When the attractiveness of investment depends on the possibility of significant 'up-side' – that is, on the likelihood, however slight, that investors will secure some 'clear blue sky' profits –

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[24] The Institution of Engineers Australia and GHD Pty Ltd, 1999, *A Report Card on the Nation's Infrastructure*, December, pp.45-46.

truncating the distribution of earnings can be sufficient to prevent socially desirable investments from going ahead.

The social costs of thus deterring innovative investment can be extremely high. The greater the absolute novelty of the service – i.e. the lower the extent to which it merely substitutes for existing services – the greater the net gain in social surplus associated with the new service's availability. As a result, there is an even greater need for caution in regulating new activities than in regulating those where patterns of demand and supply are well established. Where regulation cannot be avoided, the importance of preserving incentives to invest and innovate should be the paramount consideration in the regulatory process.

4.2 Pricing principles under Part IIIA

Given the critical importance of decisions such as the type of access pricing methodology to be utilised and the relative importance to be given to monopoly rent control versus ensuring investment incentives, it is a matter of some concern that Part IIIA provides almost no practical guidance on these issues. It is important to note that any additional clarity that can be brought to the current pricing principles will also likely improve the prospects for successful dispute resolution between access seekers and access providers. If the principles were clearer, parties to disputes or potential disputes would have a clearer understanding of the likely arbitrated outcome and hence would more readily agree on a commercial settlement. The experience under Part XIC, which embodies the same pricing principles as those used in Part IIIA, bears out the difficulties the current lack of clarity creates for commercial negotiation.

4.2.1 What guidance does Part IIIA provide?

Declarations: The only legislative guidance in Part IIIA on pricing principles is found in Subdivision C of Division 3, which contains restrictions on the ACCC's ability to make an arbitration following declaration of a service. Specifically, section 44x of the *Trade Practices Act 1974* specifies the matters a regulator should take into account in deciding on the terms and conditions for access:

i. the owner's legitimate business interests and investment in the facility;

ii. the costs to the owner of providing access, including any costs of extending the facility but not costs associated with losses arising from increased competition in upstream or downstream markets;

iii. the economic value to the owner of any additional investment that the person seeking access or the owner has agreed to undertake;

iv. the interests of all persons holding contracts for the use of the facility;

v. firms and binding contractual obligations of the owner or other persons (or both) already using the facility;

vi. the operational and technical requirements necessary for the safe and reliable operation of the facility;

vii. the economically efficient operation of the facility; and

viii. the benefit to the public from having competitive markets.

These eight principles are necessary but they provide insufficient guidance for the determination of efficient access prices. The regulator is required to consider the 'interests', 'costs', 'value', 'obligations', 'requirements', and 'benefit' of any settlement to the facility

owner, contract holders, access seekers, and the public generally. Inevitably these considerations will involve conflicting interests. Very little guidance is provided as to how such conflicts should be resolved, other than to say that as a result of the settlement the facility should be operated in an economically efficient manner, and that society should be provided with the benefit of having competitive markets.

Certifications: There is a similar lack of specificity in the case of certified access regimes. Clause 6(4)(i) merely provides that in deciding on the terms and conditions for access, the dispute resolution body should take into account the same eight matters that are listed in section 44x of the *Trade Practices Act 1974*. Regulators have been able to interpret these loose criteria to impose very specific but substantially varying pricing requirements.

Undertakings and industry access codes: As a substantial amount of infrastructure access regulation is conducted through undertaking channels (including industry access codes), it is a matter of significant concern that there is no guidance whatsoever in Part IIIA about the appropriate pricing principles in these cases. As a result, the various regulatory bodies have been required to exercise discretion when examining an industry code or undertaking.

For example, Chapter 6 of the Electricity Code (which has been accepted by the ACCC as an industry access code) imposes extremely detailed principles and methodologies for determining maximum transmission revenue and transmission prices, the provision of transmission and distribution network services, maximum annual distribution revenue and individual maximum distribution tariffs. The ACCC, as the national regulator for transmission,[25] has exercised its discretion to develop its own guidelines and rules[26] for the application of these Code guidelines. These guidelines are really *de facto* legislation, because the ACCC is ultimately responsible for approving pricing structures developed by individual network service providers. Despite the existence of detailed principles, the determination of access prices still relies upon an assessment of efficient costs, and as a consequence these principles do not remove regulatory uncertainty.

The difficulty with the industry-specific and jurisdiction-specific approach is that by fragmenting the regulatory jurisdictions, opportunities are missed to formulate general and powerful rules, and the risk of inconsistency between regulators is significantly amplified.

When it comes to businesses which fall under Commonwealth regulatory jurisdiction, specific pricing guidance is not available and recourse must be had to the, at times unhelpfully general, guidance provided in Clause 6 (4) (i) of the Competition Principles Agreement. As with the rest of Part IIIA, the pricing guidance is framed in procedural terms, leaving it to dispute resolution bodies to apply these very general principles in each case, in order to arrive at a compromise between conflicting interests which need not necessarily rest on transparent reasoning. As a result, the ambiguity in some of the concepts covered by Part IIIA provides advocates on both sides with great scope for lengthy revisitation of basic economic principles.

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25 Jurisdictional regulators are responsible for developing national guidelines and local rules for the application of the Code guidelines to distribution pricing, and jurisdictional regulation covers matters not regulated by the Code, including practices and standards to be observed for access and connection to the distribution network, guidelines on the application of distribution pricing and technical distribution and wiring requirements.

26 Draft Statement of Principles for the Regulation of Electricity Transmission Revenues.

4.2.2 How this guidance could be improved

A clearer statement of the specific economic principles that apply to the regulation of infrastructure assets is required. At the most general level, it should be made clear that regulators, before setting any price controls as part of access regulation, must have reasonable grounds to be satisfied that the prices thus set (i) would not have deterred investment in the assets actually being used to provide the services at issue, had those prices been known to investors prior to their commitment; and (ii) will not compromise the prospects of efficient investments, including in the maintenance of existing plant, being made in future.

Within this broad principle, three further considerations are worth elaborating.

Regulatory forbearance for new and dynamically growing markets

As noted in sections 3 and 4.1.4 above, access regimes should ideally be restricted to bottleneck facilities and hence should not generally be applied to services in new markets, or in which dynamic market entry and growth, or technological innovation is observed. Nevertheless, if markets such as these are brought within the scope of the Part IIIA access regimes, there should be a requirement that any forms of price control or revenue regulation recognise the need to preserve incentives for dynamic efficiency. More specifically, the current requirement that seeks to limit the scope for access prices to allow recoupment of losses consequent on competition, should be qualified by adding a provision that would permit such recoupment where it would be consistent with dynamic efficiency.

Price regulation should facilitate least-cost investment options

A distinguishing feature of infrastructure investment is that the physical assets involved often have very long economic lives. There are often tradeoffs to be made between asset replacement, partial renewal, or ongoing routine maintenance. Because infrastructure investments consume such a large proportion of a nation's fixed capital expenditure, it is particularly important from a social welfare perspective that least-cost infrastructure solutions are selected.

The mechanism of price regulation has an important role to play in the owner's choice among investment, renewal, and maintenance tradeoffs. Inappropriate regulatory interventions can and have had the unintended effect of increasing investment costs by steering investors toward higher cost facilities which yield them more certain returns.

Several factors are at work. For example, frequent regulatory review periods can distort investment choices. In situations where the least cost infrastructure solution may involve large scale, long-lived investments, the owner may be deterred from making these investments if review periods are frequent. In these circumstances, investment will be biased towards the frequent installation of small increments of capacity. This may well increase the social cost of infrastructure.

Pricing principles need to guard against these concerns, particularly when regulatory involvement in price-setting and investment decisions is intimate and detailed. This could be done by requiring that the regulator have reasonable grounds for being satisfied that the pricing approaches adopted will not distort the choices being made with respect to infrastructure outlays. Greater reliance on incentive regulation could help in this respect, as it could provide investors with the motivation and the means to systematically discover and implement the least-cost method of service delivery.

Method of encouraging dynamic efficiency should be explicit

Dynamic efficiency—taking advantage of opportunities for cost-reducing innovation—is an important goal of regulation, and of economic policy more generally. Access pricing can play an important part in advancing that policy. A desire for dynamic efficiency is implicit in regulatory preferences for 'efficient costs', 'optimal assets', and 'forward-looking' appraisals.

Unfortunately the search for 'efficient costs' and 'optimised valuations' can unintentionally provide disincentives to the very innovation these criteria seek to promote, by setting arbitrary and unachievable cost targets. This effect is most obvious when cost-of-service regulation effectively removes the incentive the firm would otherwise have had to increase productivity, by eliminating the economic profit that those increases in productivity would otherwise have given rise to.

In general terms, the search for 'efficient costs' and 'optimised valuations' is driven by the desire to protect consumers from any potential monopoly inefficiencies.[27] In principle, there are two ways in which these inefficiencies could be dealt with. The first of these relies on **punishing** the firm for excess costs through periodic exposure to reduced economic returns; the second on **rewarding** the firm when it seeks out and implements measures that reduce costs.

From an economic point of view, the punishment model has little to recommend it:

- First, the regulator is less well informed about opportunities to reduce costs than the regulated firm; as a result, the regulator is likely to err significantly in determining whether costs could or could not be reduced.

- Second, even if investors could insure against stranding risk (and it is unlikely that they can), it is not obvious that managers (whose human capital is tied up in the firm, and whose remuneration is likely to depend on the firm's performance) could.

- Third, the combination of investor and management exposure to stranding risk could readily result in incentives which defeat the very purpose of exposing the firm to the risk in the first place. This is because the increased risk, if not fully compensated, will reduce investment and output; while providing full compensation for the increased risk may not be any less costly than not allowing the stranding to occur

In contrast to the punishment model, an approach based on rewarding the firm for cost reduction requires that the firm be allowed to retain the income that cost reduction permits for some specified period of time. While determination of the optimal form and duration of such a reward is obviously a complex matter, it is clear that the main cost of such an approach is the fact that it allows the regulated firm to earn economic profits.[28] These correspond to a rent the firm secures on its superior information relative to the regulator.

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27 It is worth noting that an unregulated monopolist need not be technically inefficient. Nor is there any *a priori* reason to believe that a firm exposed to competition will innovate at a more socially efficient rate than one that is not so exposed. Indeed most of the major anti-trust cases around the world, such as the Microsoft case, point to innovation that is so sustained and targeted as to exclude potential rivals.

28 There can also be economic costs when say a price cap replaces pure rate-of-return regulation with no asset stranding. These arise because the cap exposes the firm to the risk associated with input price shocks, which it is insured from in pure rate of return regulation.

It is questionable whether the economic costs of these rents could be high, especially when compared to the costs of the punishment model. The rents are only earned because the firm has freed resources for other uses. Moreover, with demand relatively inelastic, and the firm free to price discriminate among consumers, any allocative efficiency distortions are likely to be small.

As a result, optimised valuations and efficient costs should not be unquestioned social goods in themselves. Instead, the regulatory strategy for enabling dynamic efficiency should be specifically identified, and its feasibility should be tested. More specifically, regulators should be prevented from forcing write-downs on sunk assets unless they have reasonable grounds for being satisfied that the risks associated with those write-downs have been fully reflected in allowed cash flows.

4.2.3 Alternative to explicit estimation of efficient costs: incentive regulation

Incentive regulation is an alternative that can avoid some of the detailed cost estimation work required by more traditional forms of regulation. To this extent, incentive regulation can reduce one component of regulatory risk: that arising from estimation error.

Writing in 1983, Professors Beesley and Littlechild concisely set out the nature of incentive regulation when they proposed that "the price of a bundle of telecommunications services should not increase by more than X percentage points below the retail price index (the RPI-X) for a period of five years. This could be applied to any set of services, perhaps weighted as the bills of the representative consumer."[29] They then went on to enumerate the gains such a form of regulation would bring. The regulated firm would be encouraged to cut costs, as it could keep any profits that resulted from out-performing the target rate of productivity growth built into the 'X' factor. The fact of 'locking in' regulation for a period of time would provide certainty for investors and consumers alike, at least with respect to regulatory risk and for the period between re-sets. This certainty could provide added incentives for dynamic efficiency. Moreover, they said, such a scheme would be relatively simple to devise and implement: for "... the level of X would, in practice, be the outcome of negotiation between BT [British Telecom] and the government; an exhaustive costing exercise is not called for."

Incentive regulation does offer real potential for substantial gains. These arise principally from a longer period between regime adjustments, greater incentives for cost reductions and a reduced reliance on cost estimates. However, the Australian experience – for example with the price caps applied to telecommunications, gas and electricity – highlights the scope for this approach to be implemented in ways no less heavy-handed and no less distorting than its major alternatives. As a result, even for regulators committed to the broad principles of incentive regulation, it remains crucially important that clear policy guidance be provided as to the objectives regulatory price setting should pursue.

4.3 Suggested next steps towards efficient pricing principles

NECG would urge the Commission to address in its deliberations as a matter of highest priority the development of efficient pricing principles to be inserted into Part IIIA to give regulators and the developers of State and Commonwealth access regimes guidance on these critical issues.

While a complete and simple formulation that would be broadly acceptable to all interested parties is not yet available to address these issues, it seems likely that an important distinction could be made between firms for which price regulation begins with the estimation of an overall

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[29] Beesley and Littlechild, 1983, "Privatisation" Lloyds Bank Review.

revenue cap, and firms which follow a negotiate and arbitrate model. The former type of regulation is more typical of the energy sector, whereas the latter type is often found in sectors such as telecommunications and rail transport.

Nevertheless, certain significant issues arise frequently enough in practice that they should be treated explicitly in the ultimate pricing principles underpinning Part IIIA. NECG and the co-sponsors of this submission look forward to corresponding with the Commission further on these matters.