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The Socio-Economic Drivers for Prescriptive Regulation

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SUMMARY

A number of recent statutory reviews and cases have highlighted the need to carefully examine the current direction of Australia's utility regulation and to ensure that it is achieving its intended goals. It is becoming increasingly apparent that statutes imposing regulation on Australian utilities need to give far greater weight to the preservation of strong and effective regulatory "filters" against unwarranted encroachment of regulation into competitive markets and to the existence of clear and widely available review rights. It is also clear that in striking the balance between the short-term interests of consumers and the longer-term interests of investment and growth, there is a danger that regulators have, by failing to compensate adequately for regulatory risk, enforced third party access arrangements that are not sustainable in the longer term. This paper discusses these issues in the context of recent statutory reviews by the Productivity Commission (for example, Review of the National Access Regime) and other review bodies, as well as some important regulatory decisions (for example, Duke Eastern Gas Pipeline) by the Australian Competition Tribunal and others. It also discusses current deficiencies in regulatory arrangements under the National Gas Code, with specific reference to the recently announced review of national energy markets.

INTRODUCTION

Government regulation, in all forms, is subject to continual revision, and to constant expansion and contraction over time, as the tide of public opinion and academic and professional debate lead to

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revised opinions about the appropriate nature of regulation, and about the ends that regulation is meant to achieve. It is an unfortunate feature of most regulation that once introduced, it is prone to being seen as a panacea for ailments that it was never intended to redress. Third party access regulation is no exception in this respect. From its inception in 1995 (and earlier in the case of the natural gas industry), the application of access regime has grown considerably, and has become one of the most controversial and high profile faces of the National Competition Policy.

No wonder, then, that there has been a tendency for regulators, politicians, and proponents of the National Competition Policy to want to present access regulation in such a way as to deliver, and be seen to deliver, immediate and observable benefits for consumers.

It is becoming increasingly apparent, however, that statutes imposing access regulation on Australian utilities need to give far greater weight to the preservation of strong and effective regulatory "filters" against unwarranted encroachment of regulation into competitive markets, and to the maintenance of clear and widely available review rights. It is also clear that in striking the balance between the short-term interests of consumers and the longer-term interests of investment and growth, there is a danger that regulators have, by failing to compensate adequately for regulatory risk, enforced third party access arrangements that are not sustainable in the longer-term.

A number of recent statutory reviews and cases have highlighted the need to carefully examine the current direction of Australia's utility regulation and the need to ensure that it is achieving its intended goals. The most pertinent in this respect are the Productivity Commission (PC) review of the national access regime set out in Pt IIIA of the *Trade Practices Act* (TPA) and cl 6 of the Competition Principles Agreement (Clause 6), the Australian Competition Tribunal's (the Tribunal's) decision in the *Duke* case[1] and the recently announced review of national energy markets by the Council of Australian Governments (CoAG), taking the National Third Party Access Code for Natural Gas Pipelines as a case study.

PART 1: AUSTRALIAN ACCESS REGIMES

The introduction of a generic national access regime in Australia was a key recommendation of the 1993 report of the Committee of Inquiry in its National Competition Policy Review (the Hilmer

[1] *Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2 (4 May 2001).

Report).[2] The legislative scheme set out in Pt IIIA, which, in large part, adopts key Hilmer Report recommendations with respect to access, provides for three main approaches to the mandating of access to important infrastructure assets:

- declaration of a service by the Minister, based on recommendations of the National Competition Council (NCC);
- certification of State and Territory access regimes as "effective access regimes"; and
- acceptance of access undertakings by the Australian Competition and Consumer Commission (the ACCC).

A service may only be declared if all of the following matters are satisfied:[3]

> "(a) that access (or increased access) to the service would promote competition in at least one market (whether or not in Australia), other than the market for the service;
> (b) that it would be uneconomical for anyone to develop another facility to provide the service;
> (c) that the facility is of national significance, having regard to:
> (i) the size of the facility; or
> (ii) the importance of the facility to constitutional trade or commerce; or
> (iii) the importance of the facility to the national economy;
> (d) access to the service can be provided without undue risk to human health or safety;
> (e) access to the service is not already the subject of an effective access regime; and
> (f) access (or increased access) to the service would not be contrary to the public interest."

The development of the access arrangements under the Gas Code preceded enactment of Pt IIIA of the TPA. In February 1994, CoAG agreed to remove impediments to free and fair trade in natural gas. The Natural Gas Pipelines Access Agreement, entered into by the Commonwealth, States and Territories on 7 November 1997, developed from this 1994 agreement. Its objective was to establish a uniform national framework for third party access to natural gas pipelines that would:

- facilitate the development and operation of a national market for natural gas;
- prevent abuse of monopoly power;

[2] Independent Committee of Inquiry into Competition Policy in Australia, National Competition Policy: Report by the Independent Committee of Inquiry into National Competition Policy in Australia, 1993, AGPS, Canberra.
[3] Section 44G(2) of the TPA.

- promote a competitive market for natural gas in which customers would be able to choose suppliers, including producers, retailers and traders;
- provide rights of access to natural gas pipelines on conditions that were fair and reasonable for both service providers and users; and
- provide for resolution of disputes.

A central part of this process was the development of a National Gas Access Regime, which applies to natural gas transmission and distribution pipeline services. The National Gas Access Regime comprises the Gas Pipelines Access Law (GPAL), which provides the legal framework for the regime, supporting State and Territory legislation and regulations, and the Gas Code. Access to a natural gas pipeline is mandated when it is "covered" by the Gas Code.

Section 1.9 of the Gas Code provides that pipelines may be "covered" upon fulfilment of the following conditions:

"(a) that access (or increased access) to Services provided by means of the Pipeline would promote competition in at least one market (whether or not in Australia), other than the market for the Services provided by means of the Pipeline;

(b) that it would be uneconomic for anyone to develop another Pipeline to provide the Services provided by means of the Pipeline;

(c) that access (or increased access) to the Services provided by means of the Pipeline can be provided without undue risk to human health or safety; and

(d) that access (or increased access) to the Services provided by means of the Pipeline would not be contrary to the public interest."

There are obvious similarities between the coverage criteria under the Gas Code and the declaration criteria under the TPA, in particular, with respect to criteria (a) and (b), the "promotion of competition" and "uneconomic to develop" tests respectively.

PART 2: THE ECONOMICS OF ACCESS REGULATION

Optimal access regulation requires that regulation is only imposed in the presence of market failure; that is, when market competition is not feasible. It also requires that when setting access prices, regulators strike a balance between the short-term interests of consumers in lower prices and the longer-term interests of

investment and growth that is promoted by allowing facility owners to earn returns from regulated assets. Access regulation that is improperly applied exposes the economy to costs on two occasions – once when an asset is brought within the regulatory umbrella ("error costs in the mandating of access"), and again when decisions are made about the permissible range of activities of a regulated entity ("error costs in the setting of access prices").

Access and Error Costs

"Error costs" are the efficiency costs to society of incorrect decisions by regulators about whether and how to intervene in a market. In designing any competition law, it is necessary to weigh the social costs of falsely condemning competitive behaviour or identifying market failure (Type I error) against the costs of incorrectly exonerating anti-competitive conduct or failing to correct market failure (Type II error).

When third party access is granted too liberally, a Type I error occurs. More specifically, the general costs of granting access too liberally comprise:

- the administrative costs associated with applying an excessively generous access regime;
- the resources consumed in litigation when facility owners challenge regulatory decisions; and
- reduced incentives to invest, attributable to both the uncertainty created over the property rights of the facility owner and the increased risk-premium incurred in raising capital.

Access Prices and Error Costs

Error costs can also arise after access to a facility has rightly or wrongly been mandated, for example, when a regulator sets access prices that are too low, and regulated facility owners are unable to recover adequate returns on their investments.

Regulators need to determine access prices that eliminate monopoly rents while still maintaining efficient incentives for access providers/facility owners to continue to invest in maintaining and upgrading facilities. In practice, this is a nearly impossible task because regulators simply do not have access to sufficient information to be able to accurately determine efficient access prices. Their task is made even more difficult when they attempt to estimate the capital costs of a hypothetical, efficiently configured asset.

The difficulties associated with determining efficient access prices can be reduced considerably if regulators bear in mind that the harm associated with inappropriately low access prices almost always outweighs the harm associated with inappropriately high access prices. The reason for this is not always appreciated, and it is worth explaining in some detail. Even if regulated access prices provide a reasonable return on capital to asset owners, the overall effect of an access regime is usually to truncate the expected returns to investors from investing in regulated facilities. Prospective investors in regulated facilities, like any other investors, must rely on the probability of earning above-average returns in successful investments, to compensate for the probability of incurring losses from unsuccessful projects. In a workably competitive market, the investor's expected return will be zero. However, if regulated access prices for successful projects provide a return to investors sufficient only to provide a reasonable return on capital for those projects (even with sufficient compensation for risk), then the average return across a diversified holding of projects likely to be subject to a mandated access regime would be less than the cost of capital. The end result is that the investor makes negative returns. This is an important result. What this means is that an even-handed approach to setting access prices still carries the risk of a severe reduction in incentives for efficient investment in infrastructure facilities.

These dangers of inadequate levels of investment are heightened in the case of infrastructure assets because of the unique characteristics of such assets compared with other investments:

- infrastructure providers operate within constraints that arise from the nature of infrastructure assets – in particular, they have long lives and a high specificity to particular uses and places. Infrastructure investment, once made, is largely sunk, and the parties making the investment already bear a high level of risk;
- the variable costs of operating infrastructure assets are comparatively low. Thus, when revenues are forced below the level corresponding to the long-term costs of supply, capacity will remain in use as long as the allowed revenue exceeds the (relatively low) costs of continued operation. As a result, it can take many years before the full consequences of revenue inadequacy become apparent. This increases the risk of "regulatory expropriation"; that is, regulators can force prices below long-term costs without immediate cessation of supply. Access prices that are set erroneously low can persist without correction for long periods of time;
- the dangers of regulatory expropriation are usually enhanced because firms supplying infrastructure services are often subject to

obligations to supply, and hence are required by law to make continued service available; and

- consequently, when regulated revenues are forced below the long-term costs of supply, service continues but maintenance is cut back, new investments are deferred and, over time, the quality of service deteriorates. Thus, under-pricing access has, over the long term, a substantial negative effect on the dynamic and productive efficiency promoted by adequate infrastructure investment.

By contrast, the costs of over-pricing access comprise the allocative efficiency losses associated with the monopoly rents that may be extracted by incumbent facility owners. However, the negative consequences for efficiency in such a situation are usually ameliorated by the fact that there are natural checks and balances that prevent high monopoly rents persisting.

For example:

- in many instances, non-integrated service providers must deal with a small number of relatively powerful access seekers. Economic literature suggests that, in such circumstances, and in the absence of collusion, prices and quantities might not diverge greatly from efficient levels; and
- the efficiency detriments of monopoly pricing of access can be mitigated by the adoption of some types of charging regimes for the essential input and/or final service. For example, the use of multi-part prices potentially entail lower efficiency costs than uniform charges.[4]

Error Costs – Implications for Access Policy

Even if regulators accepted that under-pricing access was more serious than over-pricing access (and it is true that many do not), practical implementation of that proposition is likely to be problematic. What this means in practice is that the burden of ensuring that inefficiently low access prices are not perpetuated throughout the economy devolves, to a very large extent, on the "second-best" method ensuring that access is not granted too liberally in the first instance. Of course, an appropriately designed access regime should have strict criteria for determining whether access should be granted in any case because there are also costs from the mere fact of over-expansively mandated access. The point here is that there is a second consideration in deciding how liberally access is

[4] Multi-part tariffs are generally recognised as enabling greater allocative efficiency. See Mark Armstrong and Chris Doyle, "The Economics of Access Pricing", OECD, 1995.

granted; that is, the "flow on" costs arising from regulators' pricing determinations.

Apart from the simple fact that regulators are rarely, if ever, appraised of all necessary facts to enable them to determine optimal access prices, it is an inescapable reality that "political economy" issues intrude on the regulatory process. For example, a principal-agent problem arises in the context of the administration of access regimes. A regulator of an access regime may have greater incentives to set low access prices because of the high public approval enjoyed by the consequent lowering of final prices paid by consumers, even if this comes at the expense of declines in service quality over the long term. By the time the long-term effects manifest themselves, the regulator may have already served out his or her term and therefore might not face the full costs of these long-term effects in decision-making.

It is unwise to believe that appropriate pricing principles alone can guarantee the setting of efficient access prices. What is needed is a reduction in the number of opportunities wherein the regulator might be tempted to make bad decisions. In other words, there must be sufficiently strong regulatory "filters" against the inappropriate mandating of access.

PART 3: DUKE[5]

On 16 October 2000, on the recommendation of the NCC, the Minister for Industry, Science and Resources (the Minister) decided that the Eastern Gas Pipeline (EGP) of Duke Eastern Gas Pipeline Pty Ltd (Duke) should be a covered pipeline under the Gas Code. Duke subsequently applied for a review of the Minister's decision by the Tribunal. On 4 May 2001, the Tribunal held that the EGP did not meet the criteria for coverage under the Gas Code, and made orders that the Minister's decision be set aside. In handing down its decision, the Tribunal elaborated on previous decisions about the interpretation of the "uneconomic to develop" and "promotion of competition" tests under the Gas Code and Pt IIIA of the TPA.

Duke and the "Uneconomic to Develop" Test

The "uneconomic to develop" test under the Gas Code is, in full, a criterion that "it would be uneconomic for anyone to develop

[5] The discussion in this Part can be found in greater detail in NECG 2001, "The 'uneconomic to develop' criterion after Duke", available at www.necg.com.au/papub/papers-necg-duke-aug01.pdf.

another pipeline to provide the services provided by means of the pipeline". A preliminary step in applying the test is, by necessity, identification of the "service(s)" that it must not be uneconomic to develop. The significance of proper service definition under the "uneconomic to develop" test is akin to the significance of proper market definition in determining whether a firm has market power under s 46 of the TPA. In *Duke*, the Tribunal characterised the service provided by the pipeline as a "point-to-point" service, regardless of the substitution possibilities that might have existed at either end of the pipeline. The Tribunal saw it as a matter of "fact" that the relevant service was the transportation of gas from one location to another, rather than multiple services, including the transportation of gas from one location and the transportation of gas to another location.

This meant that once the service provided by the pipeline had been defined by the Tribunal, any pipeline providing a differently defined service was automatically ruled out as an effective competitor to the EGP, irrespective of the substitutability in an economic sense of the "services" provided by that pipeline with the multiple services provided by the EGP itself. The alternative approach proposed by Duke, which the Tribunal rejected, was to test whether other pipelines provided a material and direct constraint on the pricing of the services provided by the pipeline, irrespective of whether they provided exactly the same services.

This dimension of the Tribunal's decision has thrown up a number of unsatisfactory policy results. The Tribunal's decision now implies that, under the Gas Code (and by extension, Pt IIIA of the TPA), it is not necessary to undertake a rigorous inquiry into the market dimensions of, and the availability of, actual and potential substitutes for the service that is provided when determining whether the "uneconomic to develop" criterion is satisfied.

Duke and Reform of the Declaration Criteria

The "uneconomic to develop" test adopted by the Tribunal in *Duke* involves:

- identifying, as a matter of fact and not of economics, the service provided by the facility in question; and
- deciding whether it is "economical" to develop a facility providing a similar service to that facility.

What is missing under this approach is the concept of economic substitutability – that is, the availability of economically viable alternatives to the facility at issue. It is this concept that the Tribunal

has deprived itself of in rejecting a market definition-based approach to interpreting the "uneconomic to develop" criterion.

It may be argued that a way out of the problems that arise under the NCC's and Tribunal's interpretation of the "uneconomic to develop" criterion is to adopt a sufficiently wide definition of the service provided by the facility in question. It should be obvious, however, that this raises the question of how to determine when particular services are sufficiently similar. While the Tribunal in *Duke* stated that the "uneconomic to develop" test would not be satisfied where a facility currently provided, or could provide, "substantively" the same services as those provided by the facility in question, it rejected the need for market definition in applying this test. At the same time, however, it formulated no alternative economic test for similarity or difference to established market definition principles and accordingly, the decision provides no guide as to how the question of whether a service is sufficiently similar to the service provided by the facility in issue can be determined on a principled and easily replicable basis in future cases.

This opens the door to essentially untrammelled regulatory discretion, at least in respect of this criterion. More particularly, by choosing to define the service in the narrowest manner possible, the decision-maker can ensure that there will be no other services which are substantively similar to those provided by that facility. This would amount to an inefficiently low threshold for regulatory intervention imposing, or at least creating the risk of imposing, the costs discussed above. This result goes against the lessons drawn from the discussion of the economics of access regulation presented in Part 2 above.

If the "uneconomic to develop" criterion no longer acts as an adequate filter against the inappropriate application of access regulation, the question arises whether other criteria are equipped to bear this burden.

One criterion with potential to fill the breach posed by a weak "uneconomic to develop" test is the "promotion of competition" criterion. Using the language of the Gas Code, the criterion is that "access (or increased access) to Services provided by means of the Pipeline would promote competition in at least one market (whether or not in Australia), other than the market for the Services provided by means of the Pipeline".

As this criterion has been interpreted, however, it is not clear that it is equipped to fill the role of the "uneconomic to develop" criterion. The Tribunal's decision in *Duke* has clarified that the promotion of competition test refers to the promotion of competition in another market; that is, a market other than the market for the services

provided by the pipeline (or "facility" if one is speaking of Pt IIIA of the TPA) in question.[6] What this means is that the "promotion of competition" criterion is simply not able to capture the impact of mandating access on competition in the very market in which the service at issue in declaration or coverage decisions is being provided.

The "promotion of competition" is by its nature a complex test. It is widely accepted that economists do not have a precise, or in any event simple, characterisation of the factors that promote or deter competition. Assessing whether any single element of structure enhances or deters competition requires a weighting of a complex range of considerations. Even greater difficulties can be involved in determining whether the provision of access, or increased access, will achieve a pro-competitive outcome, and if so, how great the extent of the change is likely to be.[7]

Thus, the outcome of relying on a "promotion of competition" test, in the absence of any other effective bulwark against regulatory over-reach, is at best uncertain. Both access seekers and potential access providers will therefore have less ability to predict the extent of their rights and obligations, and arrange their affairs accordingly. Furthermore, the fact that the test is potentially loose creates scope for it to be interpreted in a manner that permits regulation to be extended to areas where its costs outweigh any benefits regulation can bring.

In addition, the NCC has signalled in recent pronouncements[8] that it will interpret the "promotion of competition" criterion as setting a very low threshold – as long as the facility in question has market power, the criterion is satisfied. That this sets a very low barrier can be confirmed by comparing it to s 46 of the TPA, which only applies to firms with "a substantial degree of power in a market".

The interaction between the emasculated "uneconomic to develop" criterion and the low threshold implied by the NCC's reading of the "promotion of competition" criterion therefore exposes the economy to much higher risks of inappropriate declaration of services (or, in the language of the Gas Code, inappropriate coverage of pipelines). By extension, it also exposes the economy to the costs of inappropriately low access prices following the mandating of access. It is therefore important to examine what measures can be taken to rectify this unsatisfactory

6 See para 74 of *Duke* and refer to the brief summary of the Tribunal's comments on criterion (a) in subs 5.3.

7 See generally P Areeda, "Essential facilities: an epithet in search of limiting principles" (1989) 58 Antitrust Law J 841 ff.

8 NCC, *Moomba to Sydney pipeline system – Application for partial revocation of coverage under the national gas access regime*, Issues Paper, July 2001.

result. The PC's review of the national access regime and the forthcoming energy market review provide excellent opportunities to address these issues.

PART 4: PC REVIEW OF THE NATIONAL ACCESS REGIME

On 29 March 2001, the PC released its draft report (Position Paper) on its review of the access regime under Pt IIIA of the TPA and Clause 6 of the Competition Principles Agreement (CPA).[9] The PC did not have the opportunity, prior to release of its Position Paper, to consider the ramifications of the Tribunal's May 2001 decision in *Duke*. However, it made a number of other important recommendations.

Perhaps the most enduring and significant aspect of the PC's initial thoughts is its recognition that the purpose of Pt IIIA and Clause 6 is to enhance overall economic efficiency through the promotion of the efficient use of, and investment in, essential infrastructure services. It is not unreasonable to suggest that this is a point that has been all too often overlooked by regulators as a matter of practical application of the regime to regulated industries, although this is an assertion that would be hotly contested.

NECG has argued to the PC that, as it is currently drafted, Pt IIIA is capable of engendering unnecessary and unacceptably high levels of regulatory risk. One way in which it does this is in its ambiguous and sometimes conflicting principles for the pricing of access that give very wide discretion to regulators. This in turn produces substantial disincentives for efficient use of, and investment in, essential infrastructure services. It is extremely important that this controversial point has been accepted by the PC. It is the basis for the PC's key recommendation for the legislation of access pricing principles that give proper regard to the needs of investors in essential infrastructure facilities. The PC has not, it should be noted, endorsed granting unfettered monopoly pricing power to owners and operators of essential infrastructure. Rather, what it has said is that given the asymmetry in the costs of under- and over-compensation of facility owners, together with the informational uncertainties facing regulators, there is a strong in-principle case to "err" on the side of investors. In other words, it has recognised the validity of the argument that there are asymmetric error costs as between over and under pricing access, as noted in Part 2 of this paper.

[9] Productivity Commission 2001, *Review of the National Access Regime*, Position Paper.

These arguments can be clarified by looking more closely at the relationship between "regulatory risk" and investment incentives.[10] Regulatory risk is a phenomenon that arises when the interaction of uncertainty and regulation changes the cost of financing the operations of a firm. Regulatory risk is a product of "market uncertainty" and uncertainty arising from regulatory discretion. Market uncertainty arises from the usual interactions between buyers and sellers in all markets (for example, external cost shocks, unanticipated technological advances, shifts in preferences, etc). Market uncertainty can have more severe impacts on regulated firms because of constraints regulation imposes on their ability to respond. Uncertainty arising from the existence of regulatory discretion is a feature of all regulatory systems, and is manifest in the fact that because regulators always have some non-trivial decisions to make, the outcomes from the future stream of regulatory decision-making processes can never be predicted with certainty.

In the face of regulatory risk, the expected returns on any investment made by a regulated firm can be distorted. Where the costs of regulatory risk are neither recognised nor explicitly compensated, any attempt to regulate prices to the level of "cost" will impose economic losses, severely reducing incentives for efficient investment.

There is certainly reason to believe that regulators in Australia have not adequately taken account of regulatory risk when setting access prices, even though this is due, no doubt to pressure to gain public support for the process of regulatory change by wishing to deliver instantaneous reductions in prices faced by end-consumers. However, it is impossible to demonstrate conclusively the impact of regulatory risk on investment levels in Australian infrastructure. It will never be possible to engage in anything but speculation about what level of investment would have occurred if a narrower, more certain access regime were in place, in which firms were compensated for their exposure to regulatory risk. Certainly, there is extensive anecdotal evidence of investor concerns about regulatory uncertainty and evidence that these concerns are having an impact upon the flow of funds into regulated infrastructure.

Nonetheless, some indirect indication of these matters is given by examination of any recent regulatory decision in energy, telecommunications, or other regulated markets, which reveals substantial gaps between access prices regulated firms expect to receive from regulators, and what regulators ultimately allow.[11] The

[10] An extended version of the arguments to follow in this subsection is made in *Regulatory Risk*, Draft version of a paper prepared for the ACCC Regulation and Investment Conference, Manly, 26–27 March 2001, by Henry Ergas, Jeremy Hornby, Iain Little and John Small, available at http://www.necg.com.au/pappub/papers-ergas-regrisk-mar01.pdf.

[11] Evidence of this is presented in NECG's 5 June 2001 submission to the Productivity Commission's review of the national access regime, available at www.pc.gov.au/inquiry/access/subs/sublist.html/subdr076.pdf.

very great magnitude of these gaps makes it difficult not to believe that even if eventual outcomes were fully justified, the gap itself demonstrates the highly uncertain nature of the current process.

These concerns would also appear to be vindicated by the complaints of many investors that regulatory decisions have left investments stranded, with investors unable to recover their costs. This was certainly a consistent theme in the Australian Council for Infrastructure Development (AUSCID) submission to the Victorian Essential Services Commission Inquiry.[12]

If Australia's national access regime is to avoid harmfully and unnecessarily curtailing incentives to invest through unnecessary exposure to regulatory risk, a number of changes must be made to the regime. It is worth taking a closer look at some of the PC's recommendations and how much closer they bring us to this goal.

Access Holidays

One recommendation in the PC's Position Paper that has attracted a great deal of attention is the proposal to award certain investments an "access holiday" as a means of reducing firms' exposure to regulatory risk. In essence, the PC has argued that there is a strong "in principle" case for providing investments in essential infrastructure that are expected to be only marginally profitable with some immunity from exposure to access regulation because without a degree of immunity, such investments may be deterred, denying the community the opportunity to benefit from the availability of new or improved services.

However, exempting new infrastructure from access regulation for some initial period does not, by itself, constitute the most effective way to reduce regulatory risk.

One problem is that access holidays would typically be limited in their duration, applying only during the early, loss-making period of an investment. Therefore, they would offer little benefits to an investor when the investment came to fruition and access seekers began to make claims on the asset.

Another problem is that it may be difficult to explain to the public why access holidays were appropriate, particularly if one or two projects become phenomenally successful and their owners enjoyed very high returns. Such outcomes may impact the credibility of the

[12] See AUSCID, Submission to the Victorian Department of Treasury and Finance, *Essential Services commissio*n, September 2000, Ch 3, "Regulatory Risk", available at: http://www.vic.gov.au/treasury/esc/sn27.pdf

regulatory scheme, or, in the opposite case, introduce perceptions of regulatory opportunism.

Thirdly, an undue preoccupation with the access holiday proposal may mask the more important problem of identifying why the national access regime does not properly incentivise new investment, and thereby forestall attempts to rectify this problem.

The PC has recently flagged the idea that one way of implementing access holidays is to allow new infrastructure projects that are considered to be "contestable" to generally qualify automatically for some sort of access holiday. There are, however, many problems with this model:

- Many enhancements of existing assets with high cost/revenue risk are contestable only in the sense that the network provider can contract out the work. This does not constrain it from setting excessively high prices.
- Contestability in greenfields projects is difficult to define and monitor, and it may not always be possible for a regulator to observe whether competition is sufficiently effective to constrain a potential infrastructure owner from earning monopoly profits.
- The proposal still does not properly address the potential for regulators to tax successful investments when the holiday expires.
- This proposal could create an environment in which different types of investment by the same firm will be regulated under different rules. The fact that the boundaries between investments that did and did not qualify for an access holiday would become difficult to define could create the potential for gaming and enhanced regulatory discretion.
- Finally, discriminating between "old" and "new" investments is an essentially arbitrary exercise, bearing a high risk of regulatory error.

Nonetheless, access holidays may be justified where:

- genuinely new services are being provided to customers for the first time and, given the non-existence of the previous generation of services, making the new services available can only increase consumer surplus;
- the specific cost and/or revenue risk is particularly high (since regulatory risk is likely to act as a strong deterrent to such investment); and
- the number of new network connections is highly sensitive to price (since this will constrain a firm's ability to exercise market power).

Whatever the ultimate model adopted, however, the following principles should apply:

- investors must be in a position to understand how prices will be set over the full lifetime of the asset (including when the holiday expires);
- prices must be set so as to provide investors with the expectation that they will earn a rate of return in line with the cost of capital for the project; and
- firms should be prevented from exploiting ex post market power to generate unlimited monopoly profits for shareholders.

As a practical matter, any one of the following models may be best placed to implement the access holiday proposal:

- an exemption for projects awarded by tendering processes that focus on the prices that firms are able to charge customers;
- pre-determination of benefit sharing for projects that turn out to be profitable ex post;
- pre-determined regulatory rules for investment that will be covered by the more familiar regulatory approach to network services.

Asset Valuation[13]

Another important matter that has been considered by the PC is the correct approach to valuing assets that are regulated under the national access regime. One approach to asset valuation is the "DORC" (depreciated optimised replacement cost) approach. NECG has argued to the PC that, although there are important limitations in the DORC approach, from a theoretical point of view, valuing assets at DORC is an entirely valid basis for setting efficient access prices. Both the DORC approach and a common alternative – inflation-adjusted depreciated actual cost (DAC) – are capable of generating efficient prices.

In a submission to the PC's review, however, Professor Johnston has argued that:[14]

- valuing existing assets at DORC will mean the owners invariably receive a one-off windfall gain; and

[13] For an extended version of the argument in this subsection, see NECG's 25 July 2001 submission to the Productivity Commission's review of the national access regime available at www.pc.gov.au/inquiry/access/subs/sublist.html/subdr113.pdf.

[14] Professor Johnston's submission is available at www.pc.gov.au/inquiry/access/subs/sublist.html/subdro74.pdf.

- the choice of initial regulated asset base is largely a distributional matter.

The implication of these two propositions submitted by Professor Johnston is that it may even be appropriate to value assets below DAC depending on how far regulators place the interests of customers over those of shareholders.

However, the logic underlying this deduction is incorrect. It is not inevitable that investors will receive a windfall under the DORC approach; there is a very strong likelihood that they will suffer a one-off loss as investment becomes stranded. Moreover, any decision to deliberately strand sunk assets by setting the initial regulated asset base at an unreasonably low level might be taken by an investor as a signal that new investment might also receive the same treatment when, at a later date, it can also be regarded as sunk.

The key to the DAC vs DORC debate is really the difference in the cost of capital associated with the two methodologies, and the extent to which any differential is justified in terms of off-setting benefits to customers. However, it is important to realise that, in order to preserve dynamic efficiency, regulators may need to allow a higher rate of return, even when using DORC:

- There is still scope for regulatory error, which arises when regulators are forced to make numerous subjective and arbitrary assumptions about the cost of an optimally configured network. Even if one accepts that there will be no systematic bias in the direction of the regulators' error, investors are still exposed to significant uncertainty under the DORC approach and have no obvious ability to protect themselves from the resulting risk of regulated asset base devaluations.

- DORC exposes investors to a greater degree of market risk than DAC. This exposure comes from two sources:
  (i) the use of asset-specific price indices, rather than CPI, to revalue the regulated asset base from one year to the next; and
  (ii) the optimisation process.

In both cases, the prospects of investors receiving the full return of their initial outlay on a new investment are explicitly harmed under DORC. They are exposed to potential holding gains/losses in the event that capital-good price deflators deviate from CPI, and to potential stranding/revaluation in the event that new technologies and changing market conditions cause the optimal configuration of the network to change over time. To the extent these are predominantly market risks, not firm- or industry-specific risks, they will need to be reflected in a higher beta and therefore a higher cost of capital in order to preserve incentives to invest (dynamic

efficiency). Additionally, if the net expected impact of revaluations is negative, then there must be a corresponding offset in the cash flows if new investment is to occur.

In these circumstances, it is possible that the future liability to invest (that is, to replace worn out assets) will exceed the value at which the existing assets were bought. In order to ensure continual provision of service, it is therefore important to customers that the regulator provides the firm with some assurance that the additional costs of replacement investment will ultimately be allowed for. Basing the regulated asset base on a DORC valuation is one way in which this assurance can be provided.

Although the focus of Pt IIIA is on natural monopoly, several regulated industries compete with other types of service (the best example being competition between rail and road). It is important that regulation does not distort the relative costs of the competing alternatives. Use of the DORC approach in setting access prices helps to ensure that competition between rival services takes place on a level playing field. This is true because assets will be valued at no more than their economic value, so that assets exposed to by-pass can be written down to the cost of the most efficient by-pass technology. To the extent to which the investment decisions of those who might engage in by-pass reflect current prices, this valuation rule should help prevent uneconomic duplication for so long as the existing assets can serve the market.

Coverage of Access Regimes[15]

The PC has recommended that all industry-specific access regimes should be tested against the Pt IIIA framework through the certification mechanism. The PC has said that while divergence between access regimes to cater to the particular circumstances of different industries is appropriate, the growth of an entirely independent family of Commonwealth access regimes should be discouraged. It considers that while, given the broad nature of the Clause 6 principles, the current Commonwealth industry regimes would probably meet the criteria for certification, nevertheless, the assessment process would help to ensure that the regimes only diverged from Pt IIIA where industry-specific circumstances made this absolutely necessary. The PC considers that an assessment process for Commonwealth regimes might also help to identify anomalies in the current arrangements.

[15] The discussion here and in the rest of this section is drawn from NECG's 25 July 2001 submission to the Productivity Commission's review of the national access regime available at www.pc.gov.au/inquiry/access/subs/sublist.html/subdr113.pdf.

In light of these considerations, the PC has recommended that the Commonwealth Government should be required to submit its industry access regimes for certification, and that for existing Commonwealth regimes, any immunity from Pt IIIA should be removed.

The PC's proposal is a welcome one because a major deficiency in the scope of Pt IIIA is the failure to require that all Commonwealth access regimes conform to the principles in Clause 6. However, in order to constrain the growth of Commonwealth access arrangements that are inconsistent with the provisions of Pt IIIA, other reforms are necessary. The problem with relying on the certification proposal exclusively is that the only sanction associated with a failure to achieve certification is the possibility that the services in question can still be declared under Pt IIIA. While this is an effective deterrent for governments planning to implement regimes that are more light-handed than Pt IIIA, it is ineffectual as a means of limiting the scope for governments wishing to implement much more heavy-handed regimes (for example, Pt XIC of the TPA or the *Airports Act* 1996).

Consequently, what may also be needed are amendments to the certification procedures flowing from Clause 6 that limit the extent to which all governments can put in place access regimes that are more onerous than Pt IIIA. This could be achieved either through:

- a "show cause" provision, whereby all governments – State, Territory and Federal – were required to provide detailed reasons as to why an access regime diverges from Pt IIIA and when convergence with Pt IIIA will be achieved; and/or
- a provision that allows an access provider to lodge an undertaking under a reformed Pt IIIA, which protects it from declaration under alternative Commonwealth or State and Territory regimes.

Introducing mechanisms such as these, and thus exposing such regimes to assessment under the Pt IIIA criteria, would ensure that there is a consistent application of access regulatory policy across Australia. At the same time it would, where differences are considered appropriate, allow for greater scrutiny of the claimed justification to occur. Additionally, assessments could more easily be made over time of the continued justification for such different treatment.

The PC has also suggested that there are some deficiencies in the current declaration criteria that could lead to inappropriate declaration of services, including:

- the scope for declaration to proceed where the effect on competition would be trivial; and

- weaknesses in the natural monopoly criteria, which could allow coverage of services without substantial and sustainable market power.

The PC has recommended that the declaration criteria should be modified as follows:

- s 44G(2)(a) be amended to: "that access (or increased access) to the service would lead to a substantial increase in competition in at least one market, other than the market for the service"; and
- s 44G(2)(b) be amended to: "that it would be uneconomic for anyone to develop a second facility to provide the service."

The PC is also of the view that declaration should, as far as practicable, be confined to essential infrastructure facilities involving natural monopoly technologies. However, since making this recommendation, it has become apparent that, following the decision of the Tribunal in *Duke*, a more fundamental reconsideration of the "uneconomic to develop" criterion is needed. This issue is explored in more detail in the conclusion of this paper.

The PC has also advanced a number of proposals for a more fundamental restructuring of the criteria:[16]

> "Proposal 6.2 (Tier 2): For a service to be declared under Part IIIA it must meet all of the following criteria:
> (a) the service is of significance to the national economy and the entry of a second provider of the service would not be economically feasible;
> (b) no substitute service is available under reasonable conditions that could be used by an access seeker;
> (c) competition in downstream markets is insufficient to prevent the provider of the service from exercising substantial market power;
> (d) addressing the denial of access, or the terms and conditions of access, to the service concerned is likely to improve economic efficiency significantly;
> (e) access to the service is not already the subject of an effective access regime; and
> (f) access (or increased access) to the service would not be contrary to the public interest."

The PC has also proposed a number of "Tier 2" changes to the criteria for certification of access regimes:[17]

> "Proposal 7.4 (Tier 2): The certification provisions in Part IIIA should specify that an effective access regime must include:

[16] PC, 2001, *Review of the National Access Regime*, Position Paper at p 147.
[17] PC, 2001, *Review of the National Access Regime*, Position Paper at p 183.

(a) an objects clause;
(b) coverage arrangements that focus mainly (though not necessarily exclusively) on services for which the entry to the market of a second provider is unlikely to be economically feasible;
(c) clearly specified dispute resolution arrangements and provisions to establish the terms and conditions of access;
(d) clearly specified criteria and pricing principles applying to regulated terms and conditions;
(e) cost-effective appeal and enforcement provisions;
(f) revocation and review requirements for all determinations under the regime; and
(g) where appropriate, provisions to facilitate consistency across multiple State and Territory access regimes applying to a particular service."

The PC has also suggested that the principles used to assess the effectiveness of existing access regimes for the purposes of certification should be included in Pt IIIA.

However, in addition to these measures, there also needs to be greater uniformity in the drafting of the access criteria under Pt IIIA and Clause 6, because this will introduce greater consistency in the regulation applying to essential facilities, and will greatly enhance the usefulness and universality of precedent developed within each regime. The greater economic significance of certified access regimes compared with declared services means that it is extremely important to get the certification criteria, and not just the declaration criteria 'right'.

Appeals and Merits Reviews

The PC has proposed that Pt IIIA should include provision for full merit review by the Tribunal of decisions on undertaking applications. NECG has strongly endorsed this proposal. Review rights impose necessary discipline on arbitrary and poorly founded decisions and increase the level of regulatory certainty. The existence of full merits review is so fundamentally important that it is difficult to conceive of any proper justification for failing to have such a process in place.

While there are undoubtedly costs associated with the PC's proposal to extend appeal rights, these are more than outweighed by the importance in encouraging accuracy in regulatory decisions. Any "costs" that may accrue from a six to 12 month merits review process are likely to be outweighed by the benefits of ensuring that the undertaking power is exercised in a manner consistent with that

which Parliament (and economic analysis) would suggest is most applicable for regulatory intervention.

While, in recent times, the Tribunal has struggled to manage an increasing workload, this is an issue that should be resolved, not by adopting the expedient of disregarding the important benefits to be had from merits review, but by providing the Tribunal with greater resources.

However, it is a matter for real concern that the PC has proposed that provision for appeals against decisions to declare services under Pt IIIA should be abolished.

There are no ultimately persuasive arguments for removing appeal rights. The "concerns" expressed regarding the timeliness of the appeals process are generally unwarranted. First, such concerns would seem to be overly influenced by the Sydney International Airport decision.[18] However, the appeal in that case was stayed by the parties themselves, and cannot legitimately be cited as demonstrating any deficiencies in the appeals process per se. The more recent experience in the case of the *Duke* appeal is a vindication of the Tribunal's ability to hand down decisions quickly.

The "need for speed" is a grossly over-simplified argument and should not be used as a justification for removing appeal rights. There is no doubt that timeliness is an important consideration in providing resolution of issues regarding the obtaining of access under Pt IIIA. It is not a consideration that should come at the expense of recognising the very high economic costs to society that arise from incorrect regulatory decisions. Even accepting the claimed concerns of timeliness and the consequent "need for speed", there are other means available to overcome such concerns, all of which are significantly less drastic than removing appeal rights.

Separate Regulatory Bodies

A subject of much discussion within the context of the PC's review of Pt IIIA has been the current separation between the regulatory functions of the NCC associated with declaration decisions on the one hand, and the regulatory functions of the ACCC, namely decisions in the context of arbitrations, on the other. Specifically, the question has arisen as to whether a single regulator should be allocated responsibility for both regulatory functions.

The PC has proposed that:[19]

[18] Sydney International Airport [2000] ACompT (1 March 2000).
[19] PC, 2001, *Review of the National Access Regime*, Position Paper at p 232.

> "Proposal 9.2 (Tier 2): A single regulator should be assigned the responsibility for regulating all aspects of Part IIIA, subject to the relevant appeals processes. At this stage, the Commission is inclined to the view that this regulator should be the ACCC."

Arguably, the proposal for a single regulator is misguided. Having different regulators at the different functional levels of access regulation imposes a significant discipline on the unwarranted extension of access regulation by the unilateral actions of the regulator.

The current division of powers correctly recognises the need to distinguish between the policy decision (whether to regulate or not) and the regulatory process (on what terms and conditions should access be provided). The separation of functions currently operating under Pt IIIA avoids the perceived conflict of interest that arises when the entity that will have powers to shape an activity, also has the power to determine whether it should or should not be placed in a position where it can do so. The fact that declarations under Pt IIIA rest on an objective test, and are subject to full review by the Tribunal, further limits the risk of "regulatory creep".

An instructive illustration of the dangers of combining the policy and regulatory decisions in the one body may be found in the operation of Pt XIC of the TPA. One of the direct consequences of handing the powers of declaration to the ACCC under that Part has been regulatory creep. The ACCC has the ability – if so-minded – to extend its own powers in terms of the determination process by declaring whatever eligible service it believes should come within the purview of Pt XIC. The ACCC can effectively decide what it wants the market structure to look like and then implement this by controlling both declaration and determination.

The PC has commented that, where considerable discretion is involved in decisions about whether a regulation should apply in a particular case, the argument for separation of responsibilities is strong. The PC goes on to suggest that the degree of discretion involved in coverage decisions under Pt IIIA is limited to a significant extent by the various criteria that must be met before a service can be declared or a regime certified as effective (particularly if the PC's proposals for strengthening the relevant criteria are adopted), and therefore that the in-principle case for having dual regulators is weakened.

The current (and proposed) criteria for declaration and certification tend, of themselves, to be capable of very broad interpretation. This is particularly the case with the criteria set out in s 44G(2)(c) and (f) of Pt IIIA. Of course, there is always scope for a very broad range of interpretation of different criteria. Similarly, in the context of arbitrations, there is also significant discretion available to the regulator as to how to apply the particular principles in a given case.

Were it not apparent that each of these areas – namely, declaration and arbitration – were fundamentally discretionary in nature, there would not be the evidence of the significant levels of regulatory debate and activity by the industries concerned. Although it might be argued that there is no discretion in the sense of complete freedom of choice as to how to act and so the argument for separate regulators fails, discretion should not be so narrowly interpreted. If there is a choice as to how to proceed in applying a particular criterion, then relevant discretion exists.

It was argued by many submissions to the PC review that the adoption of a single regulator would permit of greater consistency between the various decisions to be made. However, as the experience of Pt XIC of the TPA readily shows, consistency of decision-making does not automatically follow from the presence of a single regulator. The argument for consistency, though, is misplaced in that it fails to give due emphasis to the entirely different nature of the decision-making concerned. Decisions about coverage of the regime – that is, policy decisions – are fundamentally different to decisions regarding the terms and conditions of access which take such policy decisions as a given and then seek to implement administrative arrangements that support such policy.

Notwithstanding, the PC has formed the view that the costs associated with maintaining separate regulators outweigh all of these considerations. This is an unfortunate result, because the considerations in relation to cost are fundamentally misconceived; that is, it is not a question of currently having two regulators performing the same function as each other and thus wasting costs through duplication – the roles of policy and administration are fundamentally different. Even if it were possible to combine them into one regulator, different people would generally be involved in the different functions achieving minimal, if any, costs savings and increasing the costs associated with other challenges of integration. Furthermore, the evidence of effective, if not explicit integration of declaration and arbitration decisions under Pt XIC of the TPA does not lend any support to the claim that integration would reduce costs.

PART 5: NATIONAL ENERGY MARKETS REVIEW

The NECG has made the point on numerous occasions that the significance of the national access regime in Pt IIIA of the TPA and Clause 6 lies less in ad hoc declarations of services, and more in the framework it provides for a number of industry-specific access regimes (that is, through certification or undertakings). It is important

to bear in mind that any reforms flowing from the PC's review of the national access regime will not necessarily translate into reforms of individual access regimes that hinge from the national access regime (for example, the Gas Code). Therefore, there needs to be an individual review of some of these regimes. In this context, it is pertinent to make some comments on the recently announced review of national energy markets.

The Gas Code had its origins in the CoAG commitment to free and fair trade in gas in Australia, and was formulated in the 1997 Natural Gas Access Agreement between all Australian States and Territories. At the time the Gas Code was formulated, it was reasonably valid to presume, as the Gas Code appears to, that all transmission pipelines are monopolies with respect to their destination markets. Also, at that time, there was limited inter-basin competition in Australian gas markets, and the present convergence trends between gas and electricity were scarcely evident.

Since the introduction of the Gas Code, the construction of new pipelines, particularly in South Eastern Australia, has brought the possibility of a national gas pipeline "grid" close to reality. In this grid, multiple pipelines interconnect at gas fields, city gates, and hubs, providing a multiplicity of possible transportation paths serving each gas basin and each destination. This development, crystallised by the completion of the Eastern Gas Pipeline, has placed gas basins in competition with each other to sell gas into major markets such as Sydney and Melbourne. For the first time, gas producers, who are unregulated, face some pricing discipline through competitive forces.

A national gas pipeline grid also creates benefits in the form of fault tolerance, or route redundancy. This feature proved its usefulness when the Interconnect, linking the Cooper Basin to Melbourne was used to supply gas to Melbourne during the Longford plant crisis. The Interconnect again played that role later when a problem at the Moomba plant necessitated the shipment of gas from Longford to Sydney.

Another significant development since the Gas Code was introduced has been the convergence between gas and electricity markets. Traditional gas firms have acquired electricity distribution assets, and electricity distributors are diversifying into the gas industry.

In several significant respects, the Gas Code has not kept pace with these developments. Many of the assumptions underpinning it are no longer valid, and will become increasingly anachronistic as present energy market trends continue. Persisting with the Gas Code in its present form is likely to place at risk the investments that are needed

to complete the transformation of Australia's energy markets to nationally integrated, flexible, highly substitutable, and fault-tolerant energy delivery systems.

The CoAG review of energy policy (to be overseen by the new Ministerial council on Energy) presents an opportunity to address these issues.[20] The review is expected to take around 12 months. It is a matter of some concern that the terms of reference for this review do not include provision for explicit review of the Gas Code. Furthermore, while action on national electricity market issues has been flagged as a "high priority" by CoAG, examination of the Gas Code has not been highlighted in such a way. It is important that CoAG is urged to include a thorough and independent review of the Gas Code as an integral part of its review of energy policy.

NECG would like to see the following key areas emerging from this review:

- coverage tests;
- information disclosure requirements;
- the application of the Gas Code by regulatory authorities, especially with respect to pricing and asset valuation issues; and
- measures to increase certainty for investors.

Issues Posed by Coverage Tests under the Gas Code

The tests for coverage under s 1.9 of the Gas Code were evidently translated from the declaration tests contained in s 44G(2)(a), (b), (d), and (f) in Pt IIIA of the TPA. The word "pipeline" was substituted for the word "facility", and otherwise the wording is nearly identical. Both Pt IIIA and the Gas Code contain a test of promotion of competition in another market, uneconomic development of another facility, safety, and contrariness to the public interest.

Section 1.9(b) of the Gas Code, which asks whether it would be uneconomic to develop another pipeline to provide the services provided by means of the pipeline, has proven particularly problematic in practice. While it is clearly modelled on the Pt IIIA test in s 44G(2)(b), the substitution of "pipeline" for "facility" has prevented other non-pipeline facilities from being considered as

[20] The National Gas Pipelines Advisory Committee (NGPAC) is currently considering recommending to relevant Ministers that certain amendments should be made to the Gas Code – NGPAC, *Information Memorandum: Proposed Amendment to the National Third Party Access Code for Natural Gas Pipeline Systems*, 6 April 2001. The NGPAC inquiry is only in respect of two specific matters under the Gas Code, and cannot be regarded as a substitute for a full and fundamental review of the Gas Code.

substitutes. In the present day, where gas turbine electricity generation near the gas field with electricity transmission can clearly substitute for gas transmission, this inadvertent drafting oversight makes the s 1.9(b) test excessively stringent to achieve its aims.

Recent interpretations of s 1.9(b) by the NCC and the Tribunal have emphasised that the wording of s 1.9(b) appears to require a point-to-point and route-specific definition of the services provided by means of the pipeline. As a result of such an interpretation, the substitution possibilities afforded by a national gas pipeline grid must be ignored in applying this test.

In essence, because there is no requirement to establish that a pipeline has substantial market power before coverage may be imposed, there is clearly a risk that inappropriate decisions will be made to regulate gas pipelines under the Gas Code.

Information Provision

The Gas Code imposes extensive public information disclosure requirements on covered pipelines. These requirements compel the disclosure of cost, capacity, pricing, investment, and product strategy information at a highly detailed level.

While such disclosure may have been seen as helpful to regulators of monopoly pipelines, in a situation where pipelines compete – which is becoming a common one in Australia, this type of disclosure is likely to facilitate tacit collusion. This fact was acknowledged by the Australian Competition Tribunal in the Duke Eastern Gas Pipeline appeal.

Accordingly, it is necessary that the purpose of information disclosure be revisited in light of this issue, and that the disclosure requirements be recast in terms of the minimum necessary to meet these objectives.

Implementation of the Gas Code and Pricing and Asset Valuation Issues

Once a pipeline is covered, it is subject to the Gas Code's ratemaking provisions. These stipulate that the pipeline must submit an Access Arrangement in which reference tariffs for a reference service are published, together with enough information to enable the regulator to apply rate-base rate of return regulation. The pipeline's expenses in preparing and gaining acceptance of an Access Arrangement are great, and the delays created by the

regulatory process have been known to extend for years.

The rate of return price-setting method applied under the Gas Code is of dubious merit for such a dynamic industry as Australian gas, where very significant new investments are required in order for current initiatives to achieve their potential. Incentive regulation of a price cap type, such as is used for electricity distributors, is better attuned to the needs of a dynamic, growing industry.

Differences between the method of regulating substitutable energy sources, such as gas versus electricity, as well as differences in the application of rate of return regulatory formulae to different pipelines serving the same destination market can, and do, create opportunities for regulatory arbitrage. In some cases, the regulator may tip the competitive balance between two competitors – effectively destabilising what might otherwise have been a level playing field.

While in many respects the Gas Code is quite prescriptive on pricing, in others it leaves enormous discretion to the regulator. This discretion is particularly notable on the establishment of an Initial Capital Base (ICB), and in the handling of depreciation. As a pipeline's cost structure is dominated by capital costs, these discretionary levers leave the outcome of regulatory rate making entirely too uncertain.

A final pricing issue under the Gas Code in its present form concerns the selection of transportation volume assumptions to derive reference tariffs from the ICB and other regulatory costs. Forecasting gas transportation volumes can be difficult in all but the most mature markets, but the advent of a national gas grid makes it far too uncertain.

Where a gas sales market can be served by more than one pipeline route, the competing pipeline that wins more of the market will be subject to regulation that lowers its prices. In turn, this step may result in the other pipeline being forced to set even lower rates again to those it initially set. A likely outcome is a downward pricing spiral, producing unstable outcomes that place at risk the take up of socially desirable investment opportunities in the gas pipeline industry, to the longer-term detriment of gas customers and gas producers.

The probable outcome of these shortcomings is that incentives to invest in pipeline infrastructure will be adversely affected, undermining the fundamental objective of the Gas Code to encourage free and fair trade in gas.

Measures to Increase Certainty for Investors

A substantial part of the uncertainty surrounding the current arrangements for access under the Gas Code (as with all other Australian access regimes) is the tendency for regulators to "optimise" asset values when setting access prices. When regulators optimise asset values without compensating regulated firms for the consequential risk of asset stranding, it is clear that there will be substantial disincentives for investment. It will also be difficult for regulated firms to provide for the necessary upkeep and maintenance of their existing investments.

Furthermore, optimisation as an exercise is itself fraught with such difficulties that its very practice needs to be questioned. There should be scope for any review of the Gas Code to consider whether simpler, less informationally demanding approaches should be adopted to determining allowable costs over the lives of regulated assets.

In particular, it should be clear that investors should be able to recover costs that have been prudently incurred in the past, even if, in the face of technological and other developments, such costs would not have been incurred today. In other words, it should not be possible for regulators to penalise regulated firms for developments that reduce the costs of pipeline construction over time. Rather, it is critical that owners are compensated for the investment they made at the time.

Finally, there is a real need to introduce measures under the Gas Code to reduce the uncertainty faced by regulated firms in their dealings with regulators. One thing that should be pursued as a priority is the introduction of measures that would require regulators under the Gas Code to establish key components of the cost of capital before investments are made and funds are committed. It should also be possible to determine the risk premium associated with an investment before an investment is committed.

As a more general matter, investors in gas pipelines should also be able to approach regulators before funds are committed to receive a commitment from the regulator about whether the pipeline is likely to be regulated after it is built. One possibility is to introduce measures under the Gas Code to allow potential investors to obtain preliminary advice analogous to the pre-notification procedures within the ACCC's merger guidelines. Such a measure would go a long way to reducing the very large risks faced by investors who channel funds into investments that very quickly become "sunk".

It is also important that other measures to increase certainty for investors are explored in the review.

CONCLUSION

This paper has explained that the social costs of setting access prices too low or too high are asymmetric (so that the cost of monopoly pricing is smaller than the cost of regulatory under-pricing). This asymmetry of costs, and following from that, the policy value of erring against the granting of access in marginal cases, in turn underscores the importance of maintaining strong and effective "filters" against inappropriate regulatory intervention under Pt IIIA and other access regimes, such as the Gas Code.

The PC review of the national access regime has set out some recommendations for improvement, including recommendations relating to improving the declaration criteria.

The PC's Position Paper was produced before the *Duke* decision was handed down, and as a result, we have yet to see how the PC will react to the decision.

One means of overcoming the issue highlighted by the *Duke* decision would be to introduce a limited amendment to the "uneconomic to develop" criterion so as to explicitly refer to the existence of alternatives in the market for the services of the facility in question. For example, the criterion could be modified to read:

> "That it would be uneconomic for anyone to develop another facility to provide the service or a substitute for the service in the same market as that in which the service is provided."

A limited amendment, such as that set out above, would retain the guidance provided by current case law as to the meaning of "uneconomic", while being able to draw on the extensive precedent that exists with respect to market definition. It could be made speedily, without requiring far-reaching reconsideration of the overall statutory scheme. And last, but by no means least, it would enable a range of close substitutes, which are presently excluded, to be considered.

The other issues canvassed in the PC's review related to access holidays, asset valuation, ensuring consistency of existing Federal and State regimes with the principles underlying Pt IIIA, appeals and merit reviews, and the case for and against separate regulatory bodies.

Of these issues, the PC's in-principle support for access holidays and ensuring consistent certification of access regimes is encouraging insofar as it is likely to lead to significant improvements in the workings of the current system, especially in the direction of ensuring an appropriate balance is struck between consumer

interests in lower prices and the need for efficient investment incentives. However, this is subject to the caveat that additional measures other than those specifically canvassed by the PC may be needed to achieve the aims underlying the policies of access holidays and consistent certification.

Ultimately, the outcome of the PC's review, and the energy market review will depend on governments' willingness to adopt measures that present a certain challenge, at least on their face, to the tendency to want to offer immediate and obvious positive outcomes for consumers. The political considerations here are entirely beyond the scope of this paper, but it is certainly very encouraging that Australia is engaging so vigorously at present in the debate about these complex issues.

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