

ACCESS REGULATION – BUILDING ON THE REVIEW OF THE NATIONAL ACCESS REGIME

Infrastructure is vital to the Australian economy. It underpins the delivery of essential services and drives economic growth. Given that Australia's infrastructure affects every Australian every day, it is of paramount importance that it meets today's needs and through careful planning, maintenance and construction, tomorrow's needs as well.¹

Expenditure on essential services in energy, telecommunications, rail transport, and water accounts for about 12% of Australia's GDP, but has flow on effects into the economy as a whole -- industry cannot function without energy, telecommunications, transport etc, and our personal quality of life depends on them.

Infrastructure services are capital intensive – Australia's investment in energy, telecommunications, rail transport and water infrastructure exceeds \$120 billion and each year we invest more than \$7 billion in renewal and new infrastructure. Therefore the investment climate for infrastructure is particularly important, and particularly important to the Australian economy.

The National Access Regime is perhaps the most critical factor impacting on the investment climate for infrastructure. Since it applies across all infrastructure it has the potential to affect the investment underpinning all of Australia's essential services. It is therefore of national importance that the National Access Regime provides the correct signals for infrastructure investment.

Access regulation is based on the (non-controversial) presumption that competitive markets produce better outcomes for consumers than do non-competitive markets. It is applied where there exist 'bottleneck' or essential services facilities that cannot be economically duplicated and which must be used by participants in markets upstream or downstream of the 'bottleneck' facility. The regulatory concern is that owners of 'bottleneck' facilities may have the incentive and power to deny access and therefore to limit the potential for upstream and downstream competition.

The Hilmer Committee argued that the application of the national access regime should be limited, and should not extend to vertically separated (as opposed to integrated) providers of essential services because they will have little incentive to deny access to downstream firms.

Today's policy makers maintain that vertically separated 'bottleneck' facility owners may have an incentive to charge high access prices which can have the same practical effect as a refusal to provide access. As a consequence, access regulation is applied to vertically separated as well as to vertically integrated 'bottleneck' facilities.

It is also recognised that access prices which are too low can produce resource misallocations in upstream and downstream markets, and are likely to stifle innovation and deter investment in infrastructure. The costs of under-investment are likely to result in future capacity shortages, unreliable service, and high prices.

¹ IEA, Communique

Clearly this points to the need for balance. It is not in the overall public interest to have low prices today if the cost of those low prices is future shortages whose social costs outweigh the benefits of low prices today. The appropriate balance is one which will provide sustainable prices and services over the long term. That is, prices should be good for consumers today, but they should also be sufficient to allow owners to maintain and renew existing infrastructure, and to provide owners with the incentive to invest in new infrastructure.

Have we got the right balance today?

Different interest groups have expressed different views about the balance. Regulators have suggested it is about right, some users have suggested prices should be lower, and infrastructure owners have suggested prices are too low to compensate for the risks associated with new investment.

In its submission to the Productivity Commission's review of the national access regime, the ACCC claims that "current access arrangements are providing a healthy investment environment, [and that] returns provided to Australian electricity and gas transmission owners compare favourably with average returns on equity".²

The Productivity Commission has observed that the ACCC's comment on returns misses the point, and does not provide evidence of the health of the investment environment.³ I agree. The ACCC is comparing uncertain ex ante returns for successful infrastructure projects with certain ex post returns for the average of successful and unsuccessful investments in the market. This is clearly not a meaningful comparison and, if relied on, would significantly and adversely affect infrastructure investment.

More important perhaps is the revelation by AMP to the 2001 AGA convention that it had not invested in energy infrastructure in Australia for several years but that it was investing in India. That is, according to the actions of AMP, the environment for investment in energy infrastructure is less favourable in Australia than in India.

Perhaps the most rigorous evaluation of whether we have the balance right comes from the Productivity Commission. In 2001 the Productivity Commission conducted a review of the National Access Regime. In March it published a Position Paper, and in November it submitted its final report to the Federal Treasurer. The final report has not yet been made public, however I do not expect it to depart radically from the Commission's Position Paper.

In February the Productivity Commission released its Annual Report. The accompanying Media Release was entitled "Better Regulation of Infrastructure Needed". In it the Commission took the opportunity to, as it said, "bring together some key policy messages arising from its recent inquiries into the regulation of Australia's economic infrastructure". The Media Release says:

Although the problem of market power should not be overstated, access and price regulation of essential infrastructure have the potential to promote the efficient use of resources.

The regulatory challenge is to ensure that the right facilities are targeted and that prices are set neither too high nor too low.

² Productivity Commission, p64

³ Productivity Commission, p65

The major risk associated with the current regulation of essential infrastructure is that setting prices too low could deter new investment in the facilities themselves. While available evidence of adverse impacts on past investment is largely anecdotal and difficult to verify, the potential risks from regulatory action appear to be looming larger.

Getting the balance right is not straightforward but it is critical to achieving efficient outcomes for the benefit of consumers over the long term. An important step is for governments to provide clearer guidance to regulators: greater clarity about objectives of regulation, the behaviour at which intervention should be targeted and the principles governing the type of intervention.

With the inherent uncertainties and information difficulties, there are limits to what regulators can achieve. This makes it doubly important for regulators to intervene only when the potential gains are sufficient to warrant incurring the inevitable regulatory costs.

I agree wholeheartedly with these policy messages. The Productivity Commission has made reference to the disease and the prognosis if we don't take care, and has clearly identified the cure.

If we don't improve access regulation by getting the right balance in prices, we are likely to end up with under investment resulting in shortages and interruptions in the supply of essential services. Getting the balance right is not simple, especially given the informational uncertainties facing regulators. The cure is for governments to provide clearer guidance to regulators, including regarding the principles governing regulatory intervention.

The Productivity Commission describes the current form of regulatory intervention in its Position Paper on the national access regime. It says:

The approach [to regulation in Australia] is clearly highly information intensive and intrusive, which participants claimed reduces incentives for good performance.⁴

Intrusive regulatory systems have high social costs. The Hilmer Committee cautioned that "poorly designed or overly intrusive [regulatory] approaches can reduce incentives for investment and efforts to improve productivity."⁵ IPART is more strident in its criticism of intrusive regulation. It says "The history of intrusive cost plus regulation is replete with examples of heavily regulated utilities that exhibit low levels of efficiency, poor investment practices and below average service performance."⁶

Admittedly, IPART's criticism is focused on intrusive **cost plus** regulation. However, as the Productivity Commission points out, there is a "tendency for price caps based on the building block approach -- the Australian approach -- to merge into rate of return regulation."⁷ In this context, the criticism is valid.

At one time it was accepted wisdom that because regulators would of necessity have incomplete understanding and information about the business, traditional price fixing by regulation is problematic, and incentive regulation made sense. In fact I believe it is still accepted wisdom, but the practice is inconsistent with that wisdom.

⁴ Productivity Commission, p212

⁵ Hilmer, p271

⁶ IPART, p13

⁷ Productivity Commission, p212

Incentive regulation was devised to promote the efficient production of infrastructure services in an environment where competition is absent, or less than vigorous, and where informational uncertainties make traditional price fixing by regulators problematic. The philosophy is that, given the correct incentives, operators of infrastructure will continuously strive to improve efficiency. In this way, incentives, rather than regulatory interventions hampered by informational uncertainties, would drive efficient outcomes. I believe incentive regulation, properly designed, still provides the right answer for infrastructure regulation.

In one sense we have incentive based regulation today. Because we employ price and revenue caps, an owner that beats the regulator's forecasts of costs, and throughput under a price cap, keeps the rewards, at least until the next regulatory review. This provides the incentive to improve outcomes.

However, there is a great deal of mystery and uncertainty surrounding regulatory price setting. That uncertainty establishes a very costly environment, sometimes prohibitively so, for the provision of new and renewal capital, and undermines the incentive to invest in anything that does not have an immediate payback. In this sense we have anything but incentive regulation.

What we have is incentive regulation in form, but not in substance. To have incentive regulation in substance as well as in form, especially in industries with long life assets which, once the investment is made, become 'sunk', it is necessary to have a regulatory environment based on openness and trust.

Most of the 'mystery' and 'uncertainty' arises from the significant discretion given to regulators under access regulation. In this context, I agree with the Productivity Commission when it says 'an important step is for governments to provide clear guidance to regulators' especially if that clarity spills over into clarity for investors. We need clarity to remove the current uncertainties that give rise to unnecessary regulatory costs and undermine the potential strength of incentive based regulation.

While I expect that no one would argue with the statement that uncertainty gives rise to risk and cost, it would be reasonable to question, and challenge, my assertion that these uncertainties are unnecessary. In the time remaining to me I will briefly address seven sources of uncertainty; all of them significant to investors.

Uncertainty regarding initial regulatory rate of return for new infrastructure, and uncertainty as to whether the rate for successful investments will be subsequently reduced.

As custodian of shareholders' interests how can I invest in new infrastructure when I don't know what return the regulator will assume in setting prices before I put my money in the ground? As an investor I can accept and factor in to my decisions the vagaries of the market, the possible fluctuations in costs and demand. What I find unacceptable however is that I have to second guess the regulator on a matter such as the regulatory rate of return. I am not looking for a guaranteed rate of return, my return will be a function of my effort and market movements, but I do want to know the assumption the regulator is going to make in setting the prices I can charge.

Given that a regulator has to make this decision at some time, surely it is not unreasonable to ask that the decision be made before I invest rather than after the event as is the case at present. Furthermore, what value can come from keeping this piece of information secret. All it does is increase the uncertainty of making investments, thereby increasing costs and in turn prices. The increased cost does not seem to have any offsetting benefit at all, it seems to be grossly wasteful.

It could be argued that we can rely on precedent to get a bead on a regulator's view of the cost of capital. Such argument seems to have very little merit. Regulatory determinations thus far have not created any useful precedent. This is especially so since the Productivity Commission has questioned the reasoning given by the ACCC to justify the rates of return it has awarded. In any event, why rely on opinion as to what precedent means when intentions can easily be provided. I am not asking for the regulatory rates for every conceivable project to be posted, but I do expect that regulatory rates for a range of investments should be disclosed.

Uncertainty as to whether the regulator will, in future price determinations, reduce the risk component of the rate of return for successful investments from the figure set initially.

When we make a decision to invest in a project we do so because the expected returns on the project equal or exceed the cost of capital that is consistent with the risk we foresee at the time we make the investment decision. When we carry out a review of the performance of an investment, we do so by measuring actual returns against the benchmark returns on which the investment decision was made. That is, against the cost of capital consistent with the risk we foresaw at the time we made the investment. If actual returns exceed this benchmark, the investment has been successful, if they fall short of the benchmark, the investment has not been successful.

As an investor in regulated assets we face the risk that regulators will reset prices at subsequent reviews on the basis of an assessment of the risks at the time of the reset. For successful projects, future risk is likely to be less than the risk at the time the investment was made and therefore prices will most likely be reset to recover returns lower than those consistent with the view of risk at the time the investment was made. Therefore, price resets will inevitably ensure that successful projects will earn a return lower than the benchmark which distinguishes good investments from poor investments. That is, regulators are likely to turn good investments into poor investments. On the other hand, there is nothing a regulator can do to turn a poor investment into a good investment.

How can I in good conscience invest shareholders' money in even the very best of projects when I know there is a significant risk that they will fail because of regulatory action?

Pre-investment commitments to set prices at subsequent reviews on the basis of the pre-investment view of risk is a necessary prerequisite to removing this barrier to investment.

Uncertainty as to whether actual capital expenditure on additions will be allowable in price determinations or whether part will be deemed imprudent.

Uncertainty as to whether an investment deemed prudent at the time of investment will in future be deemed redundant, in whole or in part;

Infrastructure investments exhibit significant economies of scale. In fact it is this characteristic which gives rise to their characterisation as natural monopolies. Despite the fact that society has misgivings about natural monopolies -- because they have the power to constrain supply to inefficient levels -- society nevertheless chooses to use them as the means of production because they offer the potential for economies of scale.

Access regulation allows regulators to 'strand' assets, in whole or in part, if they are not fully utilised. Let me tell you the messages this sends to me.

It says to me that I should 'size' my investments so that they are fully utilised from day one. Taken to its extreme but logical conclusion that means that customer specific small pipes should be installed from the City Gate to each individual customer as each materialises. At no time will I have any excess capacity, therefore I will not be exposed to asset stranding.

On the other hand, there will not be any realisation of economies of scale. Pipe economics are driven by the facts that capacity increases almost with the square of the diameter, whereas installed cost increases at a much slower rate. Therefore a given demand can be satisfied much more cheaply by a few large pipes than by many small pipes. To realise the benefits of economies of scale, a few large 'feeder' mains which can transport energy to a growing number of customers should be installed rather than many small pipes to individual customers.

How do we remove this barrier to the realisation of economies of scale? By accepting the reality that it does not make sense to threaten asset stranding and removing this discretion from regulators.

Uncertainty as to whether benefits from taxation investment incentives will be removed through regulatory price determinations after the investment has been made.

From time to time the Federal Government determines that it is in the interests of the economy generally to stimulate infrastructure investment. This policy has been effected by offering investment allowances generally in the form of accelerated depreciation for taxation purposes.

In its recent decisions under the gas access code, the ACCC has applied what it terms its post tax revenue model to price setting. The effect of this model is to remove any benefit previously offered by investment allowance from investors and to transfer it to consumers in lower prices.

From the perspective of a past investor, this behaviour is deplorable. From the perspective of a potential investor, this behaviour means that it is not possible to rely on government incentives designed to bring forward infrastructure investment. From the perspective of management of the economy, this behaviour means an important instrument of policy has been neutered.

Uncertainty as to whether actual operating costs incurred by an efficient operator will be recoverable in regulated prices.

Regulatory regimes in Australia have been drafted to reflect a preoccupation with removing monopoly rents, where monopoly rent has been taken to exist if actual or forecast costs exceed, or could exceed, 'efficient' costs. To give effect to that preoccupation we have attempted to 'fine-tune' estimates of 'efficient' costs which then form the basis of regulated price determinations.

Efficient costs are a concept, a very useful concept, but translating that concept into practice is a very inexact science. Regardless of whether the search for efficient costs is based on engineering models or comparative benchmarking, the foundation for both approaches is comparative benchmarking. However, benchmarking used for the purpose of estimating efficient costs is approximate at best. The sources of its imprecision are well documented by Professor Vogelsang⁸, NERA⁹ and others more expert than I on this issue. They include difficulties associated with apples with apples comparisons and with normalising data to remove the effects of external factors.

Efficient costs are difficult, if not impossible, to determine. The pursuit of the elusive 'efficient' cost is an intrusive process and, because of informational uncertainties facing regulators and very imperfect analytical tools, results in estimates which can only be properly expressed as a range which is so wide as to render them of little practical use. The search for 'efficient' costs for a forecast period of five years or so is even more daunting and the results even more uncertain. As IPART says: "No regulator can accurately assess the levels of efficiency or service an industry is capable of over time."¹⁰

While the reality is that 'efficient' costs can only be properly expressed in terms of a very wide range, and despite the fact that if investment is not to be discouraged, price determinations should be based on the high end of the range, the fixation with removing monopoly rents has caused regulators to land well below the top end of the range.

As a consequence, investors have no assurance that regulated prices will in fact allow recovery of genuine costs for an efficient operator.

Uncertainty as to how efficiencies will be treated, and to what extent, if any, that the owner will get to share in them;

Uncertainty as to how shared costs will be treated, whether the owner will get to share in any realised synergies, and whether the owner will be free to allocate shared costs in an economically efficient manner.

Incentive regulation is intended to drive owners of infrastructure to innovate by offering them a share in the efficiencies that are produced. However, existing regulatory practices undermine this incentive.

⁸ Vogelsang

⁹ NERA

¹⁰ IPART, p3

As mentioned previously, regulated prices set on the basis of regulator estimates of 'efficient' costs leave investors uncertain as to whether prices will allow recovery of genuine costs for an efficient operator. In addition by setting prices on the basis of regulator estimates of forward looking 'efficient' costs, regulators are awarding 100 percent of what they consider to be achievable efficiencies to customers. Investors get no share in them at all. Furthermore, if regulators over-estimate the potential for efficiencies, then they will transfer to customers the benefits of efficiencies that have not, at the time of transfer, been realised. In this case, the share to investors is negative.

If we are to have incentive regulation, we need to agree that only realised efficiencies can be shared, and we need to have a commitment up front as to how realised efficiencies are going to be shared. There is no value in keeping this matter secret, it only undermines the very incentives on which the system is supposed to be based.

Uncertainty as to how greenfields and regional development investments are to be treated.

There are investment issues that are unique to greenfield developments. I will use the Central West pipeline as an example to illustrate some of those issues.

The Central West pipeline runs from Marsden through Forbes, Parkes and Dubbo to Wellington. It was developed by AGL but is now part of the Australian Pipeline Trust's portfolio of pipelines. The prices for transport in the early years, which are determined by the ability of the market to pay, will not allow recovery of full costs in those years. In fact it will take many years, and significant regional development, for the pipeline to recover costs. The potential for that development was uncertain at the time of the investment and remains uncertain today. If it does not materialise, the project will not recover its costs, even over the whole life of the pipeline. If the pipeline is successful, then it will earn significant returns in the later years, which will compensate for under-recovery in the early years. And herein lies the problem.

Assuming the project is successful, there is no assurance that a future regulator will allow those high returns in the later years. Responding to this issue, the ACCC allowed an initial regulatory period of 10 years, rather than the normal 5 years, and allowed negative regulatory depreciation to reflect the under-recovery of costs.

While it is pleasing to see the ACCC recognise there is a problem, their 'solution' does nothing to remove the uncertainty facing intending investors. Even with significantly higher regional development than could reasonably be expected the Central West will not be making significant returns in the first 10 years. Furthermore, what position will a future regulator adopt if the project is successful, and returns rise?

What is needed to remove the regulatory uncertainty with greenfield projects is a regulatory commitment that covers the life of the asset. An approach we have proposed is based on the Petroleum Resource Rent Tax (PRRT). An investor would be free to set prices until such time as the project recovered its costs. Thereafter the net benefit would be shared on a predetermined basis between investor and users. The PRRT employs a sharing of 60 percent to investor, 40 percent to users (the ATO in this case). Under such a scheme, investors bear the costs of unsuccessful projects, and the benefits of successful projects are shared between investors and users.

Most importantly, intending investors know the rules of the game before they invest. This is particularly important for regional development projects which are very difficult to get off the ground.

CONCLUDING REMARKS

These uncertainties add significant cost, are a deterrent to investment in essential infrastructure, and provide no benefit whatsoever to Australia. I am seeking clarity on these matters in amended access regulation for gas and electricity. Without clarity it is going to become increasingly difficult to invest shareholders money in essential infrastructure in Australia. I am encouraged by the Productivity Commission which addresses a number of these uncertainties and concludes, as I do, that action needs to be taken. I call upon governments to release the Productivity Commission's report, and to implement its recommendations by amending the Trade Practices Act and initiating the promised review of the Gas Code.

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