It is a pleasure to be with you tonight as the work you are doing here at the SMART facility is unique and valuable.

The SMART Facility is examining the impact and interdependencies of national infrastructure investments. An important issue for infrastructure is the issue of regulation.

Given this, my talk tonight will be on the topic of why, when and how we regulate infrastructure. I will make some observations and pose some questions.

Before doing so I make two general points.

First, it is clearly best to facilitate competition and to avoid price and access regulation wherever possible. Regulation has costs and is clearly a second best approach. It is, however, the situation where we have monopoly infrastructure, where competition is not possible or efficient, that I am addressing tonight.

Second, we need to remember that price and access regulation of infrastructure in Australia by an independent agency does not have a long history.

Infrastructure assets have traditionally been owned by governments, and the establishment of the prices for infrastructure services was largely settled by government ministers.

It was only in 1992, for example, that IPART was established as the independent pricing regulator in NSW.

At that time, issues to do with infrastructure and competition in downstream markets were dealt with by Section 46 involving the misuse of market power. Section 46 had limited application to state-owned enterprises, and no application to the mere use of market power.

In the early 1990s the Hilmer review determined that Section 46 was not sufficient, and so the Part IIIA regime allowing access to infrastructure came about.

The recommendations in the Hilmer report drew on the access regime that was being put in place for telecommunications, as policy makers grappled with how best to provide a competitor to the then Telecom.
I think it is now appropriate, given many recent developments, to reassess why, when and how we regulate.

These three crucial questions are, naturally, closely linked to each other.

1. Why we regulate

It seems to me that there is considerable confusion over the issue of why we regulate monopoly infrastructure. This is unfortunate; good public policy requires that we have a clear view of the problem before deciding how best to address it.

If I remember correctly one early reason policy makers wished to have an independent agency regulate the charges for infrastructure was the concern that prices charged by these then government-owned businesses were not high enough to ensure reasonable rates of return. That is, taxpayers were subsidising the users of infrastructure assets; and further, business users were often cross-subsidising household users. Regulation by an independent agency allowed governments to reform price structures and to allow government businesses a normal commercial rate of return.

But in the intervening years many formerly government-owned businesses have been privatised. Why do we continue to regulate these private infrastructure monopolies?

The current rationale given by most economists, and the approach used by the Productivity Commission (PC), is that we regulate for reasons of allocative efficiency, or to reduce dead weight loss. That is, the higher prices charged by the unregulated monopolist will see some customers who would have used the facility at efficient prices now choosing not to do so.

According to this view, the higher prices that could be charged by an unregulated monopoly are not of inherent concern. That is, it is argued that if the higher prices simply involve a transfer of income from consumers to the monopoly infrastructure owners, without any diminished use of the facility, then this is not of concern, and so not a reason to regulate.

Most Australians would, of course, be surprised by this. They think we regulate to make sure that the owners of monopoly infrastructure do not take advantage of their position and “gouge” consumers.

Indeed, if we are not concerned by a transfer of income from consumers to the owners then, if we had a monopoly asset with very low elasticity of demand for its use, and no real issues concerning promotion of competition in other markets, why would we not let them price as they wanted to at very high levels?

This of course would not work politically.

What should policy makers do? Should they side with the PC even if this means pursuing policies which make no sense to the person in the street? Or should they follow the views of the wider populace, even when those views seem to lack economic foundation?
Another major problem is that public utility regulators do not, in practice, make regulatory decisions solely or even mainly on the basis of allocative efficiency or the minimalisation of dead weight loss. That is, not only when to regulate but also how we regulate may seem to lack economic foundation.

One response to all this is to conclude that while the textbook economic approach says we regulate only for allocative efficiency, in the real world we regulate for equity reasons. The IPART Act recognises this because equity is a criterion it has to take into account in its regulatory decisions. But is monopoly price regulation primarily a concern to promote equity? If so, why do we regulate infrastructure, like coal railways, whose primary customers are large and often foreign-owned companies?

One way out of these dilemmas has been suggested by Darryl Biggar, an economist with the ACCC. Darryl argues that the underlying economic problem arises from the need for investments by the customers of the monopoly service provider. For example, a coal mine must make a substantial investment in reliance on access to the monopoly coal railway to export its coal. A freight forwarding business might locate its warehouse close to a major airport. Even small customers make an investment in reliance on monopoly services – for example, in a location close to a commuter rail station or a freeway.

These customers will be concerned that once they make their investment, the monopolist will raise the price or lower the quality of the service, in an attempt to extract the value of the customer's investment. Fearing this outcome, customers will be reluctant to make the necessary investments, and economic gains will be lost.

There are two ways to protect the investment of customers: vertical integration and long-term contracts. We see both of these approaches used in practice. Large firms enter into long-term contracts for the provision of monopoly services. Governments enter into PPP contracts. But for small customers, entering into long-term contracts is not feasible.

If small customers cannot enter into an explicit long-term contract with the monopoly service provider, what are they to do? According to Dr Biggar, we should think of public utility regulation as playing the role of a long-term contract – recreating the contract that the customers would have written with the service provider if they could have negotiated with each other prior to making any sunk investment.

Darryl argues that viewing the regulatory task as the administration of a long-term contract also allows us to understand better the way that regulators behave in practice. For example, it explains why regulators have historically focused on ensuring price stability, on ensuring that prices reflect long-run costs, and why regulators have historically not accepted forms of price discrimination.

2. When to regulate

Let's turn now to the question of when to regulate a monopoly. This question can, in turn, be broken down into a number of parts:
• which facilities should be regulated?
• when should that decision be made?
• who should make the decision to regulate?

In relation to which facilities should be regulated I have already said that such decisions should be made with a clear understanding of why we regulate.

As I mentioned earlier, the text books say we should regulate when, in the absence of some form of price control, the resulting market power would lead to an unacceptable deadweight loss, or a loss of allocative efficiency. If it does not lead to this result then we should not regulate, no matter how much ability the monopoly infrastructure has to raise prices.

The PC has used this approach to argue against changing the existing monitoring regime applied to Australian airports. In particular, the PC has taken the view that the consequence of any overcharging for airport services on the efficient level of air travel is likely to be small. The PC found, instead, that the main effect will be a shift in profits between airports and airlines.

The ACCC has a different view. The ACCC has argued that monitoring does not provide an effective constraint on the exercise of market power and that the potential efficiency effects from airports exercising their market power are significant. For example, higher airport charges could have a sizeable impact on budget travellers’ decisions to travel, which is becoming a larger segment of the market. There may also be equity concerns as any monopoly rents imposed by airports on the cost base of airlines will ultimately be paid for by users. This is of concern to the community and consumers.

There have also been concerns over investment levels and standards of service at Sydney airport.

If the deadweight loss really is low, which I think is highly questionable, there is also the issue of whether the presence or absence of deadweight loss is the right standard for measuring whether or not we should be regulating airports.

According to Darryl Biggar’s perspective we could consider imposing price regulation when:

a) the customers must make a material sunk investment in reliance on access to the monopoly service; and

b) the customers and the service provider cannot themselves come to a mutual arrangement to protect those investments.

I mentioned earlier that another rationale for independent price regulation applies in the case of government-owned firms. The historic experience in Australia shows that governments have a hard time approving price reforms in their government-owned businesses. Over time price structures tend to become fixed at levels which don’t allow firms to cover their long run costs, or which force business users to subsidise residential users. Independent price regulation allows governments to depoliticise the price-setting process, allowing for pricing outcomes which would not be feasible if the government kept the price setting task for itself.
The PC takes an alternative view. The PC’s recent draft report on urban water
advocates removal of independent price regulation of urban water utilities.

The PC’s approach to urban water would see a service charter between
businesses and governments. It is not clear how this would work in practice.
Who, for example, would monitor and enforce the charters?

My main concern though is that the PC’s proposal represents a move back to
pre-Hilmer reforms, where Ministers and government departments were in
effect the price regulators of government-owned utilities. We had plenty of
experience with the pre-Hilmer model and it was not a success.

- There was a lack of transparency, rigour and consultation in price
  setting.

- The track record was of inefficient service provision by utilities with low
  labour productivity; worse outcomes than we see now.

- There were conflicts of interest for the government in pursuing
  shareholder interests, policy objectives and political concerns with
  often a confused result and cross subsidies.

The answer to the second question I raised earlier is easier: a decision as to
when to subject an infrastructure facility to regulatory price controls should be
made before either the service provider or the customers have made any
sunk investment.

This promotes regulatory certainty for investment in that infrastructure and
certainty for customers wishing to invest in complementary assets, such as
mines, ports, rail and rolling stock.

This is this issue right now facing a new monopoly like the National
Broadband Network. Investment in the network and supply of services by
NBN Co has already started, but the regulatory framework remains unsettled.

While the ACCC has now received a special access undertaking from NBN
Co setting out its preferred regulatory approach, its lodgement has been
subject to some delay.

Now that the undertaking is before us, the ACCC will be closely scrutinising
the regulatory framework proposed. The ACCC’s most recent consultation
paper, released in February, highlighted a number of issues with NBN Co’s
undertaking and we would expect the undertaking to be refined through the
consultation process and our assessment.

Of course, we will only be accepting an undertaking if we are satisfied that the
regulatory framework it contains promotes the long term interests of end-
users having regard to the impact on competition and efficient use of and
investment in infrastructure. This necessitates consideration of the impact on
the users of the network as well as NBN Co itself.

My third question goes to who should make the decision to regulate.

Virtually all the infrastructure that is regulated in Australia today gained that
status from a government decision. For example, electricity and gas
transmission and distribution, water infrastructure and bulk wheat terminals.
We have a situation today, however, where it seems governments often want decisions on what to regulate to be taken only under the Part IIIA access regime.

The National Access Regime has been in place for over 15 years, so it is possible to reflect on its history in light of practical experience - including what has worked and what hasn’t.

At the practical level, the regime has been only moderately successful. Experience shows that aspects of it have worked effectively, but that others have not.

The process by which infrastructure may be declared is the most notable shortcoming of Part IIIA.

An example is Fortescue’s application for declaration of railway lines operated by Rio Tinto and BHP Billiton in the Pilbara.

Aspects of that process have been running for around seven years and for some of the rail lines there is still no final decision. Whether or not these rail lines should be declared, this is too long.

In another instance, Virgin Blue sought access to aeronautical services at Sydney Airport.

The entire process, from initial application to reaching an access agreement, took more than five years.

That is also too long, and for businesses on both sides of the argument that endure these delays, the result is regulatory uncertainty and increased costs.

Part IIIA does, of course, include an alternative to declaration: owners of infrastructure have the option of submitting an access undertaking to the ACCC.

If the ACCC accepts it, the undertaking will set the terms and conditions of access, and the relevant service cannot be declared.

It is often said that Part IIIA provides an option for infrastructure owners to “voluntarily” submit an undertaking to the ACCC, to avoid the “risk” of declaration.

However, no undertaking has ever been voluntarily submitted to the ACCC to avoid the risk of declaration under the generic National Access Regime.

Instead, in each case there has been some form of compulsion motivating the parties. For example:

- Operators of bulk wheat export terminals provided the ACCC with undertakings in 2009 and 2011 in order to meet accreditation obligations in the *Wheat Export Marketing Act*

- Australian Rail Track Corporation provided an undertaking in relation to the Hunter Valley rail network pursuant to an obligation in the lease of the network between ARTC and the NSW Government

The arrangements under the Wheat Export Marketing Act show how effective the access regime can be. They address concerns that the vertically
integrated operators may use their market power at the export terminal to
stifle competition for the trade and export of wheat.

The ACCC has assessed and accepted access undertakings from terminal
operators around Australia.

The arrangements have promoted the efficient allocation of terminal capacity,
and prevented the bulk handlers from discriminating against other wheat
exporters. This has been a critical part of the transition of the wheat export
industry from the monopoly held by AWB to the situation today where dozens
of exporters compete for wheat growers’ produce.

Access regulation also provided for similar constructive outcomes for the
Hunter Valley rail network, where the NSW Government required ARTC to
have access arrangements. This rail system exports $9 billion of coal per
annum.

There, an industry-driven solution recognised the need to coordinate mine, rail
and port to create an effective end-to-end coal supply chain, and to
courage timely and efficient investment in the rail network.

Other observations can be made about the absence of any voluntary
undertakings.

It suggests that the risk of declaration is perceived as very low. In addition to
the delays, cost and uncertainties, this suggests that declaration is not
considered credible.

If this is so, governments faced with decisions about whether or not to
regulate should exercise extreme caution in relying on declaration to solve
access problems.

The problems with the declaration process in Part IIIA also mean that a firm
investing billions to construct a new infrastructure facility has no clear guide
as to whether or not the facility will later be subject to regulation.

Nor do all those parties that wish to invest in complementary assets that need
access to the infrastructure – for example, new mines.

Now the Productivity Commission is scheduled to review the National Access
Regime, including Part IIIA, later this year. This is a key opportunity for an
examination of whether or not Part IIIA is achieving what was intended. That
is, provide for efficient investment in, use of, and operation of monopoly
services – and to promote competition and efficient investment in markets that
depend on those services.

But while the review is welcome there is a solution available today.

A solution is for governments to continue their past practice of making upfront
policy decisions about when to regulate key assets where there are clear
access concerns.

One approach could be that where there is vertical integration, such as with
the wheat ports, an undertaking could be required so that the access terms
are set up front. Where there is no vertical integration, such as with airports,
they could be deemed declared so that there is a negotiate/arbitrate
framework to even up the bargaining power of the parties involved.
In the latter case there may be no need for regulatory intervention, as the parties negotiate an outcome, but the threat of the intervention strengthens the position of the infrastructure users.

Where government makes a decision upfront and provides a mandate for access regulation, the delays, costs and uncertainties of the declaration process are avoided.

For greenfields infrastructure, an upfront decision makes it clear that the facility is to be regulated and the parties know where they stand.

It promotes regulatory certainty for the investment in that infrastructure and certainty for investors wishing to invest in complementary assets, such as mines, ports, rail and rolling stock.

This approach has been taken with the NBN. It is also occurring at the state level.

The West Australian Government has decided that a new 300-kilometre railway to be built in the Pilbara region, linking mines at Roy Hill with Port Hedland, should be open access.

Accordingly, the WA Government has obliged Roy Hill to have access arrangements in place, either with the ACCC or the Western Australian regulator.

Similarly, in Queensland the state government has made clear that the successful builder of the railway from the Galilee Basin to port will be expected to provide open access. The concern here, however, is that they still seem to be relying on a voluntary undertaking which, given our last 15 years experience, is unlikely to be forthcoming.

There will, of course, always be a powerful role for the Part IIIA declaration process. There will be many situations where it is not clear whether infrastructure should be regulated.

For example, when an existing privately owned infrastructure facility is subject to access regulation this will most likely be a difficult decision with significant implications. The current Part IIIA processes, with the many checks and balances, provides an independent process for appropriate decision making. While it would be very helpful to streamline these processes, they still have a crucial role to play.

3. How to regulate

Let’s finish by turning to the question of how we should regulate. Again, the answer to this question flows directly from the answer to the first question of why we regulate.

If we take the textbook view, we should regulate so as to minimise allocative efficiency or deadweight loss. I have already expressed my hesitation whether this is an appropriate standard, and whether this reflects what regulators actually do.

According to the alternative perspective I raised earlier, regulation is primarily a matter of administering a long-term contract between the customers and the
service provider. In this light the regulatory regime should seek to re-create the regulatory contract that the parties would have negotiated if they could have negotiated effectively prior to making any sunk investments.

This has some practical implications.

First, a key feature of the regulatory contract that we might expect is that it would be fair to both parties – ensuring that the service provider has a reasonable opportunity to cover the costs of its investment while, at the same time, ensuring that the customers only pay for efficient investments and long-run efficient costs. This concept is embodied within a number of specific regulatory frameworks, such as energy regulation. The objectives of the National Gas and Electricity Laws are to promote the efficient investment in and operation of energy infrastructure in the long term interests of consumers.

Second, if regulation is a matter of administering a contract between customers and the service provider, it makes sense for customers to be directly involved in that negotiation – either directly or through a formal customer representative body.

Most of the States in the US have formally-established bodies to represent customer interests in utility regulatory processes. Here in Australia, we have examples of industry-subsidised consumer bodies, such as ACCAN in telecommunications, but they are not common.

We need, also, to find other ways to get consumers involved in the regulatory process. For example, should the regulated entities be required to formally consult with consumers prior to submitting their spending and rate of return proposals?

Another question that this perspective raises relates to the role for appeals. If regulation is about the administration of a long-term contract, and if the regulator plays the role of arbiter in that process, what should be the role of appeals from the decisions of the regulator? Should appeals be limited to points of law, as in the case of commercial arbitration? Or should appeals be allowed on the merits of the decision?

Against these features I consider that the regulatory contract for energy networks that the AER is required to administer does not strike the right balance.

For a time during the mid-2000s there was a school of thought that considered economic regulation had the potential to delay efficient investment in bottleneck infrastructure, leading to declining productivity in the economy. The regulatory regime for energy networks established at that time locked in a unique pro-investment bias — where there is a presumption in favour of accepting investment and rate of return proposals from the monopoly service providers in the absence of evidence to the contrary.

In the last few years there have been quite significant rises in the prices for electricity network services. These increases reflect in part the need to spend money on network infrastructure to meet growth in peak demand, and to replace ageing equipment to maintain reliability.

However, the shift in the regulatory regime that began six years ago is also playing a part in the upward pressure on prices, and people are quite rightly
questioning whether the costs they are facing are the efficient costs associated with a safe and reliable energy supply.

In fact, the rules that the Australian Energy Regulator must follow when setting energy network prices are unique. I am not aware of any other regulatory model in the world today which limits the ability of the regulator to establish independent forecasts of required returns and expenditure.

The AER has submitted a rule change proposal to the Australian Energy Market Commission to restore the balance to this regime. The changes the AER are proposing would bring energy regulation into line with how other monopoly assets are regulated and avoid an upward bias to price rises.

Outside of energy, there are examples where the balance has been better. In the Hunter Valley coal network, the access undertaking provided by the Australian Rail Track Corporation and accepted by the ACCC provides certainty for ARTC about the return it can expect on its expanding network. It also provides the users – coal producers and train operators – certainty around future capacity and pricing. This in turn provides a basis for those users – and others along the supply chain – to undertake efficient investment.

Similarly in regulating termination fees levied by rural water infrastructure operators, the ACCC delivered a balanced approach in addressing competing interests in the irrigation sector.

In the Murray Darling Basin the ACCC has the role of reducing barriers to trading water. As part of this role the ACCC sets termination fee charges for irrigation infrastructure operators. These are the charges that the operators of pipe and channel infrastructure can levy when irrigators sell their water and terminate delivery rights. High termination fee charges can deter irrigators from selling water and create a barrier to trade. At the same time when irrigators terminate infrastructure operators face falling revenues and a diminished capacity to maintain their channels and pipes.

The ACCC allows operators to levy termination fees but caps them at ten times annual access fees. The cap limits the impact of the fees on water trading while providing revenue stability for the irrigation infrastructure operators.

The balance achieved in the water sector would not be possible in the context of the highly prescriptive energy network rules.

Further, legislative changes in the telecommunications access regime have seen a change in regulatory access processes. The previous arbitration-based model involved lengthy delays and duplication in implementing regulated access terms. By contrast, we now have a regime that allows the upfront setting of regulated terms and conditions of access in determinations. More efficient and timely access provides greater certainty to industry participants and allows the associated benefits to reach consumers and businesses without unnecessary delays.

A further feature of the regulatory contract that we might expect to find is a provision that gives customers some assurance that they are receiving value for money for the services they receive. One way to do this is through careful comparisons or benchmarking across firms.
Benchmarking can be an important regulatory analytical tool that examines historic costs, whether of the firm or the industry or comparable industries, and endeavours to look forward, to predict the efficient costs expected to prevail in the forthcoming regulatory period.

Benchmarking brings with it its own set of challenges. For example, it is important to be able to correct for all of the circumstances which can give rise to legitimate differences between the firms being compared. With the relatively small number of regulated businesses in Australia in some industries it may be necessary to look to international firms for comparison, which further increases the challenges of ensuring comparability.

Conclusion

Debates over why, when and how to regulate are extremely important because monopoly infrastructure will always play an important role in our economy.

I think we need more debate and better answers to all three of these questions. This is an area where a SMART infrastructure institution can make a large contribution, perhaps working collaboratively with the ACCC.

Thank you for your time this evening.