

**A policy framework for
Australia's infrastructure**

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A policy framework for Australia's infrastructure

Australia has had a fascinating debate on infrastructure over the past 18 months or so. The debate largely started with a strong push by the Business Council of Australia, and then it was given prominence by comments from the Governor of the Reserve Bank of Australia and the Treasurer, both of whom were needed by the peculiar events surrounding the Dalrymple Bay coal loading terminal.

The Commonwealth Governments reaction to the debate has been pivotal.

The Commonwealth's first reaction was to say that all was in hand. There was nothing more to be done. The required energy policy changes are being made by the Ministerial Council on Energy, road/rail issues were being dealt with through the Auslink program and, of course, we have the National Water Initiative.

When this did not work the next tactic was to say that we do not have an "infrastructure crisis". This sought to redefine the hurdle bar of concern. Only if we have a "crisis" need more action be taken. Mere problems did not require a further response.

To confirm whether or not there was a "crisis" the Commonwealth established the Export Infrastructure Taskforce chaired by Brian Fisher. While the Taskforce confirmed that there was no "crisis" in Australia's infrastructure it did, however, point to many potential problems. Among other things it concluded that "the fact that these problems are localised suggests that to describe them as a major crisis at present is an exaggeration. But the difficulties involved in their resolution point to underlying weaknesses... Without action to remove impediments to efficient investment in infrastructure, Australia's export potential over the next five to ten years risks being compromised".

Most important, once the infrastructure debate started the media became more alert. Events that might previously have been ignored were now being reported. Delays with the energy reforms, stories about growing urban traffic congestion and rail tracks in disrepair all gained traction. Then, of course, we had the water debate.

The combination of Malcolm Turnbull and the drought saw both urban and rural water issues dominating the agenda. The National Water Initiative went from being the answer to all concerns about water to being much too slow in its implementation and a document with very little to say on our pressing urban water issues.

As we move to the present, of course, the Commonwealth's position has now changed dramatically. Through a range of statements it has now entered the entire infrastructure arena, including urban infrastructure. For example:

- In his June CEDA speech the Prime Minister said that ... "There needs to be a revolution in thinking in relation to urban water ..." and he urged the States to bring large spending proposals to the Commonwealth

- The February COAG Communique launched a Commonwealth-State review of urban congestion issues as they relate to the main transport corridors, and a review into road/rail neutrality as it affects freight transport
- The February 2006 COAG Communique also announced the desire to remove price caps on electricity prices and to introduce interval meters, and it launched important reviews into the main remaining energy reform issues.

The Commonwealth's role in infrastructure issues has always been important. When it withdraws from these issues reform stalls.

This is not because the Commonwealth is better informed, or has smarter people.

It is because policy makers at the State level are inevitably drawn into day-to-day service provision issues which dominate State politics. Any major change can be portrayed by the Opposition or media as a threat to service levels. This is particularly so if a State seeks to make major change on its own, without the "cover" of a wider move for reform.

This is not to say that States cannot make major changes on their own, as the Kennet years in Victoria proved otherwise. It is also not to say that when the Commonwealth has sole charge of an issue it gets it right, as we can see from telecommunications policy.

It is to say, however, that greater progress occurs when the State's deep knowledge is coupled with the Commonwealth's ability to stand back from the day-to-day issues, assess the underlying problems and provide impetus for change.

Hopefully we have now moved beyond the argument of whether or not our infrastructure is in "crisis". The key question instead should be ... "can we do better?"

My key question today is, with the Commonwealth and the States now focussed on infrastructure issues, what is the policy framework they should use for addressing them?

My framework revolves around six guiding principles. If we adhere to them, I believe, we will have sound infrastructure in Australia that will serve our people and economy well. If we depart significantly from them, as we often do, our infrastructure will continue to stand out as "areas where we can do better".

My six guiding principles are as follows:

1. Use infrastructure pricing to send the appropriate signals to influence demand and supply
2. Establish competitive markets wherever possible so that, among other things, there is minimum need for regulation
3. Involve the private sector as much as possible, subject to them taking on responsibility for well defined outcomes with clear consequences for the success or failure to meet them
4. Where regulation is needed make it national, and soundly based

5. Do not seek to pick winners
6. Take a federal approach to infrastructure policy

Some could look at this list and think most of it is obvious. They would be right.

Fundamentally, micro economic reform in concept is quite straightforward. The difficulty is in implementation, where these clear policy concepts must align with clever practical ways forward.

Micro economic reform stands in contrast to macro economics. The right policies on interest rates and overall budget deficit/surplus levels are often difficult to determine. Once determined, however, they are relatively easy to implement.

Let me now explain and illustrate each of my guiding principles.

1. Use infrastructure pricing to send the appropriate signals to influence demand and supply

Unfortunately much of the debate around infrastructure pricing centres on welfare concerns. Keeping infrastructure prices low, however, or not letting them increase in times of peak demand, represent poor ways to transfer income to the less well off. We do not suppress the price of food to help these on low incomes; for the same reasons we should not suppress the price of infrastructure.

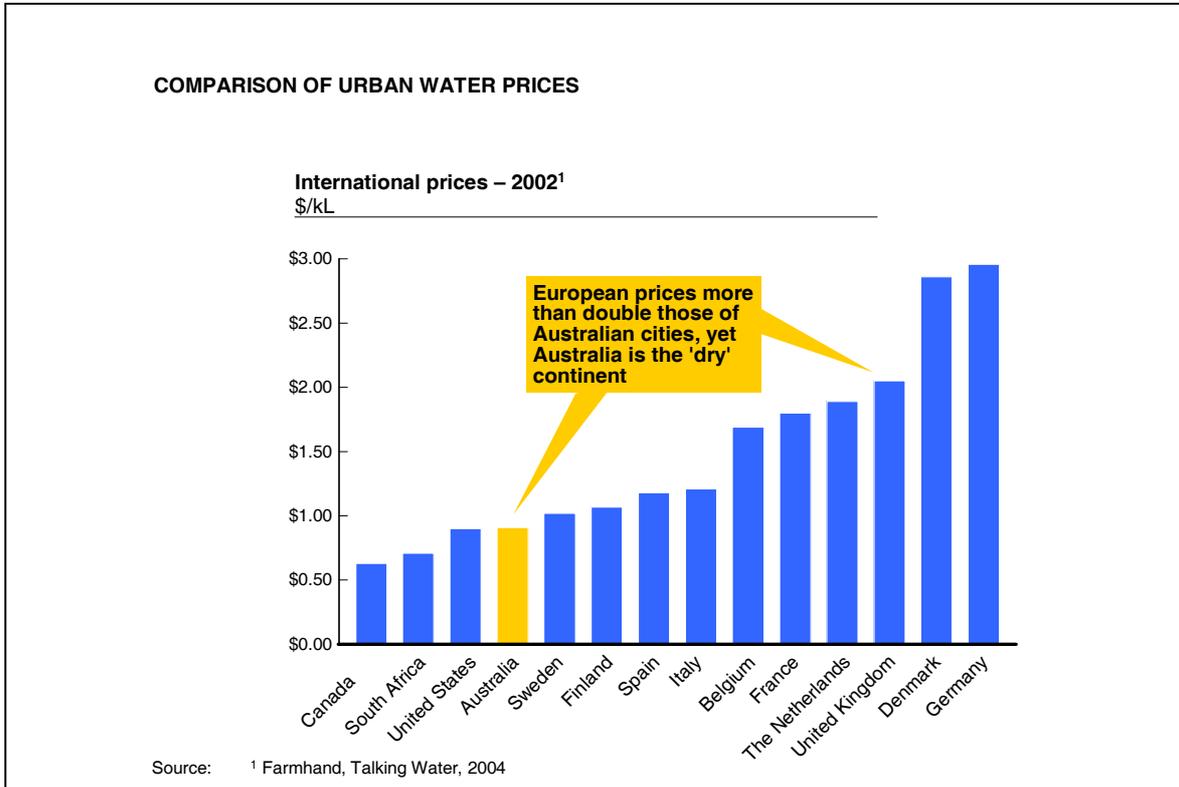
Good policy comes from aligning policy objectives with the instruments best placed to influence the relevant outcomes. Infrastructure pricing can only influence welfare outcomes a little.

Infrastructure pricing, however, is fundamental to the supply of and demand for our infrastructure. It can also have a profound affect on when we use our infrastructure, which is the key driver of its efficient use.

Let me illustrate.

If economics is about appropriately allocating scarce resources we have completely failed with water. As Exhibit 1 shows European water prices are more than double those of Australian cities, yet ours is supposed to be the dry continent.

Exhibit 1

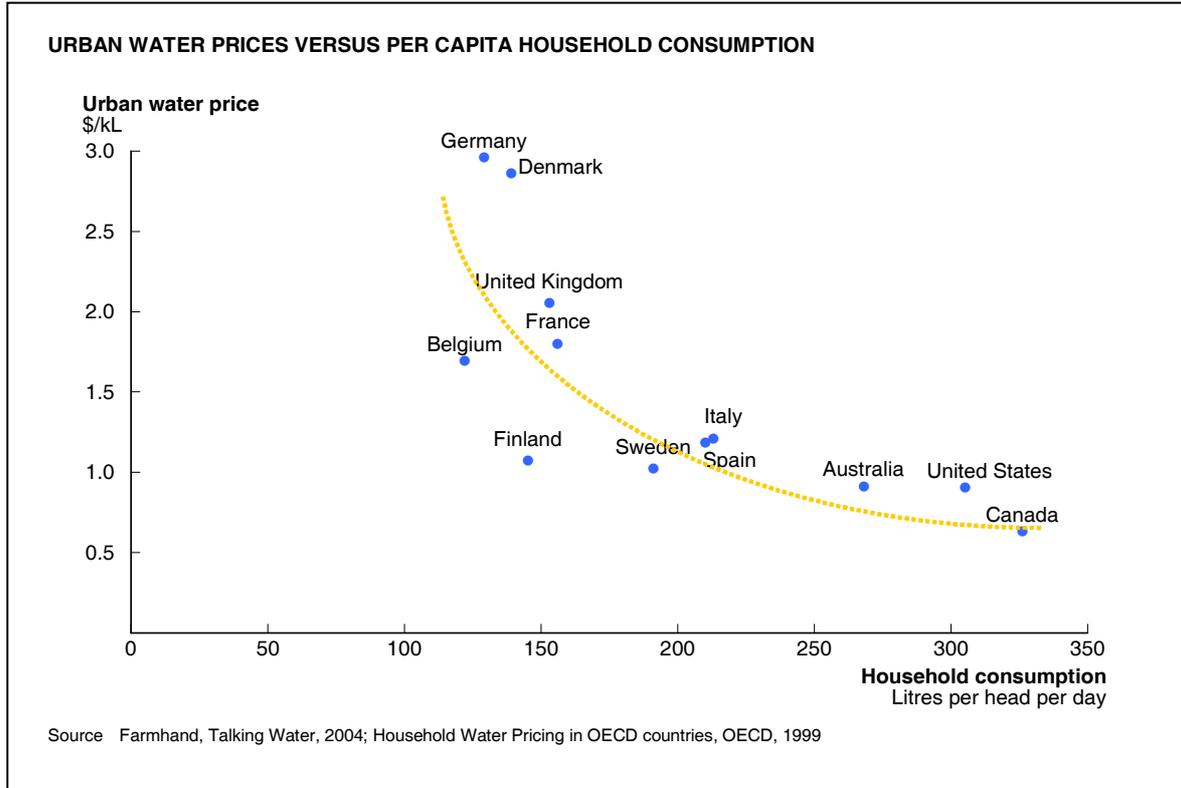


We pay very low prices for water, in part, because we value the resource as if it were a free good plentifully available. We pay only for the dams and the pipes.

Some argue that this all matters little because, for example, people will consume the same amount of water whatever the price. This is a common myth: that prices work to influence demand in all other sectors except infrastructure.

European household demand for water is considerably less than ours, as shown in Exhibit 2. To counter the obvious reply note that if all outdoor water use is excluded (and outdoor use represents 27% of total usage in Sydney) then Sydney urban users still consume more than those in the average European city.

Exhibit 2

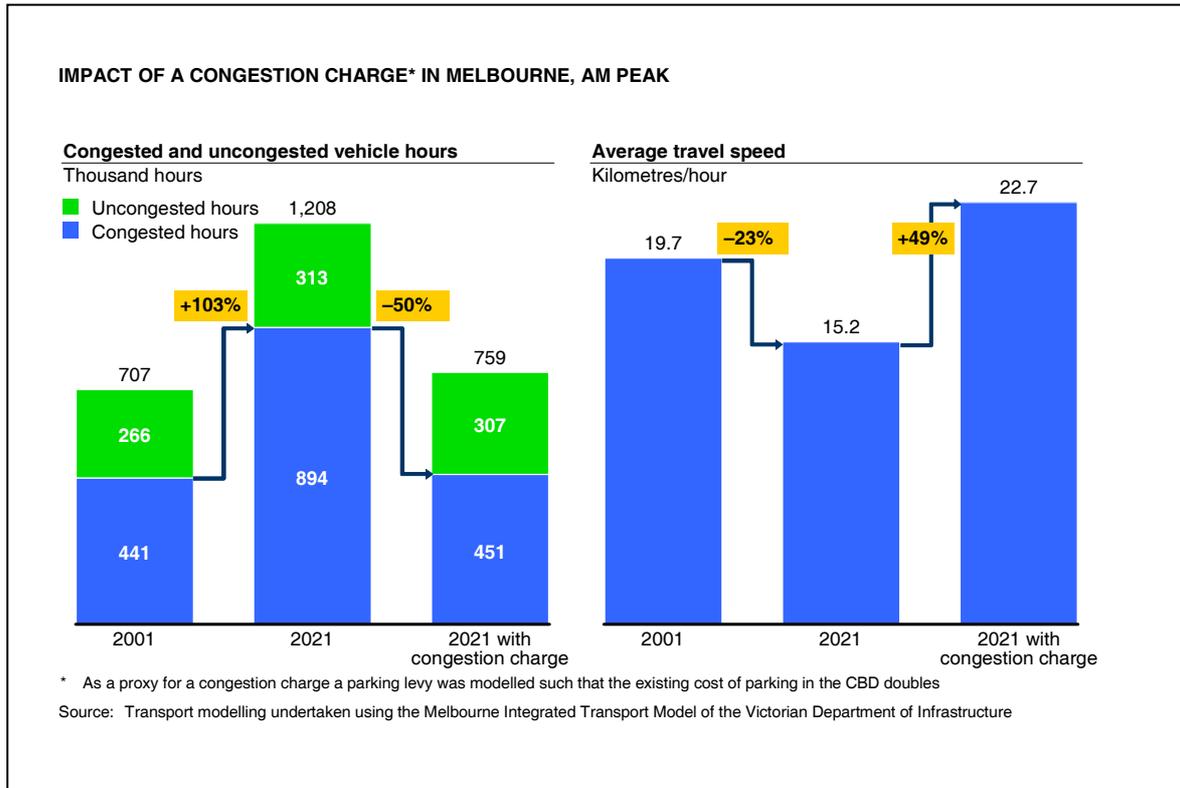


In transport, the argument is equally compelling.

While, for example, we price for some road use through tollways, we do not use price to control demand on our urban roads. Yet we are all only too aware of the morning and evening peaks when our roads are crowded. At most other times they see relatively little traffic.

Work done with the Victorian Department of Infrastructure in 2005 illustrates clearly the benefit of some form of congestion charge. Exhibit 3 shows that with a \$10 congestion charge applied to inner Melbourne traffic the congestion outcomes will vary dramatically by 2021. The level of congested vehicle hours halve, and average travel speeds increase by 50%.

Exhibit 3



The Productivity Commission recently released a report into Road and Rail Freight Infrastructure Pricing. The headline reporting of the findings were that large trucks are not being subsidised by cars, so they do not compete unfairly with rail freight; and that, to quote the Commission, "... if road changes were to rise, any shift to rail is unlikely to be large ..." because road/rail choices are made according to the different service levels offered and not on price comparisons.

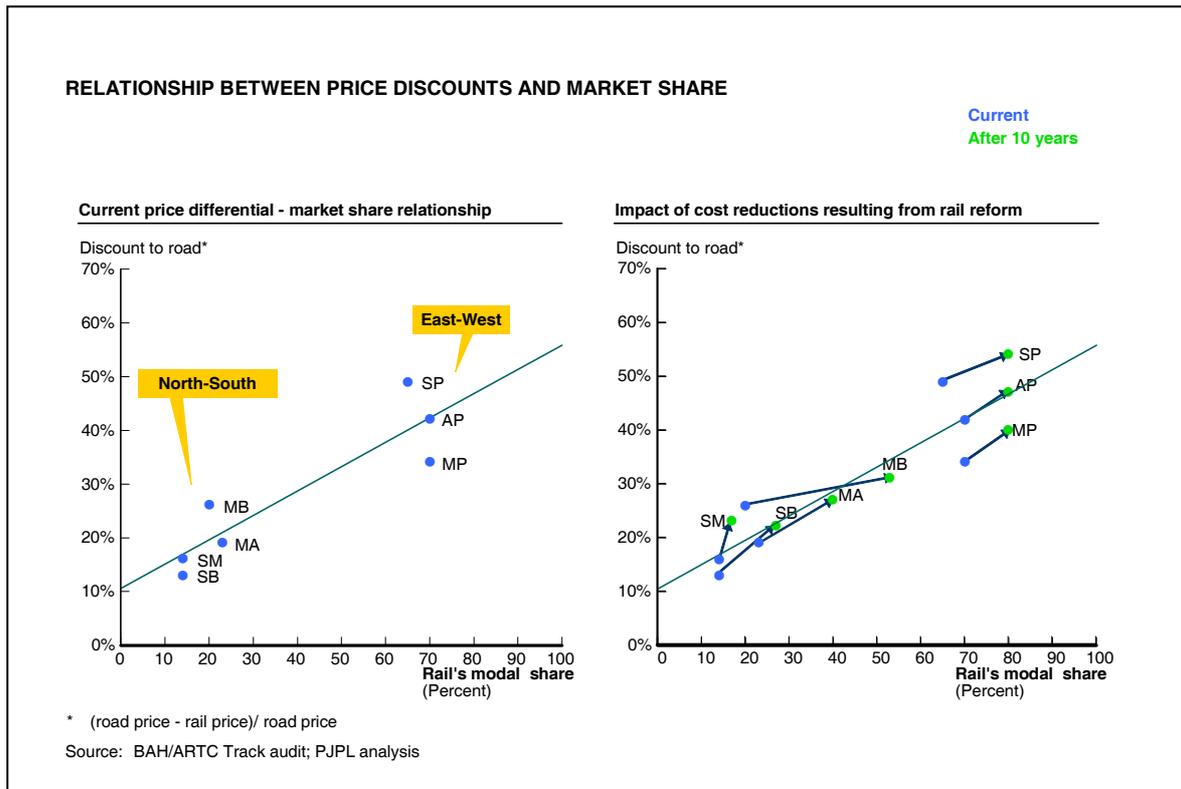
The first point to note is that the headline view of the Commission's findings that large trucks pay their way is not an accurate reflection of the Commission's views. For example:

- The Commission found that "... trucks are not being subsidised provided those otherwise paying for the network (that is, cars) pay no more when trucks also use it." That is, the Commission only considered marginal costs.
- The Commission found that ... "the NTC has adopted a conservative approach in attributing road costs to heavy vehicles ... NTC estimates are towards the lower end of the various attribution methodologies".
- And third, even within the current methodology the Commission found that "B-doubles currently do not cover the costs attributable to them ...", yet B-doubles are increasingly the main competitor to rail freight.

The most concerning finding of the Commission, however, is that relative road/rail usage will not vary with price. This is a very disappointing conclusion from such an important institution, as it reinforces the view that infrastructure pricing is not important.

The Commission's conclusions also defy some key facts. Rail has around a 70% share of freight on the east west routes, and less than 20% share on the north south routes. Yet rail's price discount to road is much larger on the former, as shown in Exhibit 4. The work of Port Jackson Partners Limited determined that modal shares could change significantly with changes in price.

Exhibit 4

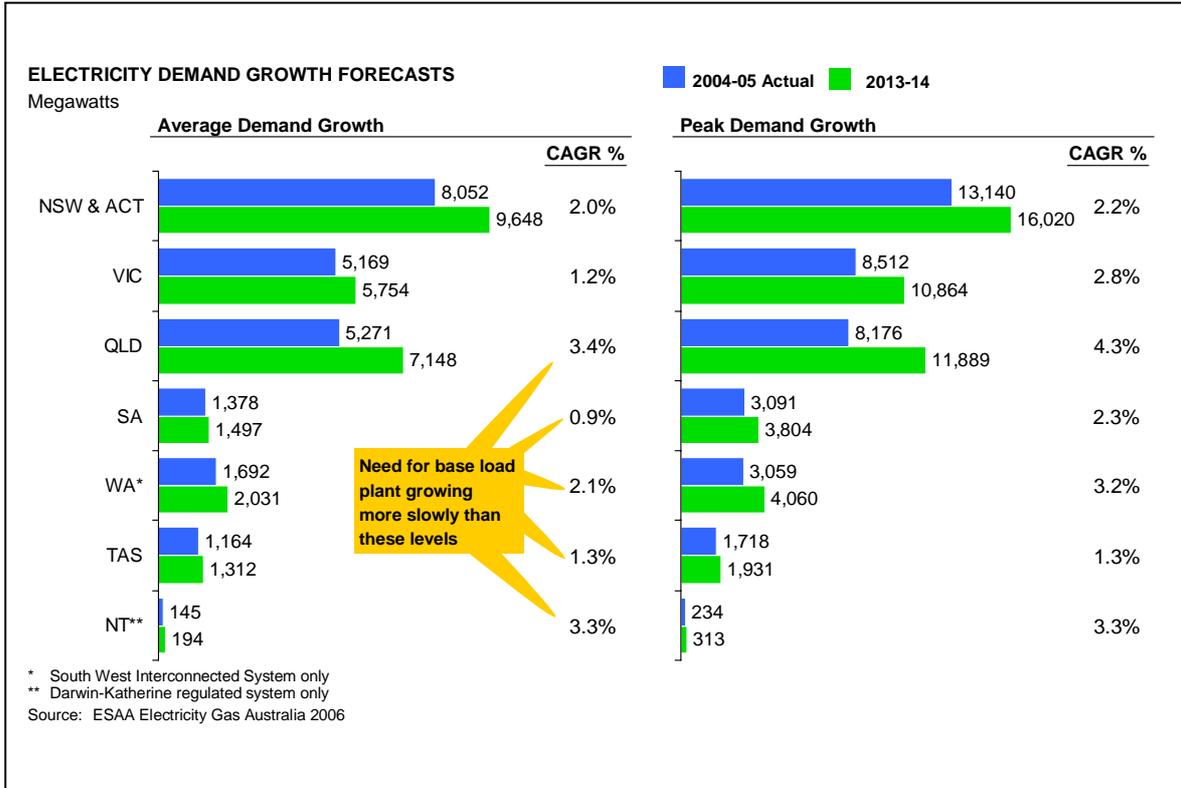


The key point of logic is that it may cost users little to accommodate a lower service level from rail. The costs of an extra day's inventory may not be significant compared to a lower overall freight price.

Perhaps the area of most concern in relation to pricing is in the energy sector.

As my report for the Business Council of Australia in March 2005 illustrated, it costs our electricity generation and distribution sector around \$3 billion to have the infrastructure in place to cater for the top 1% of demand. Yet we do not yet price to signal the cost of using power at these peak times. As can be seen in Exhibit 5 peak electricity demand is continuing to grow much faster than average demand, which means that the cost imposed by a lack of pricing for peak demand use will only continue to grow.

Exhibit 5



The February COAG Communique committed governments to addressing this issue by mandating the roll out of electricity meters that can record the time of usage. This allows retailers and distributors to price by whether usage occurs at peak times.

Perhaps the major concern with the adverse affects of infrastructure pricing comes from the electricity generation sector, and its interaction with Australia's response to greenhouse concerns. This issue is illustrated in Exhibit 6.

GREENHOUSE PERSPECTIVES	"It would be difficult to commit to a new coal-fired generation at present" NGF executive director John Boshier
Policy uncertainty	Perspective
<ul style="list-style-type: none">• SA announced plans for 60% emission reduction by 2050• VIC targeting 10% renewable energy• NSW and Qld have separate schemes• At least 4 States suggesting cap-and-trade emissions trading scheme by 2010• Commonwealth encouraging cleaner fuel technologies• Prime Minister favouring nuclear generation	<ul style="list-style-type: none">• The cheapest power source (coal at ~ \$30-35MWh) has the largest emissions and therefore the greatest risk of future greenhouse "taxes"• The more expensive fuel sources (gas at ~ \$45) will not currently get dispatched as base load in the NEM• Wind power only generates when the wind blows and so decreases the expected return from new base load generation

The essential point is that Australia's lowest cost source of electricity generation, with the greatest chance of dispatch in our National Electricity Market, faces the greatest uncertainty from potential greenhouse "taxes". Alternatively, more greenhouse friendly technologies cannot provide bulk load power because they are not currently economic.

Potentially heightening concerns are the large subsidies currently paid to install wind farms. Since wind generation occurs when the wind blows, and not in response to prices, it represents a disincentive to other fuel sources for power generation. These other sources of generation are required with or without wind generation, because the latter cannot be relied upon, but they reduce the revenue to be expected and so dampen the signals to invest in more conventionally sourced power generation.

The key point from all of the above is that it is not possible to have a sufficient and efficient provision of infrastructure unless the pricing is appropriate. Getting everything else right will not compensate.

2. Establish competitive markets wherever possible so that, among other things, there is minimum need for regulation

Another myth surrounding infrastructure is that you cannot create effective markets for infrastructure provision. Instead, it is still said, infrastructure should remain the responsibility of governments.

Views have changed over the last 15-20 years. There was a time when no-one believed we could have an effective market for electricity, or that rural water could be traded.

Much has changed, but we still have a long way to go.

The key point is that effectively working competitive markets deliver much better outcomes than those that come from political decision-making or from tight regulation.

If sectors need regulation it is difficult for it to be effective if it is “light handed”. The best outcomes, therefore, come from where we create effective markets and minimise the need for regulation. This conclusion can be illustrated by reference to examples in a number of sectors.

We have recently witnessed a public battle over Telstra’s decision whether or not to invest in a national and fast broadband network. That it chose not to invest represents a fundamental failure of policy, rather than poor decision-making by either Telstra or the ACCC. Telstra is aiming to profit maximise from its ownership of both a retail and a network business; the ACCC is trying to protect consumers.

The policy failure occurred in the late 1980s when many of us inside Government lost the battle to separate the monopoly network and retail elements of the old Telecom into separate businesses. Those MPs closest to the unions representing workers inside Telecom won, and good public policy lost.

While the states agreed to separate the monopoly network and competitive parts of their electricity sector, in telecommunications the Commonwealth chose not to adhere to a policy it would fiercely champion in sectors such as electricity that it was not responsible for.

The result is a poor telecommunications market structure and the continuing need to have regulation by the ACCC to achieve sound outcomes.

There are many barriers to trading in rural water. These range from regulated limits to the amount of trading that is allowed, exit fees imposed on trades, limits on who can buy rural water, and the restrictions that exist in the structure of local irrigation companies.

It is, however, in relation to urban water that the largest problem exists in relation to infrastructure markets in Australia today.

In essence, as the Prime Minister has said, “there needs to be a revolution in thinking in relation to urban water”. The essential change required is to replace water restrictions with a properly functioning urban water market.

Urban water supply is currently a monopoly activity, but there is no reason for this to continue. Indeed, the case for change is strong.

Past policy has seen no major new urban water supply for 20 years, despite a rising population; demand management has been the only mechanism to balance demand and supply; and pricing takes little account of the cost of new supply increments.

The current drought has not caused the underlying water shortages we are confronting in our cities. Instead, it has highlighted the issue.

The hope is that an effective urban water market will now be created. That is, that there will be an access regime to allow anyone to use the water or sewerage pipes to supply residential and industrial consumers with both potable and non potable water. Through this mechanism the many alternative sources of supply – from recycling, desalination and purchasing water from rural areas – can be tapped in the most cost effective way.

It follows that rather than have governments announce large projects that they will fund to address our urban water shortages I would prefer they announced that they were creating an effective urban water market. In such an environment we would see the private sector bring forward the most appropriate solutions in the most efficient way.

3. Involve the private sector as much as possible, subject to them taking on responsibility for well defined outcomes with clear consequences for the success or failure to meet them

While this is my most controversial principle it is, however, based on a simple premise.

This is that the private sector is best placed to achieve clear, well defined objectives; while the public sector is best placed to trade off complex, multiple objectives. Let me elaborate.

If a company is established to maximise profits, even if this is subject to achieving well defined customer service standards, then a private sector company will likely achieve a better result. The private sector can provide clear incentives and reward people accordingly. As a society we have decided that the private sector is best placed to make the food we eat, albeit it is regulated by strict food quality standards. We trust the private sector to make the cars we drive, subject to less formal regulated quality standards.

Government owned entities are prone to one of two problems. Either the management and Board think their shareholder is the people of Australia, or their

particular State, which means they effectively have no shareholder and no appropriate governance framework. Alternatively, they can have a very active government shareholder who complicates the business by continually asking it to achieve a range of changing objectives to suit the purposes of the Government of the day.

The latter case is the more usual. Functions such as policy making and settling product or environmental standards are appropriate government functions. They must meet a complex and ever changing set of objectives. It is not clear that electricity generation, water supply or even getting the trains to run on time is well suited to government ownership. These functions are likely better privately run to maximise profit against clear service standards.

As a former Chairman of the State Rail Authority in NSW my sense is that the urban passenger rail network in NSW could serve the public better in private hands. This is, of course, a difficult “call” but no matter which government is in power in my experience they will inevitably “pull” the organisation in too many directions to achieve too many objectives. Its core mandate of providing efficient transport against clear service standards will always be very difficult to achieve in public ownership no matter how good the senior management.

Some Governments, of course, will argue that they have a complex and changing array of objectives that they would like their infrastructure service providers to achieve, and that therefore Government ownership is appropriate. They need to understand that there will be costs in terms of less efficiency and a lower level of customer service from the imposition of these other objectives.

Of course, there are alternatives to full privatisation. These are often known as public private partnerships (PPPs) which generally involve private construction, maintenance and provision of finance. These PPPs are sometimes controversial.

Controversy can arise for reasons that can be illustrated by two Sydney toll road examples. The first was the Eastern Distributor build in the late 1990s. Leighton Contractors and Macquarie Bank financed and built the road in return for a concession period during which tolls could be levied to recoup their investment. The road was completed early and under budget, which generated complaints that the private consortium made too large a profit. The critics seemed to forget the history of late and over budget projects that previously occurred when governments were in charge of constructing them.

The key point is that there was a clear objective, and the private sector construction company (Leighton Contractors) had a strong incentive to achieve it: that is to complete the work early and under budget, and it did so.

The second example is the recently opened Cross City Tunnel. It was controversial due to accompanying road closures and high road tolls. The road closures made traffic congestion worse for many people not using the tunnel, and not everyone could use it given the limited tunnel access points even if they were prepared to pay.

The problem was in the contract specification, not in the concept of PPPs. It was the NSW Government that insisted on the road closures and an upfront payment which increased the road toll. In addition to gaining a new tunnel built without risk to taxpayers the Government simultaneously sought to beautify some city streets and to raise revenue.

Some may argue that in such an inner city area it was never the best approach to build a tunnel and discourage some from using it by levying a toll. From a traffic flow viewpoint this may be correct.

Not all roads will be suitable to PPPs given the traffic flow benefits of encouraging open access at all points of the planned new road.

This illustrates the point of this section. We should involve the private sector as much as possible in the provision of infrastructure, but only where it can focus on well defined outcomes, and where this focus will not cause significant problems elsewhere. Where these circumstances do not exist public sector provision should be preferred.

There is also a final point. Where the private sector takes on a clear objective for a given price and fails, it should not be rescued financially. Part of private sector infrastructure provision is to recognise that the private sector can make mistakes and that companies fail. If governments do not let them fail they put at risk the benefits that we seek to gain by involving the private sector in the first place.

When a privately owned infrastructure venture is in financial difficulty we have heard its backers insist the relevant government rescue them or face an increased “sovereign risk” to investment in their State. The truth is the reverse. A healthy investment climate requires that private under performers be allowed to fail.

4. Where regulation is then needed make it national, and soundly based

In much of the current infrastructure debate regulation and the role of regulators comes in for considerable criticism. Indeed, many argue that “heavy handed” regulation is the largest problem facing infrastructure, and that we need to move to more “light handed” regulation. In my view we need to move to better regulation, but it need not necessarily be more “light handed”.

Sound regulation is very important for appropriate infrastructure outcomes. Rather than have it necessarily “light handed” I would prefer that it be national, uniform and based on sound principles.

Our regulation infrastructure often fails to meet these requirements. This can be seen through a number of examples.

First, regulation is sometimes State-based when it should be national.

- In land transport, the National Transport Commission (NTC) proposes national uniform road regulations but States are not compelled to apply

them. Thus vehicle mass limits (how much trucks can carry) still differ between States.

- In rail we also have seven accreditation systems and seven safety regulators, and the mutual recognition of locomotive standards is still not accepted.
- In rural water we need national standards in relation to water metering and accounting, and uniform national rules on how to interpret the reliability of water that is traded.
- In urban water we should look to the national regulation of access to water infrastructure and water quality so that Australia does not end up with a fragmented urban water market as the private sector is allowed to play a larger role.

Perhaps the best example of non uniform regulation is that applying to road and rail, which are often direct competitors.

- The NTC sets road user charges based on a very different methodology to that used by the ACCC which sets rail track user charges.
- In addition, in the case of the NTC's truck charges, a majority of Ministers must agree to raise them. We have seen very recent recommendations from the NTC to reduce the under recovery of road costs from B-doubles rejected on political grounds. Train operators do not have the same ability to lobby the ACCC.

Finally, some of our infrastructure regulation could be more soundly based.

- For example, in general our regulation of all forms of infrastructure contains a bias against building ahead of the immediately observed demand. Since larger infrastructure investments can have a much lower unit cost this bias can lead to poor economic outcomes.
- Another general regulation problem is that while all regulators provide incentives for infrastructure owners to cut costs, many provide no incentives to meet standards of service.
- Turning to the more specific, the regulatory test for judging whether new electricity transmission investment is allowed pays little attention to the expected competition benefits from that investment.

In contrast to the above, if an item of infrastructure needs to be regulated given its monopoly or high degree of market power, then "light handed" regulation might not work. It is obvious, of course, why the infrastructure owners might want it. It is not, however, clear that giving in to Telstra's strident demands for deregulation would be in the public interest; or that the large price rises following the deregulation of airport charges have brought any public benefit.

5. Do not seek to pick winners

Politicians and others are often tempted to become infrastructure experts. On many occasions they cannot resist choosing one form of infrastructure delivery over another when there is little logic in the choice.

In his recent speech to CEDA the Prime Minister said that “Compared with desalination, for example, water recycling and capturing storm water have much more to recommend them as strategies for solving Australia’s urban water strategies”. He presented no logic for this statement. Sydney Water recently compared the costs of recycling with desalination and, as shown in Exhibit 7, found that recycling is much more expensive even with an allowance for greenhouse gas emission costs.

Exhibit 7

"Sydney water has undertaken studies of the costs of a 500 ML/day Indirect Potable Recycling Project (PR) and a 500 ML/day Desalination Project."

SYDNEY'S WATER COST COMPARISON OF INDIRECT POTABLE RECYCLING AND DESALINATION*

Desalination		Potable recycling	
Reverse osmosis desalination (including seawater intakes, outlets, land acquisition)	1,450	Treatment plant, movement of sewerage	1,770
Transfer, connection to water grid	350	Transfer of recycled water to Warragamba	1,320
Cost escalation, risk, capitalised interest	710	Cost escalation, risk, capitalised interest	755
Total capital cost	\$2,510m	Total capital cost	\$3,845m
Operating cost, including \$25m pa for "greenhouse gas offsets"	\$165m pa	Operating cost	\$175m pa

"The higher cost of the IPR project arises from the need to upgrade wastewater treatment to a secondary level at the coastal sewerage treatment plants ... and by the transfer of the recycled water through tunnels and pipelines for injection to the drinking water storages."

"Total annual operating costs are somewhat higher for indirect potable recycling. Although desalination has a higher treatment cost, this is more than offset by the higher infrastructure maintenance costs and pumping costs of the IPR project. The desalination project includes provision to offset fully the plant's greenhouse gas emissions."

* Indirect potable recycling and desalination - a cost comparison, Sydney Water, March 2006

A further example is the Commonwealth’s Mandatory Renewable Energy Target (MRET) Scheme. It seeks greenhouse gas reductions but only from renewable energy, which in practice means wind farms which receive up to a 150% subsidy over conventional generation. If lowering greenhouse gases were the objective we could achieve it through alternatives at lower rates of subsidy.

6. Take a federal approach to infrastructure policy

The arguments for taking a federal approach to infrastructure policy need little explanation. There are two main drivers.

First, as stated earlier, greater policy progress occurs when the States' deep knowledge is coupled with the Commonwealth's ability to stand back from the day-to-day issues and provide the impetus and "cover" for change. Changes, for example, that will face considerable resistance when proposed by one State acting alone can receive wide applause when advocated by COAG.

Second, and more fundamental, we need national markets, not State-based ones.

This is obvious when we consider rural water trading, land transport and energy, where infrastructure physically crosses State borders. While obvious, we do not have well functioning national markets in any of these areas. Even in electricity, where we have a National Energy Market, we see State-based pricing regions and competition largely intra not inter state.

What is not so obvious is that we need national markets for issues such as urban water. Section 4 has already mentioned the desirability of a national access regime for water pipes and national water standards for the benefit of what will eventually be national water suppliers.

There is much to be done to create national infrastructure markets. Only if First Ministers get behind this initiative, through COAG, will it occur. Major reform in a federal system can only occur if the Prime Minister and Premiers agree the end objectives and closely monitor the progress towards them.

* * *

Efficient and sufficient infrastructure is essential for Australia's prosperity. While this is widely accepted, infrastructure policy is often ad hoc and poorly based. It would be of great help if clear policy principles were uppermost in the minds of governments, policy makers and commentators.

31 October 2006