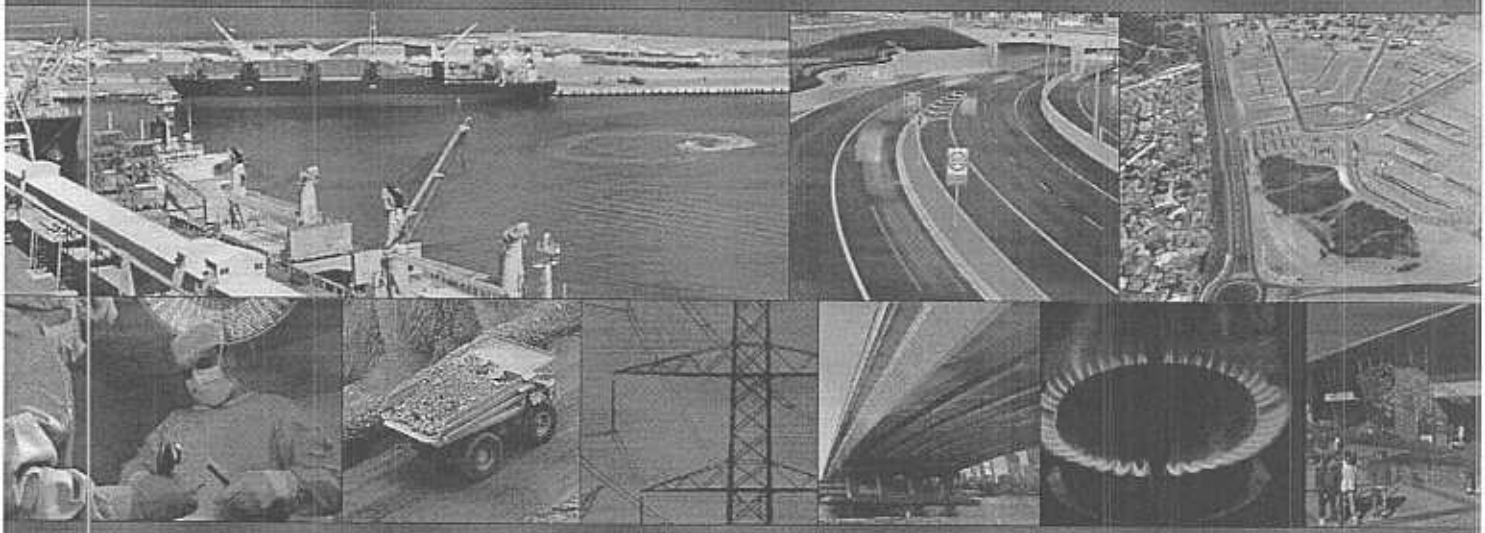
Government of Western Australia

APPENDIX



Framework for the State Infrastructure Strategy

Green Paper

September 2006

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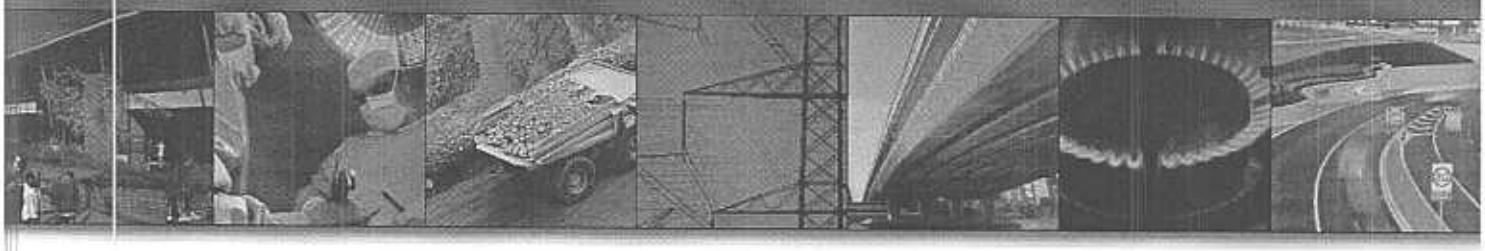
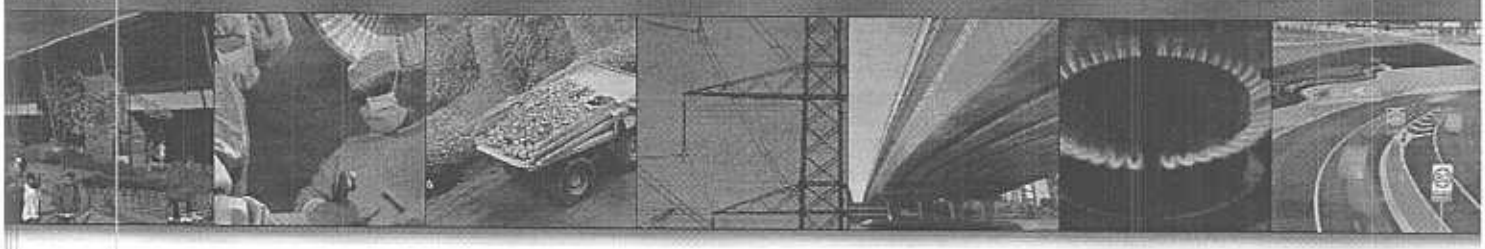


Treasurer's Foreword



Infrastructure is critical to Western Australia's continued economic success and the wellbeing of its people. Efficient transport networks, modern information and communication technology, and sustainable water and energy supplies, as well as social infrastructure such as schools and hospitals, are vital to maintain Western Australia's living standards.

Demands on infrastructure are greater than ever and will continue to grow. Public and private investment in Western Australian infrastructure over the next 20 years could be in the order of $650 billion.

The cost of building, operating and maintaining infrastructure means great care must be taken in planning and prioritising what we need. The State is encountering capacity constraints in infrastructure provision and operation that will need to be managed wisely to ensure they do not limit growth in our economy and the wellbeing of the community. Decisions made today, both good and bad, will affect generations to come.

It is essential that the State has a plan that identifies how we can deliver the infrastructure we need to lock in prosperity for future generations.

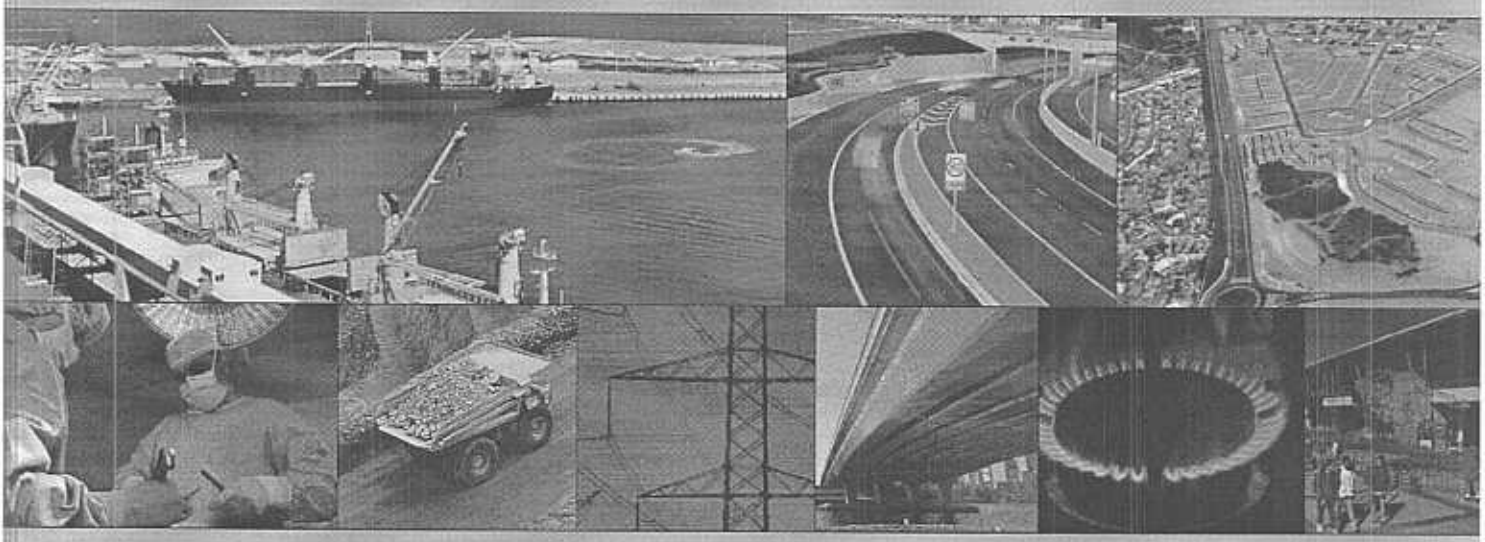
The Western Australian Government is working with the private sector and the general community to develop a State Infrastructure Strategy that will guide long-term infrastructure planning and delivery.

The Strategy will include detail on the possible timing and location of specific projects in Western Australia over the next 20 years.

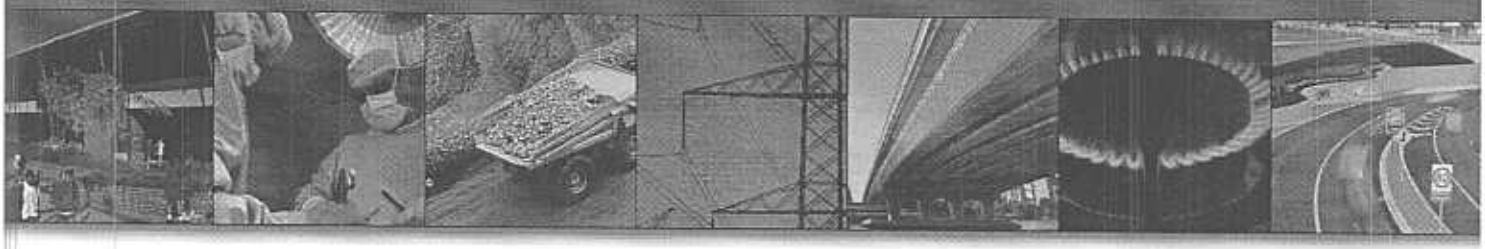
This framework document is the first step in developing the State Infrastructure Strategy. It outlines how the Strategy will be prepared and discusses policy issues related to providing infrastructure in Western Australia.

I encourage you to respond to the issues raised in the framework document by making a submission, which will be considered in developing the Strategy.

Eric Ripper
TREASURER



Executive Summary



Introduction

The demand for and cost of infrastructure per person has consistently been higher in Western Australia than in other States. This reflects the State's strong economic and population growth, its export focus and close proximity to rapidly growing Asian markets, and its large geographical area and low population density.

Demands on infrastructure will continue to grow, and the type of infrastructure required in the State will be influenced by factors such as the ageing of Western Australia's population, technological change and environmental considerations. Capacity constraints could impede the provision of infrastructure and undermine its effective operation, and will need to be managed carefully.

There needs to be a long-term view of infrastructure planning and for the public and private sectors to cooperate in providing the best infrastructure for the State.

The State Infrastructure Strategy, developed by the Western Australian Government in consultation with the private sector (through membership on the Reference Group) and the general community, will guide infrastructure planning and delivery over the next 20 years. It will contain detail on the indicative timing and location, and possibly cost and potential source of funding, of specific projects over this period.

It will help ensure that the infrastructure the State needs is provided in a timely, cost-effective way and that costs, risks and opportunities are shared fairly. It will contribute to better-informed decisions in both the public and private sectors, for the benefit of all Western Australians. It will be released next year, and updated every two years.

This framework document, developed by the State Government with input from private sector representatives and public submissions, is the first step in preparing the Strategy. It outlines processes for developing the Strategy and discusses policy and planning issues relevant to the provision of infrastructure in Western Australia.

Identifying Projects in the Strategy

The Strategy will identify projects that are significant from a State or regional perspective. Project cost is likely to be the main way of assessing significance. It is anticipated that in general, projects costing more than $20 million would be included, while a $5 million threshold would apply to regional projects. The Strategy may also include some projects that have costs under these thresholds but which have significant economic, social welfare or environmental impacts.

Government agencies already identify infrastructure opportunities over the next 10 years. To contribute to the Strategy, agencies will extend this time horizon to 20 years. Projects identified in years 11 to 20 will be generally be concepts reflecting the broad intent of the Government. The Strategy will also aim to include information on private sector and Commonwealth and local government infrastructure intentions. While information can be collected from these sources in a number of ways, there may be limitations to what can be included in the Strategy.

The strategic goals set for the State by the Government will help guide the identification of infrastructure opportunities, which will also be driven by economic, demographic, social, environmental, technological and land use planning factors. It is expected that agency and private sector infrastructure development proposals will reflect other Government strategies, ensuring that the Strategy is also consistent with them.

The State Government's Role in Infrastructure Provision

The Strategy will recognise that the Government plays a major role in providing infrastructure to meet the economic and social needs of the population. The Government must meet demands for infrastructure while ensuring the State retains its AAA credit rating.

Government does not need to provide infrastructure in cases where the private sector can provide the infrastructure society requires. It should only supply infrastructure or assist private infrastructure when sufficient public benefits compared with the cost to government will be realised.

Where the Government provides infrastructure, it should consult with stakeholders to gauge their needs and follow equitable, consistent and transparent processes to procure the infrastructure competitively.

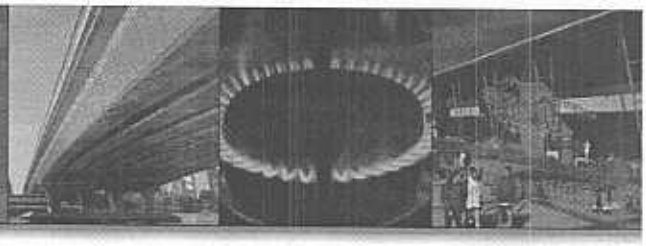
If the Government chooses to provide assistance to the private sector to facilitate infrastructure development, it should do so in the context of a clear policy framework. It should signal its willingness to provide assistance well before the infrastructure is required, and follow a competitive, unbiased, consistent and transparent process to select the proponent that will use the assistance most effectively to provide infrastructure that best meets the Government's objectives.

Where possible, this infrastructure should be provided on a common-user basis. Government assistance that results in the development of single user infrastructure should be provided only as a last resort and must accommodate the State's obligations under National Competition Policy and Australia's international treaties. The Government should ensure that a suitable access regime is in place so as not to disadvantage other potential users of the infrastructure.

It is essential that the Government ensures that timely, consultative, consistent and transparent approvals processes are followed. In addition, it is important that regulatory regimes are consistent with those in other jurisdictions and are applied fairly, transparently and in a timely manner.

The Private Sector's Role in Infrastructure Provision

The private sector is a key provider of infrastructure in Western Australia, and this role will continue. In addition, it is expected that over the next 20 years, the methods of procurement used by the public sector to meet infrastructure requirements will continue to change, with a growing role for the private sector. Examples include 'BOO' arrangements, in which the private sector builds, owns and operates infrastructure, and public private partnerships.



The Government should only enter such arrangements in cases where they clearly demonstrate value for money and the allocation of risk accords with the State's strategic risk management objectives.

Cooperation Between the Public and Private sectors

Continued dialogue between the Government and private sector on infrastructure issues is essential. Proponents can assist the Government's decision-making by providing accurate and comprehensive information on their project requirements as early as possible in feasibility study phases.

Establishment of a peak representative group from the private sector to advise the Government on infrastructure issues and policy affecting the State, as well as prioritisation of infrastructure projects, would help the Government to improve its planning and decision-making on infrastructure provision.

There is very limited scope for the Government to adjust its capital works program to 'smooth' demand for resources needed to construct infrastructure. The Government should pursue a Capital Works Program aimed at fostering the State's economic development over the longer term and vary its program only in response to specific and/or localised circumstances.

Coordinating Provision of Complementary Infrastructure

Where the Government is responsible for providing economic infrastructure to facilitate a major project, the relevant infrastructure agencies must coordinate to ensure that all of the necessary infrastructure is available before the project begins to operate. It is important that all infrastructure is planned as early as possible, so that townsite expansion, zoning, land development and providing economic and social infrastructure can occur in a coordinated manner.

The Government must ensure that it has the capacity to drive the coordinated provision of complementary infrastructure across a range of agencies.

Land for Infrastructure

To enable the State to take advantage of its opportunities to promote sustainable economic growth, enough suitable land needs to be identified and set aside for industry and infrastructure. In addition, the expected growth in Western Australia's population will require land to be set aside to meet community infrastructure needs. Land use planning needs to take into account these differing requirements, and that particular activities are incompatible with other types of activity.

The State's Management of Project Costs and Timelines

It is vital that the State Government manage its infrastructure project costs and timelines. However, strong demand for infrastructure and supply constraints are resulting in rapid cost escalation and delays in completion dates for infrastructure projects. The Government's Strategic Asset Management Framework is designed to improve capital investment across the State public sector, including better planning of procurement processes and more rigorous management of projects to reduce the scope for cost escalation and contract delays.

Professional renewal of the public sector is important to ensure that it has the capacity, expertise and motivation to identify the risks and consider the long-term impacts to the community in the planning and delivery of infrastructure projects.

Promoting Competition in Infrastructure-Related Markets

It is important that participation in infrastructure-related markets in the State is encouraged, to increase competition in the market.

Improved government procurement processes and policies can be expected to encourage greater participation in infrastructure-related markets. Providing small to medium enterprises with more information on how to discover the opportunities offered by the government market, and to compete for the work, will increase their participation and hence competitive pressure in procurement processes for infrastructure projects in the State's public sector.

In addition, deepening the construction market in Western Australia by increasing the number of firms competing for major capital works projects, as a means of improving market forces in the local construction industry, should be investigated. There are limits to the ability of the Western Australian economy to deliver the economic and social infrastructure required. Opportunities exist for joint venture arrangements, for local firms to partner with overseas players, to source expertise and materials that Western Australia is lacking.

Short-term labour shortages in the construction industry and longer-term shortages in the social infrastructure sector need to be addressed. More effective training programs and attracting more workers to Western Australia from interstate and, if need be, overseas, should be considered.

Intergovernmental Aspects of Infrastructure Provision

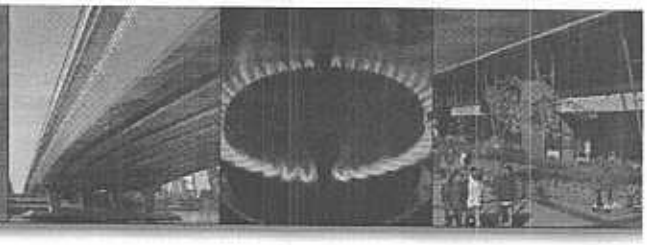
It is important that Commonwealth, State and local governments work together to meet infrastructure needs. Western Australia will continue to support the Council of Australian Governments' endeavours to better plan, coordinate and harmonise infrastructure provision and regulation across the nation.

The Commonwealth's processes for allocating infrastructure funding need to be reformed. They are not transparent and have the potential to result in inequitable outcomes that do not maximise the benefits to the nation.

The Commonwealth receives the lion's share of fiscal benefits from resource projects in Western Australia, yet compared with the State Government, the Commonwealth contributes little to the infrastructure and other costs of supporting these projects.

Western Australia should seek a more equitable share of infrastructure assistance from the Commonwealth, supported by analysis of the national welfare and economic benefits. Commonwealth infrastructure provision in areas of State responsibility should be done in accordance with an agreed plan in consultation with the State.

Also, Commonwealth funding arrangements for services and infrastructure tend to disadvantage Western Australia compared with other States, particularly in rural and remote areas. This has the potential to hinder economic development, particularly because it is more difficult for resources developers and businesses to attract and retain staff who may be reluctant to accept the lower standards of social and community services that exist in some areas of regional Western Australia.



The process for sharing the national pool of GST revenue effectively redistributes most of the net benefits from a State's economic development activities among all States. This weakens the incentive for States to put in place growth-promoting infrastructure. The method of dividing the GST pool should be reformed to remove disincentives to the provision of infrastructure that supports economic development.

Demand Management and Infrastructure Provision

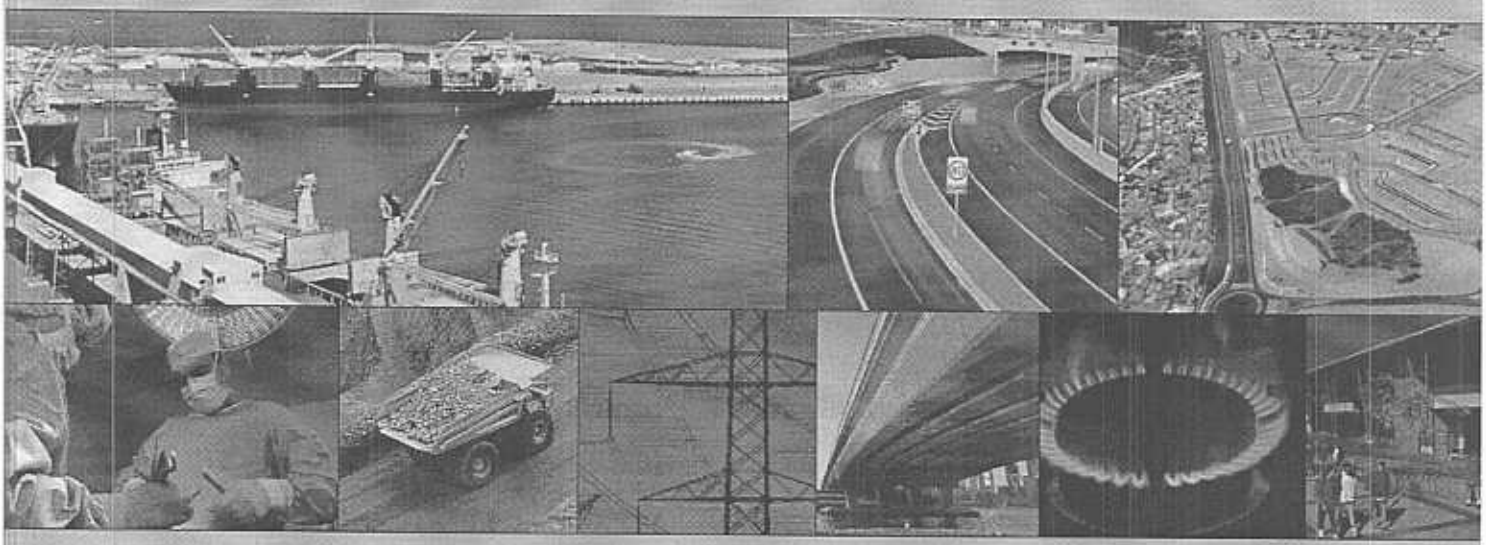
Demand management can reduce the demands on existing infrastructure and therefore the need for new infrastructure. In identifying the best solution to insufficient infrastructure capacity, demand management solutions should be considered before supply-side (new infrastructure) solutions are examined.

There is likely to be an increasing use of demand management strategies in Western Australia over the next 20 years, with appropriate price signalling being the preferred approach. The State Infrastructure Strategy should reflect this. Each proposal for demand management must be examined on a case-by-case basis to determine if its benefits are greater than its costs.

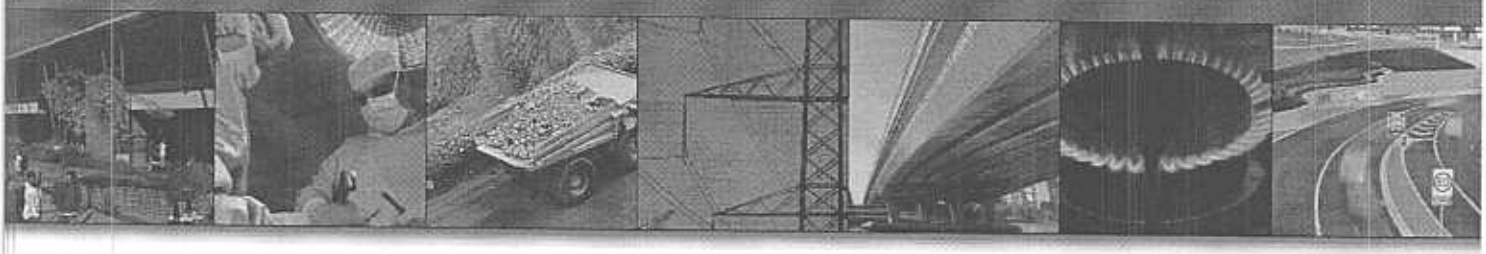
Regulation of Infrastructure

Economic regulation is necessary to protect the interests of those seeking to use infrastructure that has natural monopoly characteristics. However, regulation can create uncertainty and delays. In assessing the need for and the appropriate extent of regulation, the costs of regulation (such as potential disincentives to invest in infrastructure) must be weighed against the expected benefits (for example, benefits to access seekers and the wider community).

The State Infrastructure Strategy will reflect the assumption that regulation in Western Australia will be applied in a manner that results in efficient investment decisions, with no distortion of the timing or scope of infrastructure projects.



1. Background



1. Background

In October 2005, the then Premier, Geoff Gallop, announced that the Western Australian Government would develop a State Infrastructure Strategy to identify and prioritise the State's infrastructure needs over the next 20 years.

1.1 Terms of Reference

1.1.1 Background

To maximise economic, social and environmental benefits from the provision of infrastructure throughout Western Australia, the Government must take a strategic and long-term approach to the determination of priorities that ensure timely supply of appropriate infrastructure capacity.

Current and future needs for economic and social infrastructure must be identified and a plan for the optimal delivery of this infrastructure developed. This plan must also provide for appropriate contributions by the private sector and all tiers of government to the development of new and replacement infrastructure within the State that will support future growth.

The objectives of the State Infrastructure Strategy are to:

- engage the wider community and other tiers of government to identify existing and emerging infrastructure pressures throughout Western Australia over the next 10 to 20 years;
- bring together and articulate the infrastructure requirements and priorities of the State's public and private sectors over this period, enabling the private sector to identify investment opportunities;
- outline a plan for delivery, in the process creating a greater level of certainty about the priorities and timing of major infrastructure development that will allow better-informed decisions in both the public and private sectors;
- provide an infrastructure agenda that will facilitate engagement of the Commonwealth and local governments to meet their share of responsibility for infrastructure provision; and
- ensure proposals for future investment are affordable and based on an appropriate mix of investment of skills from both the public and private sectors.

1.1.2 Scope

For the purposes of the Strategy, 'infrastructure' is defined to include:

- economic infrastructure (eg transport and freight, energy, water and wastewater, information and communications, strategic industrial areas and land development); and
- social infrastructure (eg health, education, law, defence, cultural, sporting).

The Strategy will identify public (ie State, Commonwealth and local government) and private infrastructure priorities and opportunities over the next 20 years. In the case of State Government infrastructure priorities, this period can be broken into three components:

- a Capital Works Program over the forward estimates period (involving a reasonably high degree of certainty with respect to timing and funding);
- an indicative program of infrastructure from the end of the forward estimates period to year 10 (reflecting Government commitments but involving less certainty as to timing and funding); and
- potential intentions with respect to infrastructure planning from year 11 to year 20 (timing in generalised terms and funding left largely unspecified).

1.1.3 Considerations

The Strategy should take into account:

a) demographic trends affecting the demand for infrastructure, including:
   - overall growth of the State's population;
   - the changing age composition of the State's population; and
   - geographical shifts of population within the State;

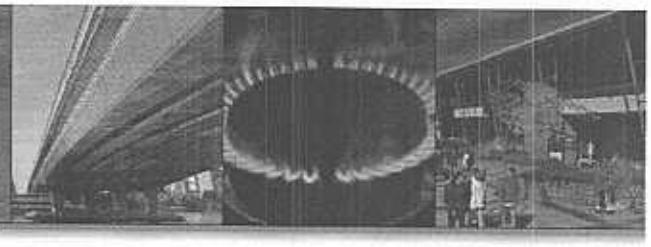
b) trends in economic activity affecting the demand for infrastructure, including:
   - overall State economic growth;
   - drivers of regional economic development (eg increasing demand from the resources sector); and
   - economic threats and opportunities;

c) various infrastructure plans currently being prepared by State Government agencies (including the Public Transport Plan and the Freight Transport Plan);

d) the need for the Strategy to interact consistently and seamlessly with the State Government's:
   - capital budgeting process;
   - Strategic Asset Management Framework; and
   - policy governing the procurement of public infrastructure (eg Partnerships for Growth);

e) processes for identifying and prioritising material infrastructure projects (including highlighting hurdles to provision [such as issues of land access] that require resolution);

f) strategies to improve the coordination of infrastructure planning and construction across the State, including:
   - collaboration between agencies and levels of government on the management, use and co-location of infrastructure assets;
   - cooperation between the State, Commonwealth and local governments on the best mix of funding from different tiers of government for infrastructure financed through public investment (reflecting the benefits they will receive as a consequence of infrastructure provision); and
   - partnerships between infrastructure providers (particularly between those in the public and private sectors);



g) strategies to promote investment in infrastructure that is timely, efficient and innovative, including:
   - using demand management, where this is a more cost-effective option;
   - designing adaptable and multi-purpose facilities for shared use, and promoting shared and multiple use of existing infrastructure assets, where appropriate;
   - exploring options for redevelopment and alternative uses of existing infrastructure assets;
   - applying advances in technology that offer innovative infrastructure solutions; and
   - making use of the full range of funding options (including private financing);

h) strategies to deal with competing demand for the skills and resources needed to construct and operate infrastructure (including the need to factor realistic escalation of building costs into the Strategy);

i) strategies to enhance participation by construction and engineering consortia in Western Australia, to help control cost escalation and bring greater certainty to construction timelines;

j) strategies developed for cooperation between the public and private sectors to source and procure key material and equipment in times of rapid expansion and economic growth;

k) administrative, practical and legal constraints to the sharing of information between jurisdictions and the private sector, and processes for effective information sharing;

l) how the information in the Strategy should be conveyed most usefully to stakeholders; and

m) processes for revising and renewing the Strategy periodically.

1.2 The Process

When the State Infrastructure Strategy was announced, invitations were issued for:

- interested parties to express their interest in joining the Reference Group (Appendix 5.1) to oversee the development of the Strategy; and
- interested groups to make public submissions to the Strategy.

In addition, a Working Group (Appendix 5.2) made up of representatives from relevant State Government agencies was established to draft this framework document.

70 submissions, covering a range of issues, were received from individuals and groups. The submissions can be viewed at: http://www.stateinfrastructurestrategy.wa.gov.au

This paper reflects the work of the Working Group, overseen by the Reference Group, and the submissions received from the public. It discusses:

- processes for developing and updating the Strategy, such as collecting information on and prioritising infrastructure projects; and
- policies and issues relevant to providing infrastructure in Western Australia.

This framework document, or Green Paper, is open to public comment and submissions received will be considered in developing the Strategy, which will be released as a White Paper. Many of the submissions already received are relevant to the Strategy and will be considered as it is developed.

The White Paper will have more detail on the indicative timing and location, and possibly cost and potential source of funding, of specific projects over the next 20 years, to make it easier for the public and private sector to plan and allocate resources.

It is intended that the Strategy will address each sector (including electricity, gas, water supply, wastewater treatment, transport, information and communication technology, health, education, justice, culture, sport and defence) individually, and deal with the State as a whole, as well as individual regions.

A number of potential scenarios will be considered during the Strategy's development, with the aim of producing a Strategy that has the flexibility to respond to circumstances that may arise in the future.

Public submissions on this framework document, as well as any further information relevant to the Strategy, are sought until 15 December 2006. The State Infrastructure Strategy White Paper will be released in 2007.

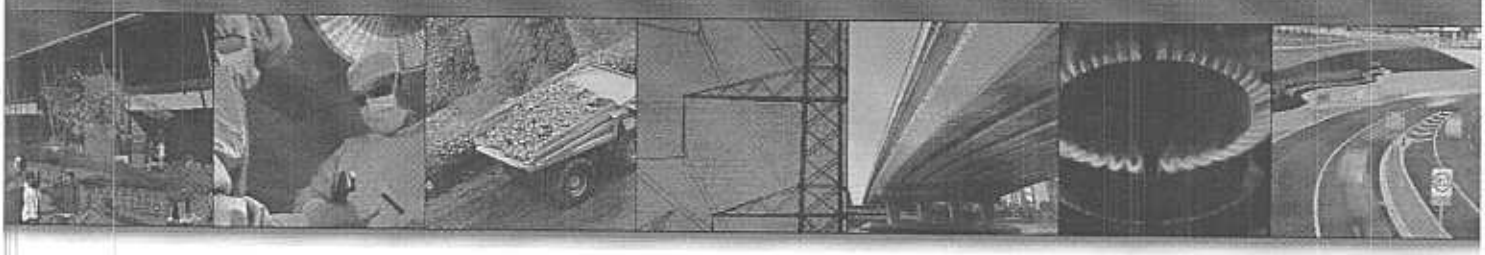
Updated versions of the Strategy will be released to ensure its ongoing relevance to Western Australia's circumstances.

Submissions can be forwarded to:

State Infrastructure Strategy
Level 10
Department of Treasury and Finance
Governor Stirling Tower
197 St Georges Terrace
PERTH WA 6000

or by email to: stateinfrastructurestrategy@dtf.wa.gov.au

2. Economic, Demographic and Fiscal Context



Per head of population, the demand for and cost of infrastructure in Western Australia has consistently been higher than in other Australian States[1] for a number of reasons, including:

- its relatively rapid economic growth and the importance of capital intensive resource investment to that growth profile;
- population growth of 1.4 per cent per year over the last five years – 0.2 percentage points higher than the national average and well ahead of most other developed countries;
- its growing trade opportunities arising from an abundance of natural resources and close proximity to rapidly growing Asian markets, which demand expanded infrastructure; and
- its large geographical area and low population density, which means that the cost of building and maintaining infrastructure is high, and shared among relatively few customers or taxpayers.

Many major projects, especially in the resources sector, are in remote areas where basic economic infrastructure such as roads or railways, and social infrastructure such as schools and health services, are lacking. Even where infrastructure exists to support local population centres, it must often be enhanced to meet the extra demands of new industries and their employees. Transport and construction costs also tend to be high in regional and remote Western Australia.

The State's economy has other features that affect its investment climate including:

- the role of multinational companies as major investment project proponents. Decisions on the construction, financing and operation of these projects may be made in other cities by people who are not fully aware of the advantages and challenges of investing here.

  Perth, however, is also the national, regional and, in some cases, the global base for an increasing number of multinational mining and energy companies, such as Alcoa World Alumina and Woodside. In the information and communications technology industry, other examples of multinationals that have invested in research and development facilities in the State include IBM and Motorola. This provides a growing base of local knowledge and technical expertise that makes Western Australia a prominent business centre for the resources and other sectors; and

- traditionally, a large proportion of economic and some social infrastructure has been provided by the private sector. However, sometimes the State has an important role in coordinating and planning for 'greenfield' developments, facilitating approvals processes, and, in some cases, providing basic infrastructure, especially common user infrastructure that can be shared between several businesses, and which the private sector may be unable to provide for itself.

1 Capital expenditure (which is a proxy for infrastructure expenditure) as a share of Gross State Product is also high in Western Australia when compared with most other States.

The Western Australian Government's ability to fund capital spending on infrastructure is, of course, constrained by the need for responsible management of the State's finances.

2.1 Industrial Development and Economic Growth

Western Australia's Gross State Product (GSP) was valued at $100.9 billion in 2004-05, making it the fourth-largest State economy in Australia. The State accounts for 11.3 per cent of Australia's Gross Domestic Product (GDP) but just 9.9 per cent of its population, and Western Australia's GSP per person of $50,584 is 14.7 per cent higher than the Australian average.

The Western Australian economy has grown by an average of 4.1 per cent a year in real terms over the past five years, significantly faster than the 3.0 per cent annual average growth recorded Australia wide.

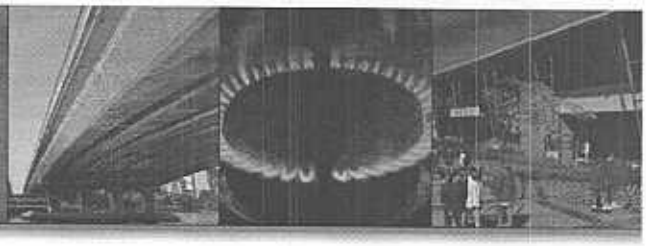
Output and Employment by Industry – 2004-05

	Western Australia						Australia			
	Employment			Value of Output			Employment		Value of Output	
	Number ('000)	Share of WA (%)	Share of Aust. (%)	Output ($Million)	Share of WA (%)	Share of Aust. (%)	Number ('000)	Share (%)	Output ($Million)	Share (%)
Agriculture, forestry and fishing	48	4.7	13.1	4,163	4.5	16	366.1	3.7	26,000	3.3
Mining	42.1	4.2	39.6	19,652	21.4	45.9	106.4	1.1	42,834	5.4
Manufacturing	96.6	9.5	8.9	8,575	9.3	8.7	1,086.30	11.1	98,311	12.4
Construction	92.1	9.1	11	6,433	7	11.8	837.3	8.5	54,410	6.9
Wholesale and retail trade	199.3	19.7	10.3	8,795	9.6	9.7	1,929.60	19.7	91,086	11.5
Transport and storage	42.6	4.2	9.4	4,204	4.6	12.3	454.5	4.6	34,212	4.3
Finance, property & business services	145.8	14.4	9.8	13,568	14.8	8.5	1,488.10	15.2	160,429	20.3
Health and community services	98.7	9.7	9.9	5,193	5.7	10.3	996	10.2	50,201	6.4
Tourism services	111.2	11	9.6	3,932	4.3	8.7	1,152.50	11.8	45,19	5.7
Other services	137.5	13.6	9.9	17,362	18.9	9.3	1,383.20	14.1	187,691	23.7
TOTAL	1,013.90	100	10.3	91,877	100	11.6	9,800.00	100	790,368	100

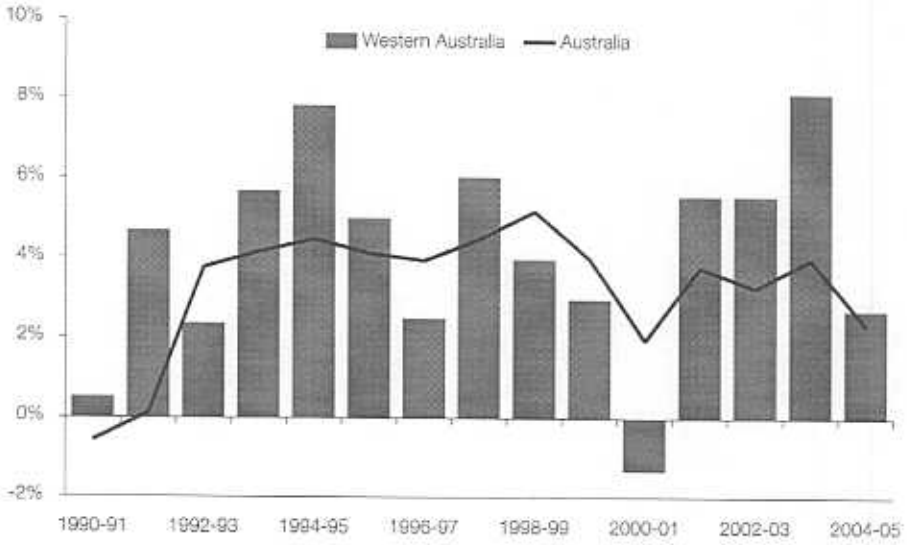
Source: ABS Cat. 5220.0 Australian National Accounts: State Accounts 2004-05

Strong growth will continue in the near term, with the Western Australian Government's 2006-07 Budget predicting that GSP will grow by 4.75 per cent in 2005-06 and by 5.25 cent in 2006-07. Beyond this, the outlook for the State's economy is still broadly positive, with GSP growth forecast to ease to 3.75 per cent in 2007-08 before strengthening to 4.5 per cent growth in each of the 2008-09 and 2009-10 financial years.[2]

2 These projections are based on long-term average growth rates.



Growth in Real GDP/GSP
Annual % Change



Source: ABS Cat 5220.0

Western Australia covers 2.5 million square kilometres – about a third of Australia's land mass – and includes some of the country's richest mining and agricultural areas.

Mining is Western Australia's largest single industry, accounting for more than 20 per cent of the State's GSP, compared to 5.4 per cent of Australia's GDP.

In the past five years the mining sector accounted for 55 per cent of corporate investment in Western Australia, and 79 per cent of exports.

Strong growth in global demand for commodities (notably from China) and 30 year highs in commodity prices[3] have fuelled rapid growth in both exports and investment.

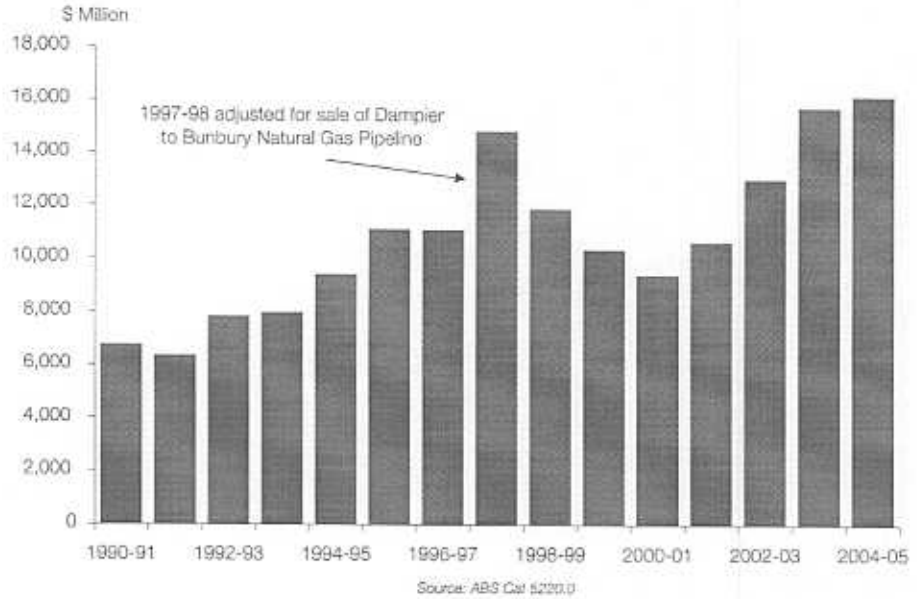
The State's merchandise exports were worth $45.4 billion in the year to March 2006. Western Australia is Australia's largest exporting State, and accounts for more than 30 per cent of national merchandise exports, up from 26 per cent five years ago.

Business investment has grown rapidly over the past five years and is currently at record levels. Over the past five years, in real terms business investment has grown by 56 per cent in Western Australia to stand at $16.3 billion for 2004-05. In recent years, investment has been supported by major projects such as the North West Shelf Project's fourth LNG train expansion and the West Angelas and Mining Area C iron ore mine developments.

Major mining projects currently under construction include BHP Billiton's $2.6 billion Ravensthorpe nickel project, a $2 billion further expansion of the North West Shelf LNG project (including a fifth LNG train) and Hancock Prospecting's $1.3 billion Hope Downs iron ore project.

3 The State's Commodity Price index increased by more than 100% in the four years to December 2005.

WA Business Investment
$ Million, Chain Volume, 2003-04 Prices

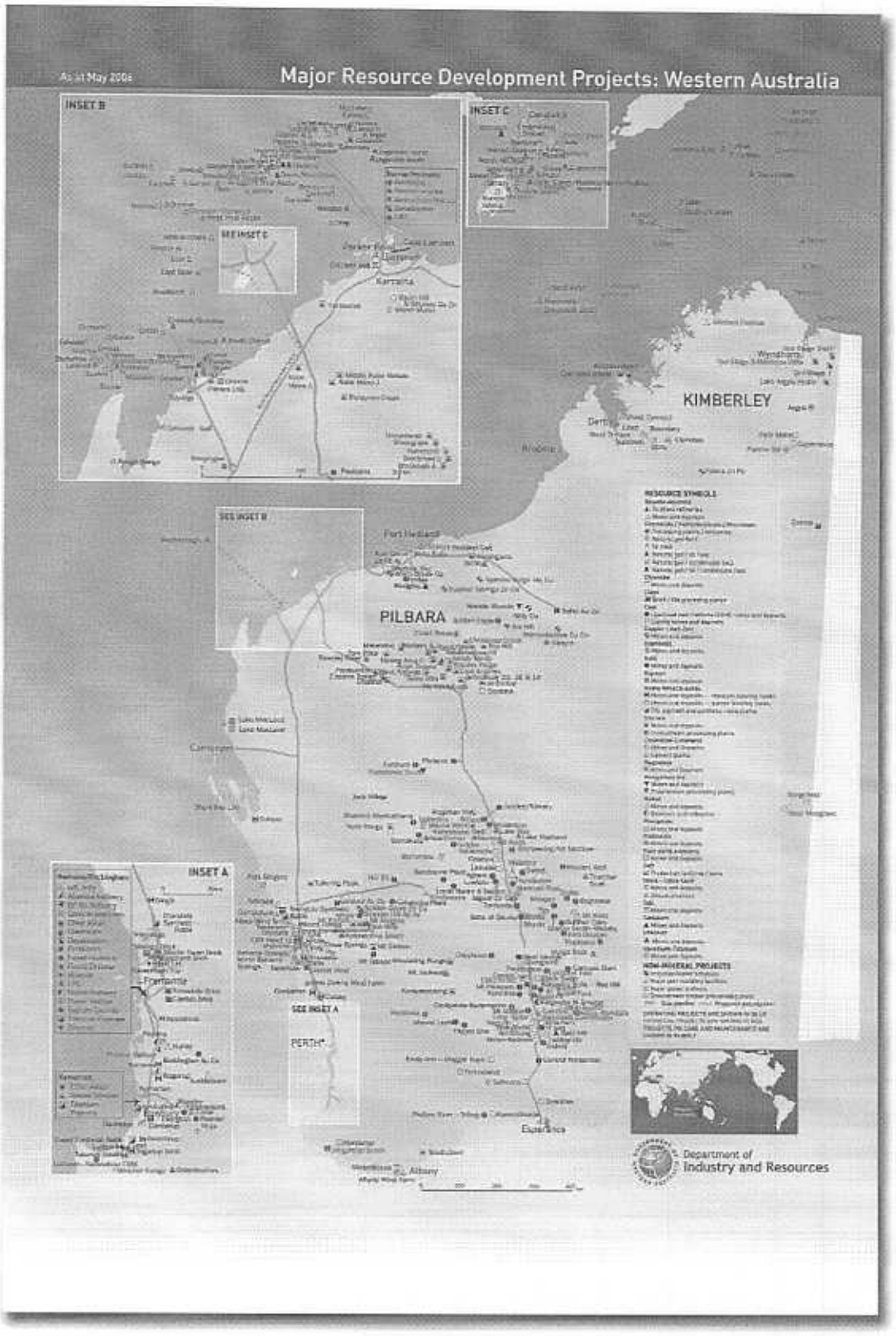


More than 90 per cent of the value of mining production is generated in the State's less populated regions (see map). Mining is highly capital intensive, so although the sector[4] accounts for around one fifth of the State's output, it provides direct employment for just 4 per cent of the State's workforce. The sector does, of course, provide indirect employment for many others.

Western Australia has considerable comparative advantages in resource production and benefits from its proximity to the rapidly growing economies of South and East Asia. However, resource industries are very competitive globally. Efficient and well-planned infrastructure development, especially in the less-populated and more remote regions, is, therefore, crucial to minimise any loss of export competitiveness arising from the relatively high cost of providing and maintaining infrastructure in the State.

While government has a key role in planning and coordinating infrastructure provision, it need not necessarily be the supplier. Most major industrial infrastructure investment, such as that made to support the large projects that characterise Western Australia's resources sector, is typically made by and for the private sector. This is appropriate because the project proponents and their customers capture most of the benefits from these projects. There is no need for any level of government to be a direct supplier of economic infrastructure for most projects of this type, even if the infrastructure is of a type that might elsewhere be a government responsibility (eg roads, ports or railways).

4 The mining sector includes businesses engaged mainly in mineral extraction and exploration and the provision of mining-related services, but not businesses engaged in the refining or smelting of minerals or ores (other than the preliminary smelting of gold), or in the manufacture of such products of mineral origin as coke or cement. The commodities produced by the mining sector involve the minimum amount of processing to produce a marketable product.


As at May 2006
Major Resource Development Projects: Western Australia
INSET B
INSET C
SEE INSET C
SEE INSET B
SEE INSET A
KIMBERLEY
PILBARA
Fremantle
PERTH
Esperance
Albany
RESOURCE SYMBOLS
Department of
Industry and Resources

Over the past decade, investment by State and local governments[5] in Western Australia has typically accounted for between 15 per cent and 20 per cent of total public and private sector investment. Both private and public investment have grown strongly – in the past three years, private sector capital investment in Western Australia has increased by a total of 52.1 per cent, while government investment has risen by 44.2 per cent.

Infrastructure provision has received increasing attention in national public policy debate. A perception that infrastructure bottlenecks may account for Australia's poor export record, despite strong world demand and prices for its exports in the past three years, led the Commonwealth Government to set up a taskforce to examine this issue in March 2005.[6]

Western Australia does not currently appear to face the same potentially critical economic infrastructure constraints as Australia's eastern States.[7] However, if the State is to continue benefiting from favourable global markets for its main exports, and to provide the base for improvements in the broader economy and social services, it must ensure that the appropriate level and balance of private and public infrastructure is provided.

2.2 Demography

2.2.1 Population Growth

Western Australia's relatively high population growth rate is a product of its strong natural rate of population growth, its traditional intake of a relatively large proportion of overseas migrants and, more recently, positive net interstate migration as people move to the State in response to the high demand for labour.

The State's population is currently projected to grow from 2.0 million people in 2005 to 2.7 million by 2026. If current trends continue, Perth's share of the State's population is expected to remain at around its current level of 73 per cent in 2026.

A rapidly growing and relatively young population[8] yields economic benefits in the form of a growing demand base and higher labour supply – Western Australia's labour force participation rate is well above the national average[9] – but also adds to demand for both economic and social infrastructure. If the State's population growth were to slow, this would obviously slow growth in demand for infrastructure.

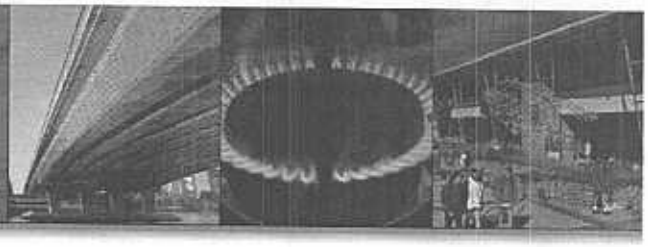
5 Disaggregated State Accounts data for the State Government are not published by the ABS.

6 http://www.infrastructure.gov.au/pdf/Report.pdf *'Australia's Export Infrastructure, Report to the Prime Minister by the Exports and Infrastructure Taskforce'*

7 See: "Australia's Resource Exports – Recent Trends and Prospects," Statement on Monetary Policy, Reserve Bank of Australia, February 2005. Also, proponents of major resource-related projects in Western Australia are typically vertically integrated – they often build and operate their own infrastructure, as it is required. This provides for a greater degree of control, as opposed to shared infrastructure (for example, the constraints faced by Dalrymple Bay on the east coast are said to typify such problems).

8 "Western Australia Tomorrow" Population Report Number 6 (population projections), Western Australian Planning Commission. It should be noted that these population projections should be used with caution – they are based on a certain set of assumptions, and so by their nature they cannot take into account unprecedented events such as wars, global economic shifts, natural disasters and the like.

9 Over the year to February 2006, the State's participation rate averaged 67.9%, compared to the national average of 64.5%.



2.2.2 Ageing Population

Western Australia's population profile is ageing, as are the populations of other Australian states and most western countries, and this needs to be factored into infrastructure provision. Pressure on the health and aged care system, including the provision of residential care facilities, is mounting, and related policies are likely to become a priority. For example, an ageing population could see a shift away from the need for schools relative to the provision of health, aged care and transport infrastructure.

Such a shift would also involve an increase in demand for employees with the relevant skills at the same time as the available workforce was diminishing due to older persons exiting the labour market.

State-wide, those aged over 65 are projected to rise from 11.5 per cent of the population in 2004 to around 17.0 per cent of the population in 2025, and 18.5 per cent by 2031.

The median age of the population is currently increasing the fastest in the South-West, Great Southern and Gascoyne regions, and most slowly in the Kimberley, Goldfields-Esperance and metropolitan regions. In 2021, population projections[10] show that the Peel region is expected to remain the region with the highest median age (43) while the Great Southern Region, whose population profile is ageing faster, will be the second oldest with a median age of 42. The median age in the Kimberley region is anticipated to remain low, increasing from 28 in 2004 to 29 in 2021. The metropolitan region had the fifth youngest population of the State's nine regions in 2004 (median age of 35), but will have the fourth youngest by 2021 (median age of 37).

Socio-demographic trends also affect infrastructure demand. For example, the trend towards marrying and having children later, and the increasing propensity for single dwelling households, are factors that appear likely to continue. Also, as an increasing proportion of the adult population moves into retirement, the shrinking taxation base could limit the ability of governments to invest in infrastructure.

2.2.3 Geographical Population Distribution

The proportion of the population living in the metropolitan area compared to the regions has stabilised, but there are ongoing substantial shifts within the State, especially from inland areas towards the coast. 'Sea-change'-type population shifts within the State have already put stress on some regions' infrastructure (eg Mandurah, Margaret River and other coastal towns) while other regions, including some wheat-belt communities, suffer depopulation, which may result in infrastructure assets being under-utilised (although these will still play a key role in contributing to the State's economy).

Population projections by region show that the metropolitan, South West, Peel and Kimberley regions are expected to be the fastest growing over the next 20 years.

10 "Western Australia Tomorrow" Population Report Number 6 (population projections), Western Australian Planning Commission. It should be noted that these population projections should be used with caution – they are based on a certain set of assumptions, and so by their nature they cannot take into account unprecedented events such as wars, global economic shifts, natural disasters and the like.

2.2.4 Population Density

Western Australia's population density is less than a third of the national average and Australia's population density is among the lowest in the world. The cost of providing infrastructure in an area with a more dispersed population is much higher than in densely settled areas. A dispersed population ultimately results in diseconomies of scale in the provision of services, resulting in higher costs of communications, water, wastewater, energy, freight and roads.

A large and sparsely populated State means that costs associated with the provision of infrastructure such as roads and energy are especially large on a per capita or average basis. Construction costs for such infrastructure are also magnified by the lack of labour and the relative remoteness of sparsely populated areas. As a result, there is often a disincentive for private sector investment in these regions and the Government is required to step in and provide infrastructure.

2.2.5 Indigenous Population

Most indigenous populations are concentrated in the north of the State, where the cost of infrastructure provision is high compared with the more populous South West. The remote location of many indigenous communities accentuates this cost impact, and their comparatively small scale can lead to high unit costs for essential infrastructure and its ongoing operation and maintenance.

The high indigenous population growth rate[11] is likely to imply a greater requirement for further infrastructure for indigenous communities over time, particularly in regional areas. In addition, the need to address adverse social outcomes for the indigenous population (particularly in relation to housing, health and education) will magnify this demand for additional infrastructure.

2.3 Fiscal Constraints

The Western Australian Government adheres strongly to a policy of retaining its AAA credit rating. To ensure retention of this rating, it has committed to two financial targets:

- maintain a net debt[12] to revenue ratio for the total non-financial public sector[13] at or below 47 per cent; and
- ensure that real per capita own purpose expenses for the general government sector[14] do not increase.

The first target places a constraint on the amount of money that the Western Australian public sector can borrow to finance capital spending, potentially limiting the size of the Government's capital works program.

The second target limits the ability of the Government to incur operating, maintenance and depreciation expenses flowing from capital spending in the general government sector. These constraints have implications for the extent to which the Government can meet the demand for infrastructure in the State.

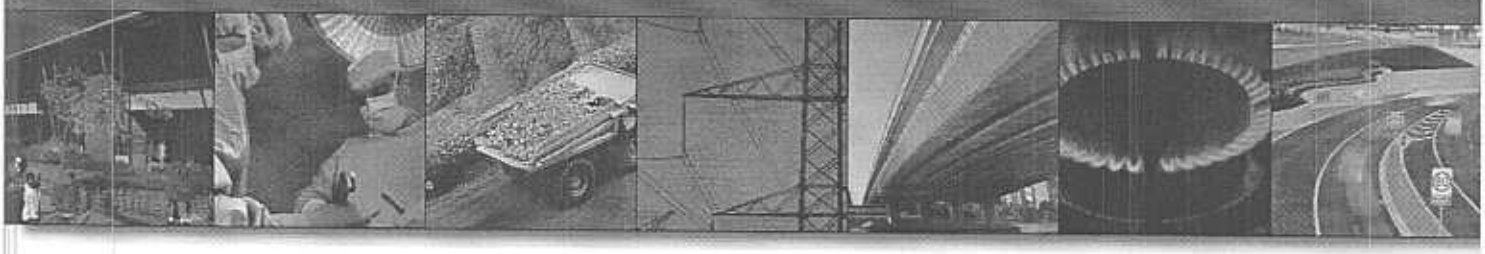
11 Relative to that for the State's population as a whole – also see *Western Australia Tomorrow* Population Report Number 6 (population projections), Western Australian Planning Commission.

12 Net debt is defined as gross debt (including finance leases, loans and debt securities and derivatives in a net liability position and excluding accounts payable and prepayments) less cash, deposits and lending.

13 The total non-financial public sector is the total public sector less public financial corporations.

14 The general government sector comprises those agencies that are funded predominantly from central revenue such as taxes, royalties and grants from the Federal Government.

3. Parameters and Process Issues



3.1 Which Projects the Strategy will Identify

The effectiveness of the Strategy in identifying public sector and private sector projects relies on it being a practical, easy to use document with a manageable amount of quality information.

Projects will be tested for identification in the Strategy on the basis of 'significance' or 'materiality' from a State or regional perspective. Such tests will have a major bearing on the size and comprehensiveness of the Strategy and might include:

- financial impact. From a public sector perspective, a dollar spent on the project cannot be spent on another project. Satisfying one need or demand may mean sacrificing or delaying fulfilment of other demands;
- economic development impact. High cost projects generally have a significant economic impact. However, less costly projects may play a key role in facilitating economic development and, as a result, may have a high strategic significance relative to their cost;
- social welfare impact. This is especially relevant for regional communities where social infrastructure projects that are relatively small from a whole-of-State perspective may be critical to the sustainability of such communities; and
- environmental impact. Projects of various sizes might be considered significant using this measure. Large infrastructure projects can have a greater environmental impact than small projects, but the siting of a comparatively minor infrastructure project in a sensitive location could have major environmental consequences.

If the Strategy is to hold quality information and remain easy to use, the tests of significance are critical. Tests that are too strict may lead to too few projects being identified, especially in regional Western Australia where small population bases often require low-scale infrastructure projects. Tests that are too lax may result in relatively minor infrastructure projects, such as those already in the State's 'rolling capital program'[15], being identified, making the Strategy less user-friendly.

3.1.1 Whole-of-State Tests of Significance

At a whole-of-State level, a balance needs to be found between the availability of information and the cost of making this information available.

15 The State's 'rolling capital program' includes minor refurbishments of and extensions to the State's asset base, which are carried out on an ongoing basis from year to year.

Ideally, tests should be quantitative, to help reduce subjectivity in determining which projects should be included in the Strategy. However, there may be circumstances where qualitative assessment of a project's significance is warranted.

Project Cost Threshold

Material from other States and Territories provides little guidance on cost thresholds:

- the *South East Queensland Infrastructure Plan and Program 2005-2026*, which covers only the most populous region of that State, identified projects with a value as low as $2 million; and
- New South Wales' *State Infrastructure Strategic Plan 2002* identified individual infrastructure projects that have a value in excess of $20 million. *State Infrastructure Strategy New South Wales 2006-07 to 2015-16* identifies projects with a value in excess of $2 million, but costs are provided only for projects in the State's Forward Estimates.

The threshold in the Queensland document and the most recent New South Wales document seem to be too low for the purposes of the Western Australian Strategy.

A threshold of $20 million would ensure the Strategy captures large and strategically significant infrastructure projects over the 20-year horizon without them being obscured by a large number of smaller projects.

Projects valued under $20 million would be captured in other ways. Projects expected to start in the next four years would be in the State budget's Forward Estimates, providing sufficient notice to the business sector. Beyond this period, the expected timing of smaller projects is difficult to forecast with any precision. The lead times for such projects is often relatively short, so little would be gained in planning terms by including them in the Strategy.

To capture the collective contribution of smaller projects to demand for infrastructure-related materials and services, the State's rolling capital program could be aggregated in terms of value and these aggregations included in the Strategy.

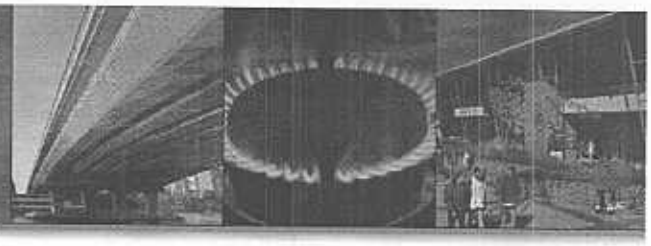
Proposals for minor public sector projects would, and should, still be considered in the course of the annual State budget process.

Economic Impact Threshold

Tests of significance focusing on economic impact could take the form of:

- a minimum expected contribution to gross State product. A project's economic contribution would take account of the direct and indirect economic impacts of the project, including some estimate of the economic activity facilitated by the project;
- a minimum expected net contribution to total employment within the State, including direct and indirect employment outcomes; and/or
- a minimum net present value.

Each test requires complex and costly economic assessments. There will also be greater uncertainty around assessments of projects on longer time lines, making them less useful.



In the short term, it is unlikely to be cost-effective to assess all projects against an economic impact threshold. A less costly approach for the purpose of the inaugural Strategy would be to:

- regard project cost as a crude proxy for economic impact and rely on cost threshold comparisons. Smaller projects would require more detailed analysis to demonstrate a material economic impact; and
- develop principles of assessment with a mixture of quantitative and qualitative criteria for projects with costs lower than the threshold, to assess the likely impact on Western Australia's economic development.

The sophistication and cost-effectiveness of the assessment principles could be refined over time so they could be used to assess the significance to the State's economy of all infrastructure projects.

Social Welfare Threshold

Calculating the value of social welfare benefits of an infrastructure project in dollar terms is highly complex and resource intensive and may not be effective as a test in the short term.

Instead, the project's cost could be used as a crude proxy for the size of improvement in social welfare it generates, with principles developed to assess the effects on social welfare of projects below the cost threshold.

Environmental Impact Threshold

A quantitative assessment of the expected environmental impact of an infrastructure project is likely to be very difficult, as different types of infrastructure affect the environment in different ways and with varying degrees of severity.

The simplest approach would be to use project cost as a rough substitute for environmental impact (assuming high cost relates to high environmental impact) and then develop principles to examine any project with a value under the cost threshold to determine if its expected environmental impact (or potential impact) is sufficiently great to merit it being in the Strategy.

Comprehensive Thresholds in the Longer Term

In the longer term, a 'triple bottom line' approach to thresholds is desirable. A project's economic, social and environmental significance should be assessed against a comprehensive threshold of significance to determine the project's merit for inclusion in the Strategy.

3.1.2 Regional Tests of Significance

If the Strategy is to include information important to the regions, a $20 million cost threshold is likely to be too high. Rather than lower the threshold for all projects, a $5 million threshold could apply to infrastructure projects in the regions.

Projects below the $5 million cost threshold could be reviewed to see if they were judged to be material from an economic, social welfare or environmental impact perspective (see Section 3.1.1).

The tendency towards higher project costs in remote areas would mean that smaller-sized projects in remote regions could be included in the Strategy. For example, a project in the Peel Region costing $3 million might not be included in the Strategy (unless judged to be material from an economic, social and/or environmental impact perspective), but a project of comparable size in the Kimberley might cost more than $5 million and be eligible for inclusion as a result.

It is important that regional stakeholders be involved in the development and application of the methodology for assessing the significance of infrastructure projects in the regions.

3.1.3 Threshold Escalation

The Strategy will be updated regularly over a number of years. To maintain its usefulness, cost thresholds should increase in line with movements in project costs.

3.2 How Infrastructure Opportunities will be Identified

Infrastructure opportunities identified in the Strategy represent infrastructure that is likely to be required by the State in the future.

As the State's economy and population grow, new infrastructure will need to be provided to satisfy increased demand. Existing infrastructure reaching the end of its useful life may need to be replaced. All infrastructure will need to be maintained properly, consistent with the Western Australian Government's Strategic Asset Management (SAM) Framework.

In some cases, infrastructure opportunities may be driven by other factors. For example:

- defence infrastructure may need to be provided in response to changing strategic assessments of external threats;
- infrastructure solutions may be required to address the increasing salinity of arable land and the consequences of climate change for water supply; or
- technological advancement and breakthroughs, particularly in the information and communication technology industry, may increase demand for infrastructure.

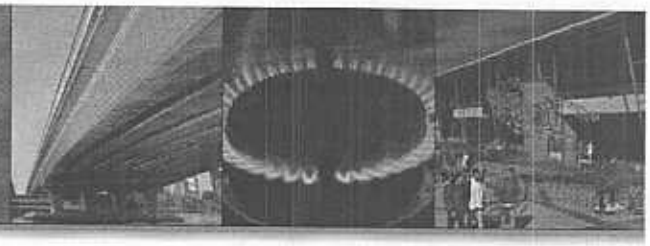
3.2.1 Context

The strategic goals set for the State by the Government[16] will help guide the identification of infrastructure opportunities.

Key aspects of these goals include:

- maintaining or enhancing Western Australia's international competitiveness and boosting local employment;
- ensuring, as far as possible, that the price of infrastructure services in Western Australia's regions has a neutral impact on the location decisions of residents and businesses in these areas. Lifestyle may be an important factor in the decision to live in regional Western Australia, but employment opportunities are likely to remain the strongest factor influencing peoples' choice to remain in the regions or to move there;

16 Department of the Premier and Cabinet, *Better Planning: Better Services – A Strategic Planning Framework for the Western Australian Public Sector*, November 2003



- ensuring infrastructure provided by the public and private sectors meets the current and future socio-economic needs of the State, while further enhancing the community's quality of life and protecting the environment;
- ensuring economic and social infrastructure is provided by the public and private sectors in an efficient, equitable, and timely manner;
- ensuring appropriate economic and social infrastructure is provided to support the State's economic growth based on its comparative advantages (eg in agriculture and mining), diversification around its strengths (eg tourism, forestry and resource processing), and new opportunities (such as biotechnology);
- providing confidence to businesses that the State's infrastructure and policy framework will support the production and distribution to market of (new) products;
- providing confidence to individuals that regional centres have the appropriate social infrastructure to meet their needs and those of their families;
- planning urban and regional development in a way that facilitates the logical and economical provision of infrastructure, while also promoting the efficient use of existing infrastructure; and
- protecting strategic industrial areas, infrastructure corridors and facilities from incompatible development. Land must be set aside for future infrastructure assets.

3.2.2 Process

As part of the SAM Framework, Government agencies already identify infrastructure opportunities in their 10-year Capital Investment Plans (CIPs) for internal planning purposes. These opportunities are largely conceptual and do not necessarily have State Government budget approval.

The Strategy's 20-year horizon will require agencies to extend their CIPs for a further 10 years, which will require them to use demographic and economic projections over longer timeframes to identify potential infrastructure opportunities. Infrastructure projects identified in years 11 to 20 will, in most cases, be little more than concepts reflecting the broad intent of the Government. Agencies should not attempt to be precise in identifying these highly conceptual projects.

In developing their CIPs over longer timeframes, agencies should use the population projections published by the Western Australian Planning Commission (WAPC).[17]

It is also expected that agencies' and private sector infrastructure development proposals will reflect State Government strategies. Examples include the Western Australian State Sustainability Strategy, Network City, the State Water Strategy, Strategic Asset Management, Contaminated Sites Management and the State Communications Policy. The State Infrastructure Strategy will reflect State strategies because it will comprise both public and private sector infrastructure projects that take these strategies into account.

17 WAPC, *Western Australia Tomorrow: Population Report No.6*, November 2005

It is proposed that agencies employ a Proposal Form to identify infrastructure opportunities over the period of the Strategy. This form summarises how infrastructure opportunities are identified by agencies in the development of their CIPs and the information will help prioritise opportunities as set out in Section 3.3.

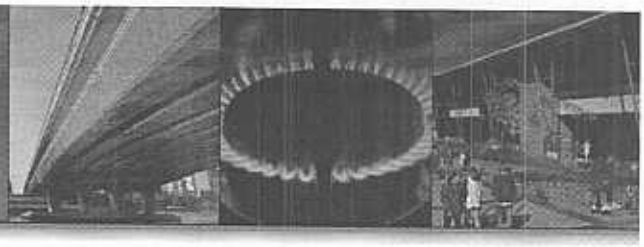
Consistent with the SAM Framework, the form should include the following information for each infrastructure opportunity:

- the name of the infrastructure opportunity and the responsible agency;
- the regional area and geographical location of the infrastructure opportunity;
- a description of the opportunity and a brief summary of its qualitative benefits;
- policy gaps (issues, aside from funding, that would need to be addressed by the Government if the opportunity were to be pursued) and the impact of not addressing these;
- an indicative capital cost of pursuing the opportunity, expressed in current dollars, and potential funding sources. Uncertainty surrounding indicative costs will increase over the course of the Strategy's timeframe. While it may not be possible to estimate costs for projects in the more distant future, even 'ballpark' estimates can indicate the scale of a project;
- the indicative recurrent financial impact flowing from the capital cost of pursuing the opportunity, expressed in current dollars, and potential funding sources;
- indicative commencement and completion dates for the construction phase, if the opportunity is to be pursued;
- linkages with and dependence upon other opportunities and Government policies;
- the importance of pursuing the opportunity (ie is it necessary for compliance with legislative or contractual requirements, or Government policy commitments?);
- the economic, social and environmental benefits of pursing the opportunity;
- the likelihood of achieving the opportunity; and
- the opportunity's potential for integration. It is possible that infrastructure opportunities that are considered unfeasible by an individual agency may be regarded as feasible when assessed against broader State goals.

The provision of comprehensive and timely information by the private sector will help facilitate better scoping of infrastructure projects and faster approvals by Government agencies, and also alert the Government to implications for public sector infrastructure that may flow from private sector decisions. Helpful information includes the likely timelines for private sector project development and its potential impact on population in the area targeted for development. This information may be available through existing approvals processes or private firms could provide information directly to the Strategy through submissions to the Reference Group and the agency or agencies responsible for updating the Strategy in the future. Surveys could also be used to obtain this information.

It is recognised that private firms may be reluctant to provide commercially sensitive information to the Strategy so there may be gaps in the Strategy, especially in the medium to long term.

The Strategy will also endeavour to include information on Commonwealth and local government infrastructure projects in Western Australia, so surveys of their infrastructure intentions over the 20-year period of the Strategy may be required to supplement information sourced from relevant budget documents.



3.3 Prioritising Public Sector Infrastructure Projects

The Capital Investment Prioritisation methodology used by the Department of Treasury and Finance (DTF) to assess capital works proposals during the Budget process could be used to prioritise State public sector infrastructure provision over the 20-year period of the Strategy.

3.3.1 Prioritisation Methodology

The methodology has been designed as a structured, systematic, across-the-board method that is readily understandable, relevant and timely to improve the quality of information available for the development of the Government's Capital Works Program. It is aimed at better informing decisions, ensuring technical, social, economic, environmental and political factors are taken into account effectively, and is designed to allow prioritisation across all portfolios on a whole-of-Government basis.

The methodology is being applied successfully, although there is scope for ongoing improvement in its application.

It is essential that a set of criteria that makes possible valid comparisons is used to assess potential capital works projects. The criteria against which all projects should be assessed are:

- the perceived *importance* of the program or project;
- the demonstrated *benefits* that will flow from the program or project; and
- the likely *achievability* of the program or project.

A set of guidelines has been established to help determine the different levels of **importance**, **benefits**, and **achievability** for individual projects. The use of these guidelines ensures a consistent rating approach in the budget process. While all criteria maintain an equal weighting and projects are rated against each of them, the criteria themselves are prioritised, with consideration given in the order of importance, benefits and then achievability, to rank projects that receive equal ratings overall.

Each program or project is rated qualitatively against each of the criteria using 'high', 'medium' and 'low' measures. To ensure consistency across all ratings, a set of rules has been developed to help define a 'high', 'medium' or 'low' rating.

The rules take into account:

- criticality
- immediacy
- certainty
- evidence
- magnitude
- strategic objectives
- strength of links to Government objectives
- sustainable capacity/capability
- delivery versus expectations
- financial return
- significance of the achievement
- leverage
- value for money

Importance

The 'importance' aspect indicates the criticality and/or urgency of the project to the Government. When rating the importance of projects, factors to be taken into account include commitments made by the Government; the perceived criticality or urgency of the program or project; the consequences of not doing anything; statutory requirements; and public expectations.

Issues considered when assessing a project against this criterion include:

i) Government commitments, including public awareness, timing constraints and significance; and

ii) the consequences of not proceeding with the program/project, including economic implications, environmental implications, political implications, statutory requirements, criticality and urgency.

Benefits

Benefits are the contribution made by a project to the achievement of Government outcomes.

The Government's key goals[18] relate to people and communities; the economy; the environment; the regions; and governance. The rating of benefits is determined by the extent to which a project is considered to contribute to the achievement of these goals. A project need not contribute to all of the goals. A single rating is allocated that captures the major benefit to which a project contributes.

Achievability

This criterion indicates an agency's ability to deliver the desired project. Its scope covers the complexity of the project, implied risks and potential for cost/scope creep.

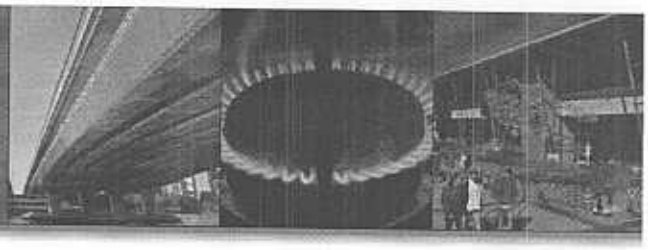
Issues considered when assessing the achievability of a program/project include:

- reliability of the estimates
- potential for 'cost/scope creep'
- capacity to deliver the project
- finance
- expertise
- materials
- equipment
- time
- complexity
- community support/opposition
- track record of agency for delivery
- Native Title and planning issues
- approval processes
- land issues
- disruption to public and commerce
- inter-jurisdictional issues
- Governmental support/opposition
- coordination with other projects/agencies

Sorting Projects by Priority

All projects are rated against all criteria, with consistency of rating maintained as much as possible across the whole-of Government portfolio, and then ranked.

18 Department of the Premier and Cabinet, *Better Planning: Better Services – A Strategic Planning Framework for the Western Australian Public Sector*, November 2003



Only after the projects have been ranked or grouped will the budgetary impact of the projects be considered, noting that financial impact is taken into consideration within the benefits and achievability criteria. The relative order of projects shows the priority that the Government should follow in allocating its limited funds.

Final recommendations on priorities that can be accommodated within the State budget are made to the Expenditure Review Committee (ERC) of Cabinet.

3.3.2 Implications

This prioritisation process has now been applied over the course of three State budgets. Feedback from senior Government officials is that the process is a substantial improvement over previous arrangements and has increased the level of confidence in the quality of analysis of capital projects within the Government.

A similar methodology could be used to prioritise State public sector infrastructure projects in the 16-year period beyond the Forward Estimates for the purpose of the Strategy, recognising that there may be information limitations.

The Reference Group will play a key role in the prioritisation process with input on the desired timing of projects. In future years, when the Strategy is updated, it would be desirable for an independent group of stakeholders to play a similar role.

The methodology will need to be the subject of continuous improvement to enhance the assessment of projects from a quantitative perspective.

3.4 Updating the Strategy

The Strategy is both an information document and a planning tool. Its relevance will diminish as outcomes diverge from forecasts. The timing of economic cycles, emergence of new technologies, shifts in population settlement patterns and changes in Government priorities – all of which influence infrastructure provision in Western Australia – are difficult to predict. The Strategy should be updated regularly to reflect the State's changing investment opportunities and associated infrastructure priorities.

To achieve this, there should be two update cycles for the Strategy:

- a biennial update including revised project lists; and
- a five-yearly comprehensive review.

3.4.1 Biennial Updates

The Strategy should be updated every two years to provide a summary of:

- any new or changed Government priorities, strategies, policies or plans that relate to infrastructure, its funding and provision;
- the latest infrastructure demand indicators and outlooks. Building on economic forecasts, the infrastructure outlook should indicate demand trends and projections; and

- updated project priorities in each of the four-, 10- and 20-year components:
  - Capital Works Program (updated annually through the State budget process): ideally all demand-driven infrastructure projects[19] in the four-year forward estimates for the Capital Works Program should have previously been identified in the 10- and 20-year outlooks. Updates to the Program will also include projects in response to unanticipated demand and policy decisions by the Government;
  - 10-Year Indicative Program – each year there should be greater certainty about the timing and cost of projects in the Indicative Program. In addition, some projects will transfer to the Capital Works Program and new projects will be added that, ideally, have previously been identified in the 20-year outlook; and
  - 20-Year Potential Intentions – projects in this category are the most uncertain, however there may be newly identified infrastructure needs that should be added.

Responsibility for updating the Strategy should lie with a central agency, such as the DTF, which already compiles a capital investment plan (an aggregate of all agencies' CIPs over the next 10 years) for the State. To facilitate these updates, agencies will also need to update their 20-year CIPs biennially.

An independent group of stakeholders should be convened for each update, to provide oversight of the process and contribute to the prioritisation of infrastructure projects in the Strategy.

The updates could be produced as a Budget Paper. This timing would coincide with the release of a new Capital Works Program and be an appropriate point to review the Government's major infrastructure priorities and projects.

3.4.2 Five-Yearly Reviews

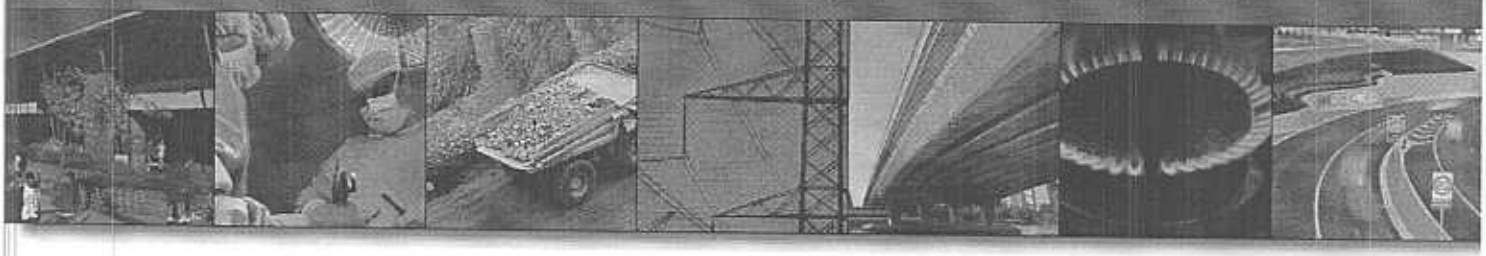
The Strategy should be comprehensively reviewed every five years. This would incorporate the biennial updates as well as a detailed examination of the context, process and policy issues that underpin the Strategy.

This five-yearly review of the Strategy should coincide with the infrastructure reports that Western Australia is required to provide to the Council of Australian Governments (COAG). The first of these five-yearly reports is due on 31 January 2007 and will provide "a strategic overview of existing infrastructure, a pragmatic outlook for infrastructure demand and a forward-looking strategic assessment of future needs".[20]

Given the close relationship of the Strategy with the State's budget processes, the five-yearly reviews should be directed by the Treasurer, overseen by a reference group of industry and Government representatives, and undertaken by the DTF. The WAPC's Infrastructure Coordinating Committee (ICC) could assist by coordinating the State's input to this review.

19 Demand-driven infrastructure projects are based on projections of population and economic growth.
20 COAG Communiqué, February 2006, p8

4. Policy Issues



4.1 The State Government's Role in Infrastructure Provision

The amount and/or quality of infrastructure that society deems optimal is not always provided by the market, and the government sector plays a major role in providing infrastructure to meet the economic and social needs of the population.

The market may not provide optimal amounts of infrastructure for reasons including:

- competition failure – where a firm has a relatively large share of the market and therefore has excessive market power. In these cases firms tend to restrict supply in order to extract monopoly profits, so there may be under-investment in infrastructure;
- information failures – where consumers and/or suppliers in a market do not have accurate or adequate information about factors such as prices, product quality, industry capability or potential demand to make effective and efficient decisions. This may lead to over- or under-consumption of goods and services whose production requires infrastructure, which may lead to the over- or under-supply of infrastructure;
- positive and negative externalities – these are costs or benefits of a market transaction that are borne by third parties not directly involved in the transaction. As a result, they are not reflected in prices. Society is often the third party. An example of a positive externality might be increased economic activity that was an indirect outcome of the provision of infrastructure.[21] That means society would prefer more infrastructure to be provided than might be possible through market transactions alone. A negative externality could be pollution, with market transactions resulting in more pollution than society considers acceptable;
- structural failure – if there is uncertainty regarding the existence of property rights or their distribution, then there may be no incentive for resources to be allocated efficiently to their highest value use (an example could be the provision of water rights);
- incomplete markets – where desirable goods and services are under-provided by the market (an example could be the absence of insurance for certain types of risk); and
- public good infrastructure – where an individual cannot be excluded from benefiting from the good and their consumption of the good does not reduce the amount of the good able to be consumed by others. Firms have no incentive to produce public goods because they cannot transact with consumers of these goods. National defence and law, order and public safety are good examples of public goods.

21 Positive externalities in the form of a flow-on economic activity are a key reason why governments provide infrastructure to attract private investment. This investment attraction may be for strategic purposes, such as to build upon natural strengths or to develop clusters of similar industries.

If a government decides to intervene in an infrastructure market, it can do so by taking direct responsibility for the provision of the infrastructure; subsidising a private provider to reduce its costs of provision and, hence, the prices it charges; or subsidising consumers, enabling them to pay the prices sought by the provider. For infrastructure supporting public goods, a government can take direct responsibility for its provision, although it may enter into arrangements where the private sector provides the infrastructure on its behalf, and finance some or all of the infrastructure from tax revenues.

Historically, the Western Australian Government has been responsible for providing a very large proportion of the State's infrastructure. It has done so because the market has been incapable of playing a significant role in infrastructure provision, for the reasons outlined above. While it is likely that the future will see an increase in the proportion of the State's infrastructure provided by the market as its capacity expands, the Government can be expected to continue to provide a significant share of infrastructure in the State. However, it will have a growing range of options available to it for procuring infrastructure and some of these will involve the private sector to varying extents. The remainder of this section needs to be read in that context.

4.1.1 Procurement of Infrastructure

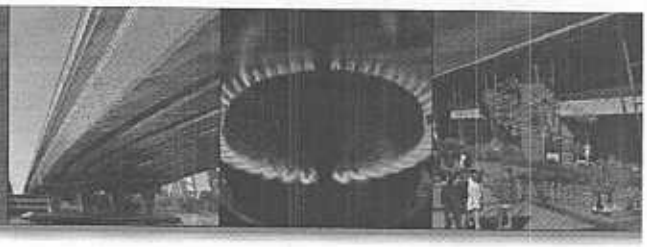
Where the Western Australian Government elects to take direct responsibility for the provision of infrastructure, it should consult with stakeholders, including prospective users, to gauge their needs and follow equitable, consistent and transparent processes to procure the infrastructure competitively. Users will know at an early stage in the procurement process about the infrastructure services that will be provided by the Government and the indicative prices that will be charged for these services, enabling them to plan accordingly. The procurement process should also result in outcomes that deliver value for money for the Government.

Where the Government elects to provide assistance to the private sector to facilitate infrastructure development, it should:

- do so in the context of a clear and widely disseminated policy framework;
- signal its willingness to provide assistance well before the infrastructure is required, so that all potential proponents are aware of the possibility of assistance and can take it into account in their planning. This also indicates the Government's willingness to be 'business ready', making the State more attractive to potential investors; and
- follow a competitive, unbiased, consistent and transparent process to select the proponent that will employ the assistance offered by the Government most effectively to provide infrastructure that best meets the Government's objectives.

Where the market can provide the optimum amount of infrastructure from society's perspective, there is no need for a government to intervene in the market, either by providing infrastructure itself or through assisting private infrastructure developers.

The Western Australian Government should not supply infrastructure or assist private infrastructure if insufficient public benefits will be realised when compared over the medium to long-term with the cost to the Government of infrastructure supply or providing assistance to the private sector. 'Public benefits' include the additional economic, social and environmental benefits realised over the life of the infrastructure.



4.1.2 Impact of Infrastructure on Policy Objectives

Regardless of whether infrastructure is provided by the public or private sectors, a government will seek to ensure that the infrastructure conforms to its economic, social and environmental policy objectives. Areas of focus include planning, environmental protection, native title, service standards, and public health and safety.

Regulating infrastructure that has natural monopoly characteristics (with a view to promoting competition) is also necessary to encourage efficient investment in infrastructure.

It is therefore essential that the Western Australian Government ensures:

- timely, consultative, consistent and transparent approvals processes are followed; and
- economic and technical regulatory regimes are consistent with those in other jurisdictions and are applied fairly, reliably, transparently and in a timely manner.

If the Western Australian Government elects to provide the infrastructure directly, then economic benefits are likely to be optimised if the infrastructure is provided on a common-user basis. This reduces the risk of the infrastructure being left stranded if a sole user no longer requires the services it provides, and also enhances the opportunity for cost recovery.

If the Government decides to assist a private firm to provide the infrastructure, it should ensure the firm provides a suitable access regime so as not to discourage other potential users of the infrastructure. This will increase the potential effectiveness of the Government's assistance, in terms of encouraging economic development.

Government assistance that results in the development of single user infrastructure should be provided only as a last resort, as it is the riskiest option in terms of optimising ongoing economic benefits. In addition, the State's competition policy and Australia's international treaty obligations must be accommodated under this approach.

4.2 The Private Sector's Role in the Provision of Infrastructure

Up until a few years ago, almost all common-user economic infrastructure and most social infrastructure was owned by the public sector. However, changing economic conditions and Government policy have increased the scope for private sector involvement in the provision of infrastructure.

Examples of privately built, owned and operated economic infrastructure in Western Australia include the Goldfields Gas Pipeline and Alinta's soon-to-be-commissioned gas-fired power station(s), which are being developed in response to the introduction of a wholesale electricity market in the State. Although not owned initially by a private sector entity, the Dampier-to-Bunbury Natural Gas Pipeline and Alinta's gas distribution system are now owned and operated privately. The Perth Airport also is operated privately.

Private sector investment in social infrastructure currently tends to be typified by private hospitals and non-government schools. However, the private sector also can build and operate entertainment complexes (for example, the Burswood Entertainment Complex, which includes a conventions and events centre and a theatre).

Public sector infrastructure in Western Australia that has been built, or has been built and operated, by the private sector includes the Peel and Joondalup Hospitals, Acacia Prison and the Fremantle Courts Complex. The private sector is playing a major role in the CBD courts project, which is currently under way.

It is expected that over the next 20 years, new ways of procuring infrastructure will evolve. There is likely to be a growing role for the private sector under some of these new approaches to procurement:

- in some cases the private sector may build, own and operate economic infrastructure. The scope for private sector involvement in the provision of this type of infrastructure has increased as markets for essential services (for example gas and electricity) have been deregulated, and this is likely to continue. Where such privately owned infrastructure exhibits natural monopoly characteristics, it will need to be subject to economic regulation;
- there may be circumstances where the State Government engages the private sector to build, own and operate infrastructure that will at some time be transferred to the public sector; and
- public private partnerships (PPPs) may be employed, under which public infrastructure and ancillary services are procured through a joint arrangement between the public and private sectors.

In addition, the private sector will be able to contribute to the provision of infrastructure through longstanding practices such as:

- property developers providing economic infrastructure and community facilities in new residential and commercial developments, ahead of the arrival of public sector infrastructure; and
- the engagement of private designers, builders and facilities managers for the construction and operation of government buildings and assets (for example, the Australian Marine Complex).

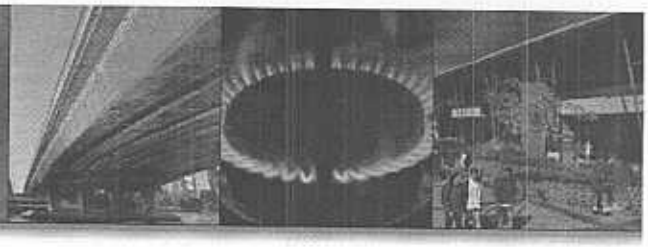
4.2.1 Build, Own and Operate Projects

Where the private sector builds, owns and operates infrastructure (a 'BOO' arrangement), it is expected that the timing of infrastructure provision and its scale will be determined by robust business cases that satisfy a commercial objective and provide an appropriate reward for commercial risk.

The Government's role will be limited to:

- facilitating such projects through timely approvals processes;
- regulation of such projects (where the State has the power to do so); and
- providing support for common-user infrastructure, under certain conditions.

There may be some circumstances where the State grants concession rights to the private owner/operator. Beyond its regulatory responsibilities (such as third party access, pricing, safety and environmental issues), the State should review critically the allocation and management of demand risk under such arrangements.



In cases involving remote and regional economic infrastructure, an initial investment may not have the critical mass or expected demand growth required to make private financing and ownership attractive. This may require government support to facilitate investment in the absence of a private sector or public/private partnership option. In this context, the State has acknowledged its role in supporting such infrastructure where:

- funding infrastructure to support early uncertain revenue flows reduces the risk to commercial projects that may not proceed otherwise; and
- public sector service provision avoids duplication and improves economies of scale and may cater for future demand.

Ways to facilitate private sector infrastructure investment in regional locations could include greater risk sharing between tiers of government, more effective tax depreciation schedules and, in some instances, regulatory holidays for specific classes of infrastructure. Many of these solutions require improved coordination between State and Federal Governments or amendments to Federal policy frameworks. The Western Australian Government should work with the Federal and local governments to develop solutions that can facilitate the evolution of public sector service provision into 'mixed' and potentially 'private' models of infrastructure development.

4.2.2 Build, Own, Operate and Transfer Projects

Build, own, operate and transfer (BOOT) projects usually involve a government commissioning the private sector to construct, own and operate an infrastructure facility for a substantial period of time (say, 30 years) before ownership of the asset is transferred to the public sector. There may be a capital provision by the government to facilitate development of the infrastructure project by the private sector if the project's financial viability is marginal or sub-marginal, yet has broader economic benefits. However, this need not always be the case.

A necessary condition for BOOT projects is that the private sector can operate an infrastructure facility as a business before it is transferred to the public sector. This suggests economic infrastructure facilities could be suitable candidates for BOOT projects, but some social infrastructure facilities might also lend themselves to this type of private sector participation. Examples of infrastructure that could be suited to the BOOT approach include:

- water treatment facilities;
- wastewater treatment facilities;
- electricity generation facilities;
- roads;
- ports;
- education facilities; and
- health facilities.

Government involvement in BOOT projects would need to be contingent upon the following conditions:

- BOOT projects must be supported by sound and realistic business cases that are in turn underpinned by robust and defensible forecasts of demand; and
- the fiscal impact of BOOT projects must be able to be accommodated within the Government's financial targets.

In some cases, the State may commit to the direct purchase of infrastructure outputs during the period prior to transfer of the facility to the public sector. The issue of demand forecasting will be critical in ensuring the appropriate allocation of public resources, should such commitments be made.

4.2.3 Public Private Partnerships

PPPs are in many ways similar to BOO and BOOT models of procuring infrastructure. The main difference with PPPs is that the Government continues to deliver core services traditionally associated with a facility (such as teaching in schools or medical services in hospitals), while the private sector may deliver the ancillary services that support the infrastructure (such as security and maintenance).

In recent years the concept of PPPs has been extended to embrace innovative ways of the public and private sectors working together to improve the delivery of infrastructure and ancillary services to the community.

This means using the joint skills of the public and private sectors to:

- potentially create infrastructure of a standard beyond that which could be delivered by the public sector alone;
- support the infrastructure with guaranteed services to ensure its continued usefulness, efficiency and longevity;
- take advantage of innovative ideas and technology that have traditionally been fostered in commercial environments, for the benefit of users of public infrastructure;
- manage more effectively the risks associated with very large and complex infrastructure projects; and
- generate synergies through the alignment of design, construction, maintenance and operation phases by forming consortia to get better value for money for the taxpayer's dollar.

Evidence is emerging of the improvements in value for money flowing from PPPs. For example independent reports in the United Kingdom[22], New South Wales[23] and Victoria[24] demonstrate savings being achieved, and a greater proportion of projects coming in on time or early and with no cost overruns on construction borne by the public sector.

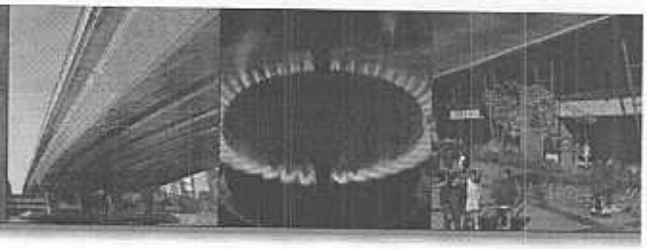
However, if poor information is used when deciding to proceed with a PPP, there is an increased risk of it failing, or struggling to succeed. There have been reports[25] of PPPs that have failed to deliver expected outcomes.

22 Arthur Andersen and Enterprise LSE, *Value for Money Drivers in the Private Finance Initiative*, 17 January 2000; HM Treasury, PFI: Meeting the Investment Challenge, July 2004

23 The Audit of New South Wales, *Performance Audit: The New Schools Privately Financed Project*, March 2006

24 Growth Solutions Group, *Review of "Partnerships Victoria" Provided Infrastructure – Final Report to the Treasurer*, January 2004.

25 See New South Wales Parliament Joint Select Committee on the Cross City Tunnel, *First Report*, February 2006 and UK National Audit Office, *The Operational Performance of PFI Prisons*, June 2003



In 2002 the Western Australian Government released the PPP policy statement "Partnerships for Growth". The Government remains committed to the use of PPPs where these result in net benefits to the State that are clear, tangible and realisable.

Some forms of infrastructure are more suited to PPP arrangements than others. "Partnerships for Growth" indicated that the following forms of infrastructure were best suited to partnerships with the private sector:

- transport – road, rail and maritime;
- general purpose accommodation, such as offices;
- health facilities;
- justice facilities;
- schools and training facilities;
- public housing; and
- support and seed infrastructure for industry.

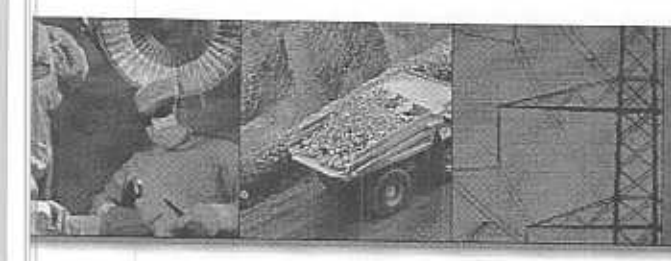
However, a flexible approach is important, and the Government has signalled that it might consider PPPs in less conventional areas as opportunities arise.

One of the core premises of the Government's policy on PPPs is that where the Government enters into a PPP to provide economic or social infrastructure, it will do so on the following bases:

- a PPP must be consistent with an agency's service delivery strategies and capital investment strategic plans;
- infrastructure projects will be commenced only when they are justified by a demand or emerging need, which can be demonstrated through a business case;
- infrastructure projects must be affordable and not compromise the Government's financial targets. PPPs are not a way around the State's key financial management targets. Although the private sector contributes funding for PPPs, ratings agencies tend to view the capital costs of PPPs in the same light as State debt for credit rating purposes, in view of the State's exposures (for example, through leases of facilities) to such projects. As a consequence, the Government will only proceed with projects if they can be resourced through public sources, consistent with debt management policy; and
- the procurement approach represents 'value for money' and the final allocation of risk under a PPP arrangement accords with the State's strategic risk management objectives as they relate to 'core' social service delivery.

PPPs are common in the United Kingdom and other parts of Australia. At present, Western Australia's CBD courts project is the only one to have commenced under the "Partnerships for Growth" policy. Scope for PPPs in the State is limited by the fact that they tend not to be attractive to the private sector if their scale is not sufficient to deliver material benefits relative to the costs of putting deals together.

Private sector involvement (apart from the normal contractual relationships used at present) will not be sought with regard to road transport – for example, the Government is not considering using PPPs to develop toll roads. However, agencies are being encouraged to explore opportunities for PPPs in the health and education sectors.



4.3 Cooperation Between the Public and Private Sectors

4.3.1 Requirements of Each Sector

A good relationship between the private and public sectors, in terms of infrastructure provision, requires clear identification of the needs of both parties.

The private sector needs to be confident that it will be protected in relation to:

- Government decisions that would change the earning capacity of the activity - in other words, sovereign risk must be minimised in order to enhance confidence about future outcomes;
- realistic assignment of infrastructure access rights to third parties, impartiality of the regulation of third party access rights and fair treatment in the assignment of third party access rights if an infrastructure facility experiences congestion - which may involve resorting to an arbitration model to resolve disputes; and
- potential loss of intellectual property and information.

The Government needs to be confident that the private sector is dealing in good faith and that there is no inappropriate manipulation of its regulatory functions to obtain an unwarranted competitive advantage or market power for an individual firm or a group of firms.

4.3.2 Consultation Between Sectors

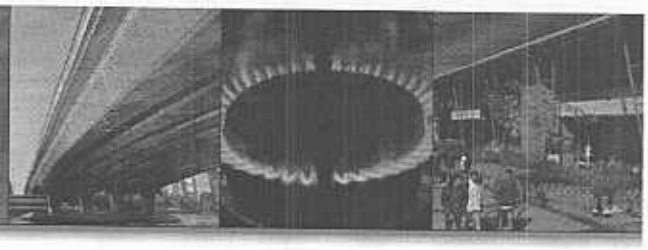
The establishment of an independent Reference Group to oversee the development of the inaugural Strategy is a worthwhile initiative. It means the private sector, through its representatives on the Reference Group, can provide high level input into the planning of infrastructure provision in Western Australia over the next 20 years.

The relevance of the Strategy would be enhanced if, in the process for updating the Strategy, the private sector can play a role that is similar to that of the Reference Group, as discussed in Section 3.4.

This role for the private sector is important, as although individual firms can approach the Government at any time regarding their infrastructure needs, the information and views provided by those firms reflect only their needs and priorities, and not those of the State more generally. As well, their time frames are usually considerably shorter than the 20-year span of the Strategy.

Continued dialogue between the Government and private sector on infrastructure issues is essential, especially in cases where decisions by the private sector can have implications for the provision of infrastructure by the public sector. Establishment of a peak representative group from the private sector to advise the Government on infrastructure issues and policy affecting the State, as well as prioritisation of infrastructure projects, would help the Government to improve its decision-making on infrastructure provision.

So that all non-government voices (and not just those of major players in the commercial sector) are heard, a consultation process, for example inviting public submissions, should be followed whenever the Strategy is updated.



4.3.3 Accommodating the Requirements of Both Sectors

It is important that the State continues to be perceived by local, interstate and international private firms as a good place to do business. An element of the Government's responsibilities to ensure this perception is the provision of infrastructure that meets the needs of firms in terms of timing and scope. This applies particularly in relation to industrial development in the State's regions, where most major resource projects are situated. Windows of opportunity for industrial projects can be short-lived, and timely provision of infrastructure is necessary if they are to be exploited.

However, the Government's task of providing infrastructure within timeframes that enable firms to take advantage of economic conditions is made easier if project proponents provide sufficient forewarning of their infrastructure requirements. Requests at relatively short notice make it difficult for infrastructure to be incorporated into capital works programs without considerable disruption, predominantly because of the constraints on funding faced by agencies.

Funding for infrastructure proposals to support major industrial projects must be scrutinised by State Cabinet and, more particularly, the ERC. This review and decision-making process typically comes at the end of the Bankable Feasibility Study phase[26] by the proponent.

This 'project driven' approach to assessing a project's infrastructure needs (which ties the allocation of public funding to commitment by the proponent) is the result of the Government's desire to minimise the risk associated with its capital investment. However, proponents can be frustrated by the length of time taken by the Government to define or configure infrastructure to the tolerances required for presentation to private financiers. Consortia of financiers are typically impatient with delay and can 'disband' while awaiting Government decisions, given the range of alternative investment opportunities.

The assessment process needs to be supported by sufficient planning and forecasting data and assessment methodologies that enable the Government to make timely and prudent commitments. While this requires better input and coordination of industrial planning and approval processes within the public sector, project proponents also need to provide more reliable data.

Agency planning for strategic industrial development needs to be coordinated, formalised and resourced adequately, so accurate and timely information is available to the Government early enough to assess infrastructure delivery costs with sufficient accuracy.

Proponents can assist the Government's decision-making by providing accurate and comprehensive information on their project requirements as early as possible in feasibility study phases. Late changes in a project's scope (which lead, in turn, to revised infrastructure requirements) can cause delays as the Government assesses the new information and possibly adjusts its capital works program in circumstances where it may have limited flexibility to do so.

26 A phase of the project that incorporates obtaining State and Commonwealth Government approvals with the ultimate intention of securing private financing for the development.

4.3.4 Reducing Competition for Infrastructure Construction Inputs

It has been suggested that the Western Australian Government take a counter-cyclical approach to its capital spending to help smooth out the peaks and troughs in the infrastructure construction industry. This means that the Government would ease back on its spending during strong economic conditions and increase its spending when economic activity was weak.

This would:

- limit the extent to which the private and public sectors compete for infrastructure construction inputs when the private sector's need for these inputs was acute, reducing the likelihood of the public sector's demand for inputs 'crowding out' private sector activity. The cost of inputs for either sector would not be driven up so much as a result; and
- help maintain economic activity (particularly in the construction industry, with flow-on effects for the rest of the State), during economic downturns, assisting to ameliorate the impact of poor economic conditions.

The extent to which the Government can pursue such a strategy is constrained by its commitment to maintain its AAA credit rating:

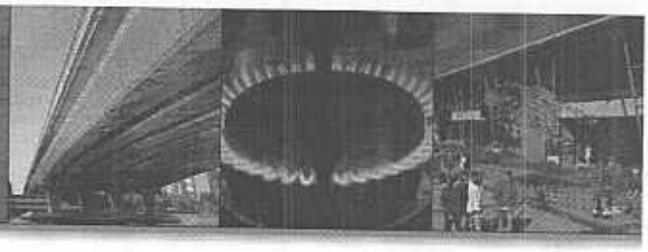
- the Government would be increasing its aggregate capital spending during periods when its revenues would be relatively low. To finance this it would have to either increase debt or run down financial reserves; and
- the Government would be easing back on its capital spending at the same time as its revenues were strong. This would result in the Government running large surpluses, which could be used to retire debt built up when it increased capital spending during the previous economic downturn. Alternatively, the surpluses could be invested in financial assets until they needed to be drawn down during the following economic downturn.

This strategy raises the following risks:

- during strong economic conditions, the Government would be winding back its delivery of infrastructure when the demand for new infrastructure was at its highest. This could generate criticism that the Government was failing to capitalise on the opportunities presented by good economic conditions, to the detriment of the State's long-term economic growth; and
- it could introduce more uncertainty into the planning of infrastructure provision within the State. One of the objectives of the Strategy is to engender a high level of certainty in infrastructure planning and provision, leading to better decision-making by infrastructure suppliers and users.

In addition, from an economy-wide perspective, the size of the Government's capital works program means that it would be unlikely to have a significant effect on the peaks and troughs in the State's economic cycle.

This suggests that the Government's scope to incorporate counter-cyclical timing of capital spending into its fiscal strategy might be limited to some minor 'backing off' from its capital works program if the market for the supply of infrastructure becomes too overheated. The Government should instead pursue a capital works program aimed at fostering the State's economic development over the longer term.



This program should have flexibility to be varied at the margin in response to conditions in certain sectors of the State's economy, focussing on sectors where capital spending would be most effective. One area where the Government practises this approach is public housing, the demand for which rises sharply in economic downturns. Another is regional centres or areas that have been affected by extreme weather events, such as cyclones, floods or droughts.

4.4 Government Support of Infrastructure for Major Projects

Large economic infrastructure projects include major strategic industrial areas and multi-user infrastructure such as ports, transport facilities, energy generation and transport, water, waste and residue management, telecommunications, industrial areas and service corridors. Many of Western Australia's large infrastructure projects are developed to support the State's resource and industry sectors.

One aim of the Western Australia Government's investment in economic infrastructure is to facilitate investments across a range of industries and projects, producing positive outcomes for the State's economy and community. The Government considers proposals to provide assistance to project-specific infrastructure on a case-by-case basis, with funds allocated according to State priorities. For example, the State Government has provided a $184 million multi-user infrastructure package for the Burrup Peninsula to facilitate economic development.

Some governments in other countries, which can compete with Western Australia for business investment, take a more active role in investment attraction activities, providing large-scale 'industry ready' industrial estate infrastructure that allows projects to use established infrastructure. The benefit to industry from this approach is more certainty regarding the availability and cost of facilities, more reliable data for feasibility studies and the potential for earlier project starts due to lower up-front costs. For governments, it provides the opportunity to influence investment to maximise synergies between industries through mechanisms such as co-location.

Regardless of how the Government approaches infrastructure support for industry, great care must be taken not to end up with stranded assets, where capacity is substantially higher than demand (this can occur if demand forecasts are over-optimistic). Also, the Government runs the risk of replicating infrastructure that the private sector might have provided if not for Government intervention. In addition, it is questionable whether some of the economic activity and job creation generated by infrastructure projects have simply been transferred from other activity within the State.

4.4.1 Planning Infrastructure for Major Projects

Planning for large infrastructure projects needs to take into account the following considerations:

- the need for a 'government ready' philosophy to help promote the State's competitiveness in the international marketplace for industry investment, particularly with respect to providing large-scale infrastructure. 'Government ready' means that from the perspective of a prospective investor, there is collectively among the Government's agencies:
  - an advanced state of preparedness to accommodate proposed investment;
  - responsive approval processes; and

- the capacity to work quickly with industry to identify infrastructure requirements and, should the Government be satisfied that its priorities are met, consider Government provision of supporting infrastructure.

To underpin this, the Government has developed a framework for assessing the provision of infrastructure for major resource projects. The framework establishes criteria against which the need for Government support and the net benefits to the State can be assessed, with an overriding consideration being the Government's capacity to pay, given competing priorities.

A key element of achieving 'government ready' status is forward planning. Ideally, planning for industry should take place in advance of, rather than in response to, specific proposals. An example is the Australian Marine Complex (AMC) Common User Facility. The Government showed the initial vision to develop a common-user facility at Henderson that now provides servicing and fabrication facilities for projects involved in the defence, marine, mining and petroleum sectors;

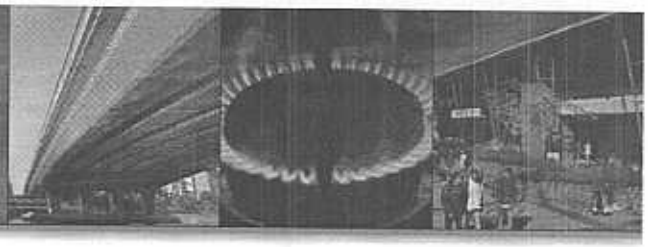
- forward planning can involve very long time horizons. The planning and information base in the Government must be compiled and managed efficiently, and shared across all relevant agencies, particularly in a climate of ever-changing market developments that impact on the infrastructure needs of the State. Government agencies and Cabinet will need a consistent flow of information to synchronise project funding with process approval outcomes effectively;
- there is considerable uncertainty surrounding when and where large-scale projects will proceed. Earlier awareness by the Government of potential projects and their infrastructure requirements can assist Government planning and assessment of any infrastructure requirements, to help to reduce project proponents' uncertainty about the timing and scope of any infrastructure provision, as discussed in Section 4.3; and
- local governments need to be consulted in the planning process for large infrastructure projects, which often have a significant impact on the community and infrastructure provided by local government.

Improved planning will help to reduce the cost of building future infrastructure through:

- minimising the cost of land buffers;
- the early securing of land for infrastructure service corridors; and
- the securing of early strategic and planning approvals for industrial development locations.

4.4.2 Funding Infrastructure for Major Projects

Dealing with large, high-cost, long-lived, market-driven and regionally located economic infrastructure, which typifies the infrastructure required to develop the State's natural resources, is challenging for the Government. Ideally, proposals for capital allocations associated with large infrastructure projects are considered in the budget process, and assessed alongside other requests for Government funds. However, proposals sometimes emerge quickly relative to the Government's planning and budgeting timelines, which adds complexity to planning and funding processes. Earlier awareness by the Government of potential projects and their infrastructure requirements would increase the likelihood of funding requests being considered in the Budget process.



The Government is typically only in a position to address financial commitments and make decisions on the public benefits at the same time as the proponent has completed feasibility, design and approval stages and is finalising project finance. Some proponents, however, cannot secure project finance until it is clear whether the Government will be involved in the project. The Government requires time to review information, evaluate the priority in the context of established expenditure priorities and consider the cost/benefit implications.

One option that could facilitate better decision-making in respect of major economic infrastructure is the creation of an infrastructure development fund. This would allow for more certainty in infrastructure planning, with Government funds reserved for infrastructure provision. The fund could be used as capital to invest directly in infrastructure, or to fund interest on borrowings for the construction of infrastructure. In this case, a set of criteria would need to be established to determine large-scale economic infrastructure projects that would be eligible for funding.

A fund could be financed by allocating a share of mining royalty receipts to the fund (ie hypothecating part of the Government's revenue streams to a specific purpose) or by appropriations from the Consolidated Fund. Hypothecation of revenues is undesirable from the perspective of good fiscal management in the public sector, as it reduces the flexibility of the Government to respond to changes in its environment and narrows the revenue base for other expenditures (which may provide more benefits than economic infrastructure). It also gives these projects a privileged position in a State budget context by removing them from the scrutiny of the annual budget process, potentially distorting priorities and misallocating public sector resources. In addition, it may create an expectation that the funds should be spent, even if there is a lack of suitable infrastructure projects.

Appropriation from the Consolidated Fund is considered a superior approach as it is:

- transparent (funds are identified clearly in budget papers);
- bounded instead of open-ended (as would be the case with a percentage share of royalty receipts); and
- able to be reviewed when necessary.

4.5 Coordination and Provision of Complementary Infrastructure

Infrastructure required to support the State's economic growth includes economic infrastructure required directly to facilitate or support a major investment or project, and includes transport, energy and water infrastructure. In addition, infrastructure is needed as a result of the secondary impacts of a major investment. This can include economic and social infrastructure, and can be termed 'complementary infrastructure'.

The four principles for infrastructure coordination and provision in Western Australia are efficiency, equity, accessibility and timeliness.[27] Delivering infrastructure according to these principles requires accurate assessments of future demand, required capacity, service routes and land requirements and funding.

27 *State Planning Strategy* (1997) and *Statement of Planning Policies Number 1: State Planning Framework* (Variation 2, February 2006)

Where the Government is responsible for providing economic infrastructure to facilitate a major project, the relevant infrastructure agencies must coordinate their prioritisation of capital works to ensure that all necessary infrastructure is available before the project's operating phase starts. This is usually achieved through Cabinet approval and State budget processes.

It is important that complementary infrastructure is identified and planned as early as possible, so that townsite expansion, zoning, land development and the provision of enhanced utility services and social infrastructure are carried out in a coordinated manner that avoids bottlenecks that might constrain the operation of the project. Local government also needs to be consulted during the planning process.

The ICC, which is the WAPC's peak inter-agency committee for infrastructure, plays a useful role in this regard, and can deliver coordinated agency plans for major projects that enhance the benefits and achievability of the projects. However, its advisory nature, and the fact that it has a predominant land use planning focus, means that its scope to oversee and drive complementary infrastructure provision is limited.

It is important that the Government has the capacity to drive the coordinated provision of complementary infrastructure across a range of agencies, to ensure that projects' infrastructure needs are met in a comprehensive and timely manner.

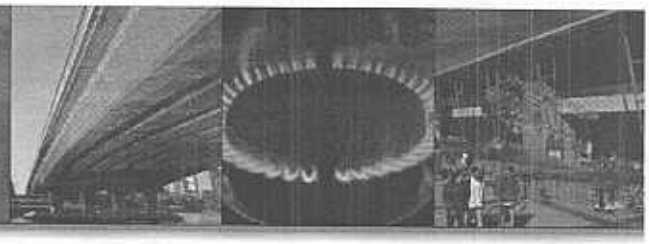
4.6 The State's Management of Project Costs and Timelines

Western Australia's booming economy, strong employment growth and low unemployment levels are creating pressures in the contracting and sub-contracting market. Excess demand in infrastructure-related markets has outstripped the capacity of the Western Australian economy to supply the necessary inputs. As a result, cost escalation issues related to the provision of infrastructure have emerged, and growing competition for resources is increasing the risk of construction deadlines not being met.

Strategies to address this imbalance and help control cost escalation and bring greater certainty to construction timelines may require the involvement of the Federal Government and cooperation with the private sector. This section discusses options that are solely the preserve of the State Government and relate mainly to its own presence in markets – for example, improving processes underpinning the Government's capital works program.

4.6.1 Process Improvements

While the main cause of cost overruns is increasing labour and material costs in a period of high demand, poor project definition can also contribute. Limited scope and definition of projects often results in poorly briefed consultants and inadequate contract documentation. This can lead to considerable re-work and 'scope creep' during the procurement stage, which can, in turn, lead to significant variance between original budgetary allocation and final project cost. Delays because of lengthy community consultations and planning approvals can also result in cost increases due to escalation and changing standards.



The Western Australian Government's SAM Framework aims to improve asset management and capital investment across the State public sector. This includes better planning of procurement processes to minimise delays associated with community consultation and planning approvals, which are essential components of the procurement process for capital projects.

The SAM Framework requires controlling agencies to prepare business cases for all capital investments and project definition plans (PDPs) for projects over $5 million in value. PDPs outline the scope of the project, identify functional requirements, critical time plans and implications, accommodation schedules, risk assessments and include updated cost plans. Within the SAM Framework, cost management guidelines have been provided to guide agencies to satisfy their cost management responsibilities. A number of supplementary tools and techniques have been included to improve the effectiveness of cost management.

Adoption and application of SAM Framework principles will achieve better-managed and more rigorous processes and, consequently, reduced scope for cost escalation and contract delay.

All requests for capital funding must include an allowance for cost escalation through to the anticipated date of tender. Cost escalation was not a major issue in the past, when prices increased relatively slowly, but today's rapid cost escalation must be taken into account so the Government can deliver its capital works program more efficiently and effectively.

Accurately forecasting movements in costs has proved difficult over the past three years in an environment of rapidly rising raw material and labour prices caused by local, national and global economic factors. The Government is working to produce a 'Fixed Asset Index' to improve forecasting of fixed asset cost escalation. This Index will enable better analysis of cost overruns caused purely by cost escalation compared with other causes such as scope creep, with the aim of continuous improvement in procurement processes and management.

4.6.2 Expertise in the State Public Sector

The public sector needs to have the expertise and motivation to identify the risks and consider the long-term impacts to the community in the planning and delivery of infrastructure projects. The public sector should not be over-reliant on consultants, who may have limited knowledge of public administration or practical knowledge of infrastructure. It can also be difficult to guarantee that the recommendations from consultants are fully independent and not profit-driven.

Professional renewal of the public sector is important to ensure that the public sector has the capacity to evaluate infrastructure projects critically before they are approved. Risks to this capacity can include:

- loss of knowledgeable personnel, which reduces management and technical skills;
- increased mobility of personnel within the public sector, which interrupts the knowledge transfer and mentoring process between staff within agencies;
- the appointment of non-industry-related resources to key project managerial positions;
- the lack of staff with appropriate training and experience; and
- a general shortage of resources.

4.7 Promoting Competition in Infrastructure-Related Markets

Supply-side solutions can help address the problem of excess demand in infrastructure-related markets in Western Australia. Increasing supply should lead to greater competition and a consequent easing in price pressures in these markets.

4.7.1 Procurement Framework

Improved procurement processes and policies can be expected to encourage greater participation in infrastructure-related markets in the State that will, in turn, lead to increased competitive pressure and improved value for money outcomes (including, where appropriate, support for local industry).

The procurement market is changing, in part due to demographic trends, increased reliance on information technology, the onset of the knowledge society, and globalisation. The challenge confronting the Western Australian Government is to become more flexible and responsive to this rapidly changing environment, while increasing the effectiveness and consistency of its policy framework to ensure greater transparency and better coordination of policies. This should:

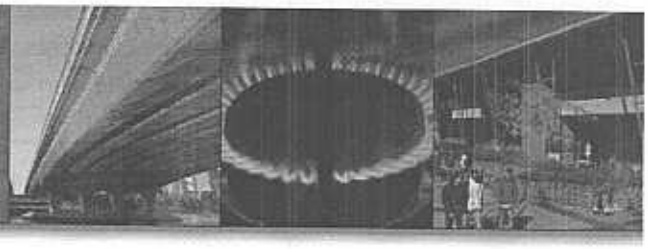
- attract the interest of market participants;
- encourage competitiveness in the market;
- expedite procurement processes; and
- help the Government better manage the risk of cost inflation.

It is in the best interests of all stakeholders to seek to reduce the costs associated with Government procurement and so minimise disincentives to participation in procurement processes. Potential strategies to achieve this include:

- simplifying the tendering process;
- standardising tendering processes;
- tailoring the tendering process to take account of industry circumstances and characteristics;
- applying appropriate procedures to minimise the demands of tendering processes on potential participants; and
- using electronic communication where appropriate.

The Government has commenced a review of its procurement processes that will examine these strategies and identify how they can be implemented as effectively as possible.

Simplifying and standardising the tendering process is imperative, but any changes should be carried out in consultation with industry and recognise industry trends. The introduction of Ecommerce will significantly improve the procurement process because the invitation, processing and transaction of commercial bids can be made through entirely electronic means, which will save time and money. Legislative change to facilitate the advent of Ecommerce will be necessary, as current legal requirements stipulate paper copies of bids.



4.7.2 Creating a More Informed Marketplace

Implementing a best practice procurement policy on its own will not optimise competition in these markets. The Government also needs to create a more informed marketplace. Small to medium enterprises (SMEs) make up over 99 per cent of all Australian businesses.[28] However, SMEs are not attracted naturally to markets in which governments are participants. The Federal Department of Finance and Administration (DOFA) believes this is the case because:

- SMEs struggle to find out about opportunities to supply governments;
- they believe public sector procurement processes are complex and expensive;
- they lack experience in dealing with public sector tender documentation;
- they regard insurance requirements associated with bids for public sector tenders as too costly;
- they believe quality certification requirements or pre-qualifications for public sector tenders are excessive and inflexible;
- they are daunted by tender requirements for track record and audit information; and
- governments have bundled contracts and services into mega-contracts that are beyond the competitive scope of SMEs.

In response to these issues, the DOFA released *Selling to the Australian Government: a Guide for Business* in April 2005 to help demystify the government sector's purchasing environment and provide step-by-step information on how to discover the opportunities offered by the government market and to compete for the work. While the Guide was released for the government market in Australia as a whole, it needs to be considered in the light of the Western Australian Government's purchasing environment, with a view to educating SMEs about the Government's procurement practices.

4.7.3 Maximising Global Business Opportunities

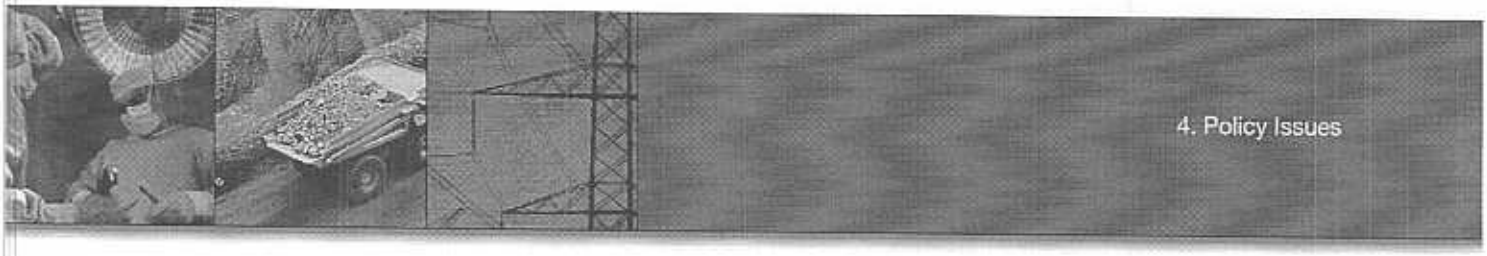
Western Australia accounts for a very small percentage of the total global construction market and the global economy. This presents challenges in attracting other national and international construction firms to meet the construction and infrastructure demands of a booming State economy with almost full employment.

It is important that the Government continues to foster an investment climate that does not deter firms from developing a presence in Western Australia and that promotes the competitiveness of the State's industry. This means that the Government must apply policies (such as taxation, investment attraction, land access, project approvals and regulation, and industrial relations and labour supply) that make Western Australia a good place to do business.

However, such policies are targeted at the State's economy as a whole, rather than specific markets. There is scope for the Government to pursue strategies aimed at deepening the construction market by increasing the number of firms competing for major capital works projects. This would improve market forces in the local construction industry and reduce the likelihood of cost escalation and delays to major projects.

Currently, the State's market for large capital works projects is dominated by only a few firms. This creates barriers to entry, less competition and reduced negotiation strength for sub-contracting firms in the local construction industry.

28 The Hon Dr Sharman Stone MP, Parliamentary Secretary to the Minister for Finance and Administration, *Public Sector Procurement – Transforming Best Policy into Best Practice*, 17 May 2005



Strategies that could be employed by the Government to attract other national and international firms to Western Australia include:

- increasing continuity of work (or deal flow). National and international firms will not be attracted to the Western Australian market without some guarantee of continued work to justify their continued presence. Businesses will not wear upfront set-up costs if they are not able to amortise these costs against sustained revenues from ongoing work. The strong economic conditions in the State have resulted in a steady stream of major infrastructure projects in both the public and private sectors. Their magnitude and frequency should be sufficient to increase international interest in the amount of work available over the medium to long term. It is expected that the Strategy will help the Government promote a level of continuity of work that attracts new entrants to Western Australian infrastructure-related markets;
- a greater level of work to attract business. 'Contract consolidation' (where relatively small contracts are bundled together) is one way to offer a greater level of work to large market participants and should be considered as part of the procurement review with the aim of:
  - attracting firms that currently do not have a presence in Western Australia; and
  - encouraging firms to maintain a stronger presence in regional areas than at present.
- a national (and possibly international) promotion and awareness campaign. A targeted approach should be pursued to:
  - promote Western Australia, its construction industry, and its extensive capital works program;
  - educate suppliers and deliver key messages about business growth; and
  - network and facilitate the building of relationships that can foster continued business improvement.

These strategies are likely to lead to 'relationship contracting'[29], which is understood to be a favoured method of procurement in the current market environment and popular with the private sector.

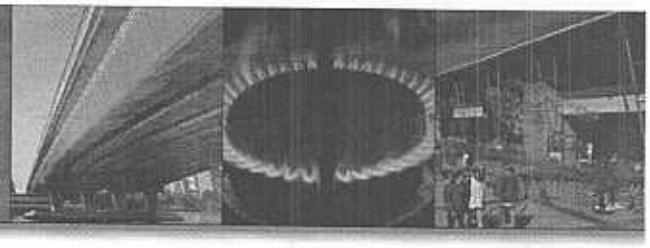
4.7.4 Skilled Workers in Western Australia

Record low unemployment in Western Australia is creating pressures in the construction industry contracting and sub-contracting market. The large number of planned infrastructure and commercial projects, as well as the demand for workers in the State's regional areas as a result of the resources boom, has created a substantial gap between proposed capital works projects and those that can realistically be delivered with the available labour supply.

As the ageing population constrains growth in the State's labour force, the challenge is to ensure there are sufficient workers with the skills to operate rapidly increasing infrastructure capacity, particularly with regard to social infrastructure.

29 Relationship contracting (which is entered into after a competitive procurement process) aims to avoid or limit potential disputes by identifying and developing shared or compatible interests among the parties involved. It does this by encouraging parties to take a proactive approach to management and resolution of difficulties and disagreements, for their mutual success. It has been applied successfully in both specific projects and long-term strategic relationships. The most common types of relationship contracting are:

- partnering, where traditional risk allocations are maintained but mutual understanding, commitment, equity, trust and goals of the parties are formally incorporated into the contract. The thrust is on maintaining goodwill and working together to avoid or resolve disputes; and
- alliancing, where the parties effectively abandon traditional rights of action, except in special circumstances. The parties' interests are aligned by a fair sharing of risks and rewards that is agreed up-front. A no blame focus underpins achievement of successful project outcomes and disputes are resolved proactively to the mutual benefit of the parties.



In the short term, there is a pressing need to address the shortage of skilled workers in the construction industry, which is currently a significant impediment to the development of infrastructure projects in Western Australia. The State's economy and population are forecast to continue growing rapidly, so strategies to attract and increase the number of skilled workers in the construction industry are a high priority. Skills development that is accessible, equitable, promotes the sustainable formation of the industry's skills base, and that all or the majority of the industry can participate in, will play an important role in addressing capacity constraints.

Industry, and more so government, carry the main cost of training with minimal cost to the employee, yet any shifting of cost to the individual could give rise to significant inequities. Experience shows that levies and coercive policies aimed at increasing training are not the complete answer and further investigation of the use of incentives seems warranted. A collective approach involving governments, the private sector, individuals and unions as equal stakeholders should be initiated to pursue a solution.

A recent Government initiative is the Skills Formation Taskforce, developed by the State Training Board to consult employers and workers throughout Western Australia about ways to help overcome the current skills shortages and strengthen the State's training system to meet future needs. The Taskforce, which is comprised of representatives from the private sector, is seeking views from industry, employers, unions, apprentices and trainees, training providers and interested members of the public. This will form the basis of recommendations to the Minister for Education and Training on reforming the apprenticeship and traineeship system.

Some changes, such as reforms of building industry apprenticeships, have been progressed already. The proposed building industry apprenticeship action plan includes a commitment to shortening the duration of apprenticeships where competencies are demonstrated. Competency-based apprenticeships, which are shorter than traditional apprenticeships, have proved more successful nationally than the current approach to apprenticeships. The Skills Formation Taskforce will be responsible for pursuing this and other initiatives. In addition, the Government has already announced reductions in durations of some apprenticeships.

In the longer term, the ageing of the Western Australian population is expected to constrain growth in the State's labour force at the same time as additional infrastructure (such as health and aged-care facilities) will be needed. The challenge will be to ensure that the State's training capacity can satisfy the associated growth in demand for skilled employees to work in and operate these facilities, so that labour shortages in the health and aged-care sectors can be avoided. Changing retirement practices for those employees in the latter stages of their careers may also need to be considered and/or addressed as part of the overall solution to any shortages.

Attracting more workers to Western Australia, from other States and overseas, is another key strategy to addressing the skilled labour supply shortfall. The Federal Government has responsibility for immigration, and is addressing international skills migration through the introduction of a visa which permits long-term temporary entry (for up to four years) of a business person or skilled person who has been sponsored by an Australian company to work or set up a new business or branch of an overseas company.

The Western Australian Government is exploring how it can better attract to the State the skilled migrants entering the country under Federal Government programs. Examples that have been pursued include:

- the establishment of a Skills Migration Unit in the Small Business Development Corporation to help advance the Government's Skills Migration Program; and
- participation in additional visa schemes to increase sourcing of specific skills for Western Australia.

4.8 Land for Infrastructure

4.8.1 Land Use Allocation Principles and Processes

The pattern of economic and urban development influences the provision of economic and social infrastructure. For example, urban infill can reduce the need for new infrastructure through more efficient use of existing infrastructure, although this depends on capacity already in place.

Conflicting demands to use land for different purposes, which may be driven by environmental, social or economic considerations, can affect land allocation. Good land-use planning that identifies and sets aside land for industry and associated infrastructure, as well as social infrastructure, is required to minimise the potential for such conflicts.

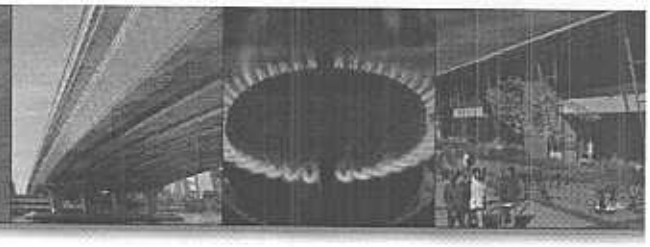
The land use planning objectives underpinning the State's economic and employment growth objectives will continue to encompass the principles of sustainability and reflect the 'triple-bottom-line' approach to accountability. This approach ensures that land use proposals, including those for infrastructure, are assessed against the broad environmental, social and economic implications of the proposal.

To deliver the State's development objectives, a land-use planning framework should:

- provide essential facilities or expansions to existing facilities in a compatible manner and with a minimum of social and environmental impact;
- coordinate the efficient development of land and infrastructure to meet the needs of the population and economic growth;
- integrate public purposes planning with land-use planning;
- support urban infrastructure needs for land as it is planned for development, and especially for those regional centres that are expected to grow because of job opportunities and/or people choosing to move to those centres for lifestyle reasons;
- identify sufficient land to accommodate necessary community facilities, including aged persons accommodation, and essential infrastructure; and
- ensure the provision of a range of lots and housing types in planned development projects to reflect the diverse needs of the community.

Within its land-use planning framework, the WAPC directs its Metropolitan, Country and Industrial Land Development Programs with the aim of:

- ensuring a sufficient supply of land for development;
- coordinating the infrastructure required to service land development; and
- providing information to the Government for infrastructure planning and budgeting.



The land development programs connect land development and infrastructure provision through consultation with non-government stakeholders and Government agencies responsible for infrastructure provision. This recognises the two-way relationship of land development driving the need for additional infrastructure, and major urban infrastructure influencing land development patterns.

The land release plans that flow from the land development programs also indicate the context in which development and the need for infrastructure takes place. The programs provide a useful mechanism whereby 'smaller' infrastructure projects can be coordinated in a comprehensive plan. This is important, as the State's aggregated expenditure on these smaller projects can often be far more significant than those projects tagged as 'major' based on their individual cost.

The WAPC provides for prospective industries, including their infrastructure needs, to be identified in schemes and strategies and protected from incompatible land use. It must be satisfied that the industries concerned meet sustainability principles and can be accommodated within its policy framework.

In identifying the appropriate use of land, the WAPC coordinates responses to proposals made by referral agencies, such as the Department of Industry and Resources, the Department of the Environment, the Department of Land Administration, the Department of Indigenous Affairs and service agencies.

WAPC strategies for the regions and metropolitan area also inform a plan that identifies existing and potential:

- water resources;
- conservation and recreation areas;
- minerals and agricultural lands;
- industrial sites;
- major industries;
- transport routes and port locations/expansions;
- pipeline routes and transmission networks; and
- land earmarked for residential development.

Once a WAPC decision has been made in relation to identifying and servicing new land release areas, infrastructure agencies can incorporate new development into their planning. Unanticipated changes in circumstances such as the possibility of a previously unplanned large-scale resource development proposal may require modification of WAPC plans to reflect changes in the area's service profile.

After the land is secured for the purposes identified by the WAPC, project proponents must ensure that they have obtained the necessary approvals (including environmental, Aboriginal heritage and native title clearances) to proceed to development. Where applicable, proposals also need to satisfy local government approval processes as well as obtain relevant construction and operating licences.

4.8.2 Land Use Allocation Issues

A number of issues affecting land use allocation decisions in Western Australia impact on the identification and management of infrastructure needs.

Population Growth Versus Economic Development

The expected increase in the aged population and the tendency for people to make lifestyle choices that affect where they live in retirement, suggests that the current trend for coastal living (and hence coastal development) will accentuate over the next 20 years.

However, if the Western Australian economy grows at its historical average rate, a 100 per cent to 150 per cent increase in the State's overall freight task above current levels is likely. This could increase the current conflict between coastal developments for those seeking lifestyle/retirement choices and the State's needs for economic development. Of particular note is that some of the State's ports and their transport linkages are located in major population growth centres. Maintaining efficient transport corridors, particularly in relation to ports, is a land use and infrastructure planning challenge facing the State.

There is the risk that urbanisation of a town or suburb may come within close proximity of (or even surround) infrastructure sites that might have been planned many years earlier, leading to potential residential opposition to such development.

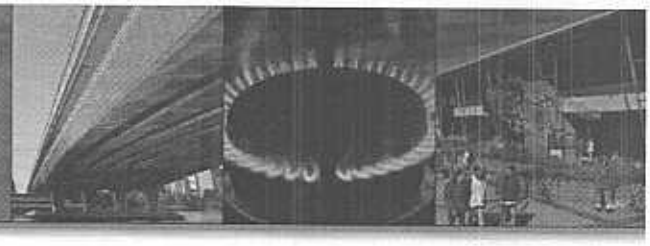
In resolving this type of conflict, land use planning processes should focus on:

- coordinating land use and infrastructure planning so that infrastructure is provided efficiently and cost-effectively;
- providing adequate transport corridors and economic facilities, including industrial sites, and protecting these from incompatible land-use;
- ensuring that appropriate industrial buffers are put in place for heavy industrial activities so that the amenity of (nearby) residents is not affected adversely; and
- minimising the environmental and safety impacts of heavy freight movement on the environment and the community through appropriate corridor planning and, where warranted, the use of deviations around regional centres and/or encouragement of rail use.

The State Infrastructure Strategy should be integrated with the WAPC's land use planning strategies, to reduce the potential for land use conflicts and assist the WAPC to provide for greater certainty in zoning.

Incompatibility of Land Uses by Different Industries

Particular types of industry activities are incompatible with other types. For example, tourism may conflict with traditional economic activities, most notably mining and agriculture. Such conflict has implications for infrastructure provision because, in general, industry activity influences the type of infrastructure required. If tourism were to be favoured over downstream processing as the preferred land use activity in an area, for example, then this would have consequences for the type of infrastructure that needs to be provided.



Encouraging diversification of regional economies also creates land use challenges. There have been cases where one region's diversification of product has led to companies being required to transport products by road to another regional port to avoid the potential threat of product contamination. Addressing these issues requires appropriate land use planning, which may have implications for infrastructure.

Setting Aside Land for Development

Metropolitan and Regional Plans have set aside land for various activities, including industry and infrastructure developments, out to 2029.[30] However, potential alternate uses for that land may already exist or develop over time. While it may be possible for industrial land to be used for a complementary activity (for example, for the woodchips industry rather than a pulp mill industry) or for another industrial purpose, this is not always an option. At some stage, the long-term allocation of land for a particular purpose may need to be reviewed in the face of competing demands for that land.

In view of the likely increasing competition for land in Western Australia, introducing sunset and/or review provisions for land set aside for potential industrial purposes, as a means of increasing potential flexibility of land use over the medium to longer term, could be considered.

4.9 Intergovernmental Aspects of Infrastructure Provision

State and local governments provide much of Australia's public infrastructure but, particularly in the case of the States, are heavily reliant on Commonwealth funding. Local governments receive funding from both the Commonwealth and the States to provide and maintain infrastructure. The Commonwealth also has the power to legislate on some matters[31] that can affect the provision of infrastructure by the States.

4.9.1 Commonwealth/State Financial Relations

Current Arrangements

The Commonwealth has effectively exclusive access to the most efficient tax bases (ie household and business income and consumption expenditure). Its taxes give it significantly more revenue than it needs to fund the services for which it is responsible. While the Commonwealth raises 75 per cent of all public sector revenues, it spends only 55 per cent of all public sector outlays.

Conversely, State and local governments' own revenue sources yield less than they need. This situation is known as Vertical Fiscal Imbalance (VFI). By international standards, Australian VFI is very high.

30 This reflects the State Planning Strategy (December 1997), which sought to set an overall vision and guidance for land use planning, including infrastructure, in Western Australia to 2029.

31 Defence, external affairs, interstate commerce, telecommunications, railways (with the consent of each State), meteorological observation, indigenous welfare, etc.

State and local governments require grants to meet their fiscal shortfall, respectively sourcing around 50 per cent and 20 per cent of their revenues from grants. The Commonwealth provides the great majority of grants (reflecting its revenue dominance), although the States provide some grants to local governments.

Around 60 per cent of Commonwealth grants to States are the proceeds of the Commonwealth's goods and services tax (GST). There are no restrictions on how the States can spend their GST grants. The Commonwealth Grants Commission (CGC) allocates the GST among States according to equalisation principles (see below).

The remaining 40 per cent of Commonwealth grants to States comprises a range of specific purpose payments (SPPs), also known as tied grants. These grants are made for specified services or activities (for example, roads, health, housing) and typically have conditions attached to their use. Tied grants often include a requirement that States match the Commonwealth's contribution or funding growth, so the amount of money over which the Commonwealth exerts influence is actually larger than the amount it provides.

While much of the Commonwealth's own spending is on defence, health benefits and income support, Commonwealth spending also has implications for infrastructure spending in the States (such as information and communications technology, industry assistance, community facilities and essential services for Indigenous communities).

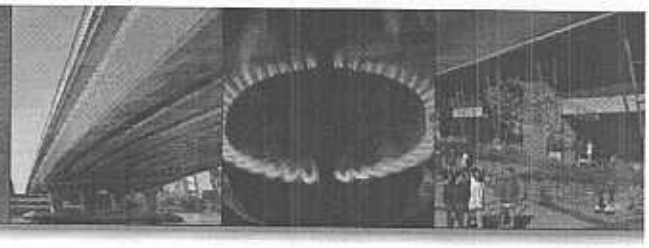
Local governments receive Financial Assistance Grants (FAGs) from the Commonwealth. These can account for more than 50 per cent of council revenue in some rural and remote areas where the capacity to raise revenue from rates and user charges can be very limited.

Implications for Infrastructure Provision in Western Australia

Impact of VFI on Accountability, Financial Risk, Flexibility and Incentives

VFI enables a central government to provide 'equalisation' grants to regional governments to help reduce differences in revenue generating capacity and the cost of delivering services. However, unlike some other federations, the States' dependence on grants from the Commonwealth goes well beyond what is necessary for equalisation purposes. While this provides some financial security against volatility in the States' revenue bases, it has serious disadvantages:

- it reduces the accountability of governments to their electorates because it is not clear which level of government is responsible when community expectations for services and infrastructure are not met;
- it exposes State governments to budget uncertainty vis à vis Commonwealth decisions about the level of grants, including the temptation to shift any national budget shortfalls onto the States. States may consider it fiscally prudent to forego provision of some (especially higher risk) infrastructure as a result;
- it facilitates the attachment of Commonwealth conditions to a significant proportion of State funding which, if not consistent with community priorities, can result in a misallocation of resources, including that for infrastructure provision; and
- it reduces incentives for States to put in place growth-promoting policies and infrastructure, because the tax benefits flow primarily to the Commonwealth. This matter is of particular concern for Western Australia and is discussed further below.



The States' heavy dependence on Commonwealth funding is unlikely to change in the medium term. However, as a long-term objective, greater fiscal independence for States is likely to improve infrastructure provision. Fiscal independence could be improved by a reduction in VFI, and budget flexibility enhanced through reduced reliance on SPPs in favour of untied grants:

- any reduction in VFI would most likely involve a comprehensive package of reforms, which could entail the Commonwealth ceding some of its revenue raising capacity to the States (including offshore petroleum royalties); and
- in the absence of a reduction in VFI, a partial 'solution' lies in improved collaboration and coordination between the States and the Commonwealth in policy development, planning and funding of programs.

From a local government perspective, VFI has resulted in:

- insufficient funding for most councils to meet their road preservation needs[32]; and
- increased pressure on local government finances associated with the emergence of new or increasing social infrastructure responsibilities for this tier of government, particularly in relation to public libraries, recreational and cultural facilities, and emergency services.

The Australian Local Government Association has contended that the quantum of Commonwealth transfers to local government should increase to give councils access to a revenue stream that grows in line with the economy and keeps pace with the demand for service delivery and infrastructure provision.

Sharing of Benefits Between the States and to the Commonwealth

Growth-promoting investments improve the Federal Government's budget balance over time through increased revenue (from its personal income and company taxes, and royalties from offshore resources[33]) and decreased welfare payments. The Commonwealth often receives the lion's share of fiscal benefits from Western Australia's resource projects, while a large proportion of the State's share of fiscal benefits tends to be redistributed to the other States by the CGC process (see below). Yet the Commonwealth makes very little contribution to the infrastructure and other costs of supporting such developments.

Examples of the relative costs and benefits to the Commonwealth and Western Australian governments from resource projects include:

- the Gorgon gas project is forecast to improve national Gross Domestic Product (GDP) by $21-31 billion, and the Commonwealth's budget balance by $11-14 billion. Western Australia's forecast net revenue benefit is only $300 million. Other States will receive a net fiscal benefit of around $3 billion;
- the Burrup Peninsula gas processing developments are forecast to improve national GDP by $3.6 billion and generate nearly $600 million in net fiscal benefits for the Commonwealth. Western Australia is expected to incur a net loss of $60 million.[34] Other States will receive a net fiscal benefit of around $450 million; and

32 Western Australian Local Government Association, Submission to the *State Infrastructure Strategy*, February 2006, pp26, 27

33 Except the North West Shelf, some 68% of whose royalties go (by agreement) to Western Australia.

34 The loss for Western Australia reflects its $160 million commitment in multi-use infrastructure assistance for the Burrup Peninsula to assist the requirements of the Burrup Fertilisers project and other potential projects in that area. In addition, $24 million will be committed if a second project is commenced. None of this will be recognised by the CGC.

- although the Federal Government's revenues from the Ravensthorpe nickel project are expected to be almost seven times larger than the Western Australian Government's, the State Government is contributing $55 million to this project (including power and water infrastructure, port upgrades, road works and school upgrades), compared with the Federal Government's contribution of around $11 million.

There may be cases in which the Western Australian Government recognises the benefits of infrastructure investment, but budget constraints may make this investment impossible without the stream of future tax revenues that will flow to the Commonwealth. It is also possible that, from the Government's perspective, the net return from alternative investments in infrastructure (such as social infrastructure) will appear relatively high, because more of the benefit will be captured by the Western Australian community. Investment decisions have the potential to be skewed, as a result.

If an infrastructure investment program improves national welfare and generates significant fiscal benefits for the Commonwealth and other States, arrangements should ensure a fair sharing of the costs or benefits. The Commonwealth should carry a greater share of the responsibility of providing the necessary infrastructure for industrial development, because it collects the main tax benefits from such projects.

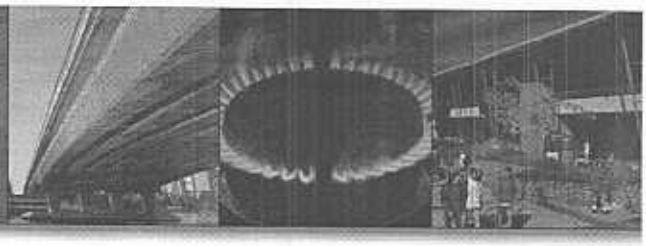
This principle has been recognised by the Commonwealth in the context of National Competition Policy (NCP) and now the National Reform Agenda, agreed at the February 2006 Council of Australian Governments (COAG) meeting, which seeks to improve 'human capital' through improvements in health and education. In both examples, the necessary reforms fall largely under State responsibility, but have realised or will yield substantial fiscal benefits for the Commonwealth. As has been the case with National Competition Policy, the Commonwealth has indicated that it will provide funding to States if it is needed to ensure a fair sharing of the costs and benefits of the National Reform Agenda.

Benefits Redistributed to Other States

The CGC recommends how the national pool of GST revenue is shared among the States. Its guiding principle is Horizontal Fiscal Equalisation (HFE) – to enable each State to provide the average level of services if it made the average effort to raise revenue from its own sources. The CGC takes into account the costs faced by State governments in providing services, and the States' differing capacities to raise revenues from their own sources, to the extent that these differences are measurable and due to unavoidable factors (for example, high cost remote communities) rather than policy choices or relative efficiency.

Under the HFE principle, the stronger a State's revenue raising capacity, the less its share of GST.[35] This process effectively redistributes most of the gross fiscal benefits from a State's economic development activities among all States. This weakens the incentive for States to pursue growth-promoting policies (which may include putting in place infrastructure that would facilitate growth).

35 Western Australia has suffered a $450 million reduction in its annual grant share over the period 1993-94 to 2006-07, reflecting the large increase in its revenue raising capacity, particularly due to the increase in mining and petroleum royalties.



The way in which the CGC makes allowances for costs faced by State Governments does not offset this disincentive. In addition, the CGC does not take account of significant costs incurred by States in supporting economic development, including the resource-related projects that are key to Western Australia's development (such as common use industrial infrastructure, geological mapping programs and the provision of affordable electricity in remote areas[36]).

Reduced incentives to pursue growth-promoting policies mean that resources are allocated less efficiently within the national economy, with the result that Australia's national output is not as high as it could be.

The CGC's method of dividing the GST pool should be reformed to remove disincentives to investment that supports economic development.

Inadequate Commonwealth Funding of Western Australia's Needs

Collectively, VFI and HFE mean that the Western Australian Government does not have the large capacity for investment in infrastructure that might be implied by the State's high economic growth.

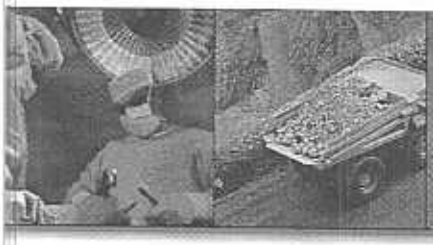
Another relevant factor is that Commonwealth funding arrangements for government services and infrastructure tend to disadvantage Western Australia vis à vis other States, particularly in rural and remote areas. The resulting below-average level of general service provision in these areas has the potential to hinder economic development, particularly because it is more difficult for resource developers and supporting businesses to attract and retain skilled staff who may be reluctant to accept the lower standards of social and community services that exist in some areas of regional Western Australia.

As indicated above, the CGC does not recognise many of the State's costs in supporting economic development. Also, the CGC has not recognised fully the cost of providing social and roads infrastructure in Western Australia, nor the cost of maintaining a level of services in remote areas similar to that found in comparable areas of other States (particularly for health services). Moreover, the CGC provides no funding for improving services in remote areas to the standards of metropolitan areas.

Other examples of inadequate funding by the Commonwealth include:

- Western Australia will receive only about 10 per cent of funding under the Auslink National Network Programme, which is much less than the State's share of relevant indicators such national road transport network (22 per cent) and merchandise exports (30 per cent);
- information and communications technology services in rural and remote areas (the standard of which is a Commonwealth responsibility) are well below metropolitan standards;
- Commonwealth assistance to local governments is insufficient to meet needs assessed by the Western Australian Local Government Grants Commission. The burden of inadequate funding falls mainly on rural and remote councils;
- Commonwealth funding arrangements for nursing homes do not generally enable viable operations in rural and remote areas;

36 Electricity subsidies are only partly recognised by the CGC.



- Commonwealth assistance for Aboriginal community municipal services has not kept pace with needs, resulting in deteriorating infrastructure; and
- Western Australia has received little Commonwealth funding for sporting events and infrastructure, compared to other States.

Western Australia should seek a more equitable share of infrastructure assistance from the Commonwealth, supported by sound analysis of the national welfare and economic benefits.

4.9.2 Infrastructure Planning, Funding, Operation and Regulation

Responsibility for provision of public infrastructure lies primarily with the States. The Commonwealth is involved in the planning and funding of most infrastructure that extends across State borders and offshore, while local government retains control over local roads and land development issues. There is shared public and private investment in sectors such as airports, rail, energy, telecommunications, land development and built form projects.

Infrastructure Planning and Coordination

Role of COAG

Western Australia will continue to support COAG endeavours to better plan, coordinate and harmonise infrastructure provision and regulation across the nation. COAG initiatives include:

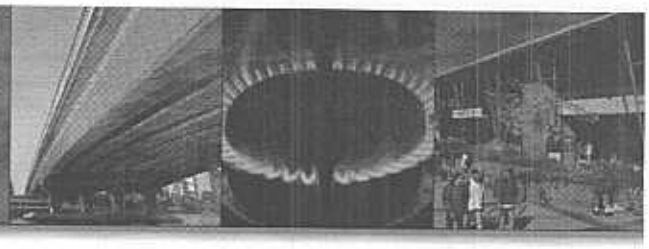
- five-yearly reports from each jurisdiction on its existing infrastructure and future needs;
- measures to simplify, harmonise and expedite infrastructure regulation and planning, especially with regard to transport for export;
- a new NCP reform agenda aimed at providing a supportive market and regulatory framework for productive investment in energy, transport and other export-orientated infrastructure, and its efficient use by improving pricing and investment signals and establishing competitive markets; and
- a Competition and Infrastructure Reform Agreement to provide for a simpler and more consistent national system of economic regulation for nationally-significant infrastructure, including ports, railways and other export-related infrastructure.

Role of the Commonwealth and the States

Conditions on Commonwealth funding have tended to become more prescriptive over time. These conditions often extend to the level and use of the States' own funds, can involve Commonwealth approval of State activity plans, and can overlook important local or project-specific factors. For example, the Commonwealth approves the selection, scope and timing of projects funded by Auslink.

This can prevent States from using funds flexibly and re-allocating funds between programs to achieve the best outcomes for their communities. It can also reduce incentives for States to adopt more innovative and cost-effective methods, because any savings achieved cannot be redirected to other areas.

Detailed policy and planning should remain largely the prerogative of the States, while the Commonwealth and States should agree on the outcomes to be achieved.



Commonwealth-State funding arrangements should, as far as possible, be outcome-based. If required, conditions on the level and use of funding should be flexible and tailored to individual States.

Coordination Among Tiers of Government

There is significant overlap and duplication in structures and processes, and problems with coordination, among the three tiers of government and the private sector. Unlike Western Australia (with its Department for Planning and Infrastructure), there is no single Commonwealth agency that deals with infrastructure planning. However, other State agencies also have significant infrastructure responsibilities. The Commonwealth and States could consider establishing single 'entry point' offices for consultation on infrastructure issues. Local government could participate in such an initiative.

Another concern is the potential for poor coordination between the Western Australian Government and the Commonwealth with regard to investment attraction activities, which include the provision of subsidies and incentives for developers of major projects.

The State Government focuses on assistance through the provision of common-user infrastructure that assists a number of businesses. It leaves the State with some residual benefit in the event that a project fails and, because it is usually aimed at assisting more than one business at a time, involves a reasonably high degree of transparency in the decision-making process.

In contrast, the Commonwealth's approach to industry assistance lacks transparency and focuses on providing financial benefits to individual businesses. Its application can be inconsistent and unpredictable, making it difficult for businesses and other jurisdictions to plan around Commonwealth assistance with any confidence.

Inconsistencies between both the objectives and the methods of provision of State and Commonwealth funding can mean that the two levels of government work at cross purposes, while the opaque and unpredictable nature of Commonwealth decision-making on assistance makes a coordinated approach between jurisdictions difficult, if not impossible.

The Commonwealth should review its business assistance programs to create a more transparent and predictable evaluation process, and to provide support in cases where net community benefits are likely to be maximised, such as common-user infrastructure. There should also be a joint review between the Commonwealth and the States aimed at achieving better consistency and coordination of assistance programs between jurisdictions.

Commonwealth Grants that Bypass the States

Some Commonwealth infrastructure funding is provided directly to service providers in areas of State responsibility. An example is the establishment of 24 new Australian Technical colleges around the nation (two in Western Australia). These grants bypass the State Government's budget and planning processes. They force the State to 'plan around' the Commonwealth's activities, so there is a risk that the overall outcome will not be optimal.

Commonwealth infrastructure provision in areas of State responsibility should be done in accordance with an agreed plan in consultation with the State.

Cost Shifting to Local Government

Commonwealth and State Governments have increasingly required local government to take a greater role in development and planning, public health and environmental management.

A key example of infrastructure cost shifting occurred when 'Commonwealth aerodromes' were transferred to local government (albeit with financial incentives). The transfer did not consider the capacity of councils, particularly in remote and rural areas, to sustain the new arrangements. The choice for councils was to accept the opportunity or lose the service to the community. Councils now are responsible for funding these facilities without the financial or administrative capacity to sustain them. In addition, cost shifting to local governments may also result from shifts in the relative shares of the transport task between rail and road.

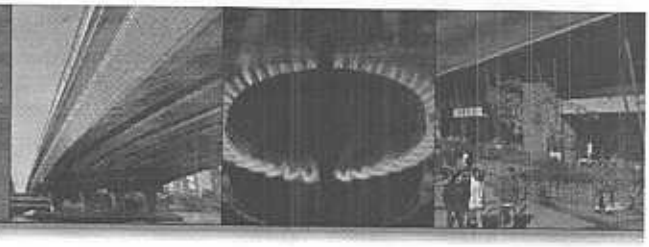
In response to the general problem of cost shifting, Commonwealth, State and local governments signed an intergovernmental agreement on 12 April 2006 that included in-principle agreement that when a responsibility was directed to local governments, they were consulted fully and the financial and other impacts were taken into account.

4.9.3 Achieving Better Infrastructure Outcomes with the Commonwealth

Achieving many of the proposals and reforms suggested above will require a significantly improved level of collaboration between the Commonwealth and the States. Important aims are to better understand each other's needs and priorities, and seek ways to achieve mutually beneficial outcomes. The following considerations are relevant:

- a well-developed plan for infrastructure is essential, as the Commonwealth is more likely to support proposals that are part of a coordinated infrastructure investment program whose component projects can be shown to meet sound cost-benefit criteria and provide good value to the community;
- if the Commonwealth is to support a proposal, it must be made aware of the relevant issues as they affect the national interest and its own policy objectives. It must also be given sufficient time to complete its own analysis and due diligence process. The State should, therefore, open dialogue with the Commonwealth as early as possible;
- the State needs to work in line with processes already agreed between the Commonwealth and the States;
- existing Commonwealth assistance programs should be used as fully as possible by State agencies; and
- community support for proposals (which requires community consultation on and understanding of the issues) can be a powerful source of leverage for the State in its dealings with the Commonwealth.

The State Government's establishment of a Western Australian Government Office in Canberra will improve the State's visibility to the Federal Government and its ability to engage in dialogue with the Commonwealth.



4.10 Demand Management and Infrastructure Provision

Demand management can reduce the demands on existing infrastructure and therefore the need for new infrastructure. In identifying the best solution to insufficient infrastructure capacity, demand management solutions should be considered as a way of using existing capacity more efficiently, deferring additional capacity and providing users with prices that signal the true cost of infrastructure service provision, before supply-side (new infrastructure) solutions are examined.[37]

As Western Australia's economy and population continues to expand, increased demand on existing infrastructure is leading to congestion and/or investment in infrastructure expansions. In cases such as electricity, water and roads, demand on infrastructure capacity is driven by the load at peak times. Well thought out demand management policies can address congestion and delay costly infrastructure expansion.

There is likely to be an increasing use of demand management strategies in Western Australia over the next 20 years, with appropriate price signalling being the preferred approach. The State Infrastructure Strategy should reflect this. Many other means of demand management can result in delayed infrastructure expansion, but unlike efficient pricing, these do not send price signals for optimum investment in infrastructure. Each proposal for demand management must be examined on a case-by-case basis to determine if its benefits are greater than its costs.

In the application of demand management, important guiding principles are that:

- the benefits of demand management should exceed its costs. If a supply-side solution can deliver a greater overall net benefit than demand management (perhaps as a result of technological innovation that reduces the cost of providing services, or demand management solutions involving significant implementation or adjustment costs for consumers), then it should be preferred to demand management;
- in the absence of positive externalities associated with the use of infrastructure, pricing for infrastructure services should signal the full costs of those services to consumers, encouraging optimum investment in infrastructure capacity[38]; and
- pricing and non-pricing methods are used to effectively reduce demand and promote the more effective and efficient use of infrastructure, allowing investment to be deferred.

There are many forms of demand management. In general, demand management involves using more than one form to ensure its effectiveness. The combination could be from any of these forms:

- long run marginal cost pricing;
- peak period pricing (which includes congestion pricing);
- introducing technology to reduce consumption, possibly combined with incentives for adoption;
- constraints on use, including bans with penalty costs; and
- promoting changes in customer behaviour.

37 For example, the Electricity Networks Access Code requires alternatives to network expansion (such as demand management and local generation) to be evaluated and implemented if more cost-effective.

38 There may be circumstances where it is not desirable or feasible to charge prices that recover costs fully. For example, in some cases (eg public transport), lower prices should be charged to encourage consumers to use the service more, because of the social and environmental benefits from doing so. Also, for some infrastructure services that have the characteristics of public goods (such as the majority of roads), it is currently not cost-effective to charge users.

Long Run Marginal Cost Pricing

While it is possible to build new infrastructure or expand existing infrastructure to meet growing demand, introduction of full cost pricing may result in:

- decreased consumer demand or a lower rate of growth if demand is sensitive to price, in which case capacity expansion may not be necessary or as urgent; or
- confirmation that there is sufficient demand to justify capacity expansion, if consumption is not sensitive to price.

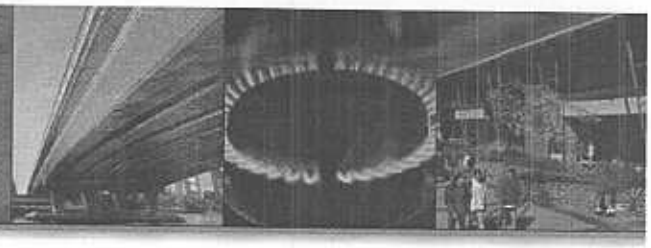
Clearer signals by consumers about their demand when costs are being recovered help infrastructure providers invest in infrastructure more efficiently. Consumers may choose to maintain consumption levels in spite of full cost pricing, in which case there should be no delay in investment in new infrastructure. In this way, full cost pricing achieves efficient investment rather than simply reducing consumption for its own sake.

The appropriate full cost pricing methodology can vary for different types of infrastructure, though it can generally be thought of as long run marginal cost pricing (LRMC). For example, as Perth's demand for water increases a series of increasingly expensive alternative sources are required. LRMC pricing sets prices on the basis of the cost of the next source, thereby testing the willingness of consumers to pay for this new source, rather than the cheaper current sources. LRMC for water sources is consistent with efficient pricing of the infrastructure and, depending on the sensitivity of demand to price, may reduce the rate of consumption growth and defer expenditure on a new water supply.

Peak Period Pricing

Also known as congestion pricing or peak load pricing, peak period pricing can reduce the cost of infrastructure services by encouraging consumption to shift from peak to off peak periods, thereby reducing overall costs and prices. It does so by adjusting prices during peak periods so that they reflect the contribution to congestion and infrastructure expansion costs from peak period consumption. If the effect on demand is large enough, the need to establish greater infrastructure capacity and, in some cases, higher running costs to meet peak demand, can be delayed.

A potential application for peak period pricing is electricity infrastructure. As electricity cannot be stored efficiently, it must be supplied in high volumes during the daily peak periods. As a result, electricity utilities must have base load generators to deal with the average demand, as well as generators and network capacity to meet demand during peak periods. Effective peak period pricing could limit or delay the need for expansion of this extra capacity. Nevertheless, cost benefit analysis of the implementation is required to determine whether the benefits of peak period pricing outweigh the associated costs of installing smart meters and administering time-of-use charging. COAG recently endorsed the phased roll-out of smart meters.



The same principles can be applied to roads. In this case road users would be encouraged to use different modes of transport, or less costly routes, to reduce congestion and delay the need for new roads. While congestion charging for Western Australian roads is not being considered in the short to medium term, it may need to be considered in the longer term if congestion were to become a major issue.

Technology and Incentives

The implementation of technology that reduces consumption, such as water and energy saving devices, is another demand management option. Through the use of water or power saving products, overall demand (and also demand in peak periods) can be lessened. The implementation of this technology should be encouraged only when the benefits from saving water or energy are greater than the cost. For example, if the cost of an electricity saving device is greater per unit of electricity saved than the cost of producing an extra unit of electricity, it is not economically efficient to use the device.

One option is to allow consumers to install the technology themselves, and for governments to rely on the public actively seeking out the water or power saving products. While governments may provide information that helps consumers search for these products, typically incentives are needed to encourage the uptake of such technologies. If government is to provide such incentives, the expected benefits of the subsequent uptake of water and power saving technologies should outweigh the costs of the incentive. Further analysis is also needed to determine the extent to which the adoption of the device is the result of the incentive.

Setting minimum standards or building efficiencies is another means of improving the adoption of devices that are more water or energy efficient. Star rated electrical or water appliances (such as refrigerators and dishwashers), as well as minimum air-conditioner efficiency standards, also help manage demand. It should be noted however, that imposing standards involves a time lag while current appliances reach the end of their useful life and consumers replace them with more efficient goods.

Constraints on Use

A simpler form of managing demand is through restrictions. Restrictions can be highly effective, but they require government to override individual choice. An example of restrictions is the current sprinkler restriction. Following extensive educational programs, sprinkler restrictions are generally accepted by the community, because there is a feeling that water must be conserved. There does not appear to be community support for restrictions on other infrastructure services.

Promotion of Changes to Consumer Behaviour

Advertising campaigns have often been effective in alerting the public to the need to lower their demand. Both the Water Corporation and Western Power have used promotional schemes that reduced demand when used with other forms of demand management, such as constraints on use and encouragement to use more technologically advanced devices. Countries such as New Zealand and Japan have also used promotion to decrease their short-term energy usage by 10 per cent and 5 per cent respectively.

Utilisation of urban transport infrastructure could be made more efficient if businesses were encouraged to look at innovative work practices, such as working from home or staggered working hours. Programs such as TravelSmart can be used to reduce demand on Perth's road system.

Encouraging and supporting higher density developments in already developed areas can enable existing economic and social infrastructure in those areas to be used more efficiently (provided it is not already being used to capacity).

On the other hand, using promotion for demand management has problems:

- promotion needs to be long-running and can be expensive, meaning a cost/benefit analysis of this option is required to compare promotion costs to the benefit of the saving; and
- using promotion to reduce demand at peak times of use is not likely to be effective by itself due to the task of changing consumer behaviour patterns and threat of information overload. Instead, an overall reduction in demand across all parts of the day is more easily achieved by promotion, although examples of targeting specific times are not uncommon, such as in the Tokyo energy education campaign in 2003.

4.11 Regulation of Infrastructure

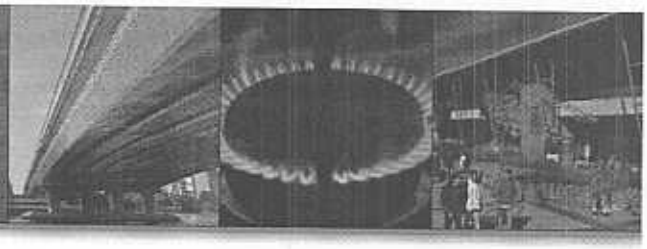
Owners of major infrastructure such as power lines, gas pipelines, railway lines, grain storage and handling facilities, seaports and airports, water facilities and telecommunications networks have natural monopoly powers because it is uneconomic for potential competitors to duplicate the infrastructure. Consequently, they have substantial potential to exploit market power, by restricting access to their services and raising prices.

Economic regulation is necessary to protect the interests of those seeking access to these types of infrastructure. Regulation is intended to permit the efficiency benefits from economies of scale to be exploited, while at the same time preventing adverse monopoly behaviour.

The argument for economic regulation is that natural monopolies should be allowed to persist, and that the detriments of monopoly can be mitigated effectively by controlling the monopolist's revenues, prices or profits, and by controlling the quantity and quality of services that it provides. The potential detriments of monopoly include:

- higher prices (and hence lower investment, employment and output in related markets) than if there was competition;
- weak incentives to minimise costs or maximise quality;
- under-investment to reduce supply and raise prices, or over-investment to deter potential competitors; and
- weak incentives to encourage innovation and adopt more efficient technologies or practices.

Detriments may also arise when a natural monopoly can be exploited to reduce competition in upstream or downstream markets. In this case the potential detriments of monopoly can spread to activities that should otherwise be competitive. The detriments of monopoly may also cross industry boundaries. For example, the exploitation of a monopoly in rail freight can affect the efficient development of the road-freight industry.



While there would appear to be a compelling case for active and prescriptive economic regulation of all monopolies, it should be noted that the extent to which potential detriments of monopoly translate into actual detriments is often a matter of conjecture and can be difficult to quantify with reasonable certainty.

In addition, it can be difficult to mitigate monopoly detriments effectively. Economic regulation typically involves judgments on complex technical and commercial issues. Good judgments require access to high quality information and scarce analytical and commercial skills. The regulated entities can be expected to seek to retain information and resources in a way that promotes their own interest. As well, regulators, like other decision-makers, may be susceptible to persuasion by sectoral interests. Finally, regulation can create uncertainty and delays that undermine the delivery of efficient outcomes.

In assessing the need for and the appropriate extent of regulation, market failure must be balanced against regulatory failure to determine the appropriate level of regulation. There is a need to balance the costs of regulation (such as potential disincentives to invest in infrastructure) against the expected benefits (for example, benefits to access seekers and the wider community).

Therefore, active economic regulation should not always be the option of first resort in the control of monopolies. Where monopolies exist and there is a compelling case that significant monopoly detriments would arise in the absence of regulation, there is reason to pursue active economic regulation focused on incentives for monopolies to provide optimal amounts of outputs from the perspective of the economy as a whole, rather than through the control of inputs. Where a compelling case for the existence of severe monopoly detriments cannot be made, it may be more appropriate to promote approaches that maximise the scope for commercial negotiation between customers and monopoly service providers, and to rely on arbitration as a fall-back option if such commercial negotiations fail.

4.11.1 Legislative Basis for Economic Regulation

Part IIIA of the Commonwealth *Trade Practices Act 1974* (TPA) establishes a legal right for third parties to share in the use of certain monopoly infrastructure services on reasonable terms and conditions. This access regime is confined to the services of major infrastructure facilities that are uneconomic to duplicate, and where access is needed to promote competition in another market.

Clause 6 of the *Competition Principles Agreement* (CPA) between the Commonwealth, State and Territory Governments provides the principles for a State or Territory access regime to be an effective alternative to the Commonwealth regime.

Part IIIA of the TPA establishes three pathways for a party to seek access to an essential infrastructure service:

- declaration of the service by a relevant Minister, which establishes a right for any party to negotiate terms and conditions of access with the service provider and to seek binding arbitration by the Australian Competition and Consumer Commission (ACCC), should negotiations fail. Importantly, declaration of a service does not provide the access seeker with an automatic right to use that service;

- certification by the National Competition Council (NCC) of the effectiveness of a State or Territory access regime applicable to the service. Certification provides all parties with certainty about how access will be regulated. While this certainty is of benefit to access seekers, it is also crucial for infrastructure operators, especially in relation to new investment; and
- a voluntary access undertaking (in relation to existing or proposed infrastructure) submitted by the service provider to the ACCC for approval. The ACCC's acceptance of an undertaking provides an equivalent outcome to certification.

4.11.2 Regulatory Coverage in Western Australia

Current regulatory arrangements in Western Australia are as follows:

- the State's Economic Regulation Authority (ERA) regulates access to natural gas pipelines and, in the case of electricity, the South West Interconnected System. The State has in place certified access regimes for natural gas pipelines (the *National Third Party Access Code for Natural Gas Pipeline Systems*) and electricity networks (the *Electricity Networks Access Code 2004*);

- the ERA regulates all standard and narrow gauge rail track and associated infrastructure west of Kalgoorlie, comprising 5,000 route kilometres of track in the south-west of Western Australia, pursuant to the *Railway (Access) Act* (the Act) and *Railways (Access) Code* (the Code), which specifies the access regime applied by the ERA.

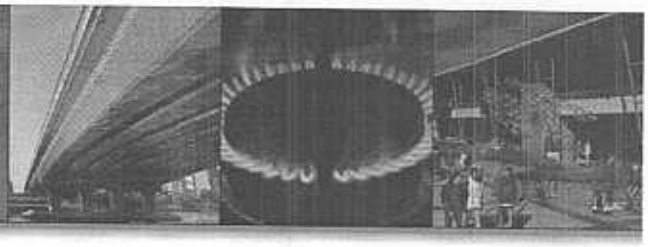
  As a condition of the *Railway and Port (The Pilbara Infrastructure Pty Ltd) Agreement Act* [the State Agreement with Fortescue Metals Group Ltd (FMG)], the Act and Code also cover the FMG railway, which is yet to be built, in the Pilbara. Privately operated railways run by BHP Billiton and Rio Tinto under Pilbara iron ore State Agreements are not covered by the Western Australian access regime.

  The track east of Kalgoorlie, which is owned by the Australian Rail Track Corporation, is governed by an access undertaking with the ACCC, rather than by the Western Australian regime;

- water is regulated by the ERA, the Department of Water (DoW), the Department of Environment and Conservation (DEC), and the Health Department. The DoW is responsible for protecting and managing the State's water resources, including managing the licensing system for water source allocation. The ERA licences and monitors water service provision. The DEC regulates the discharge of treated wastewater into the environment. The Health Department advises the ERA on the appropriate health standards for drinking water supplied by the service providers;

- ports are not subject to regulation by an independent entity such as the ERA (unlike in some other States). The reason for this is not clear, given that individual ports may have local natural monopoly characteristics. Ports are currently subject to some degree of light-handed regulation, in that proposed pricing arrangements are approved annually by the Minister and the Treasurer; and

- grain handling facilities, which in Western Australia are owned by Cooperative Bulk Handling (CBH), are not regulated. CBH's wholly-owned grain trading subsidiary, Grain Pool Pty Ltd (GPPL), holds the Main Export Licence for bulk export of certain grains. Since Special Export Licences were granted in 2003 to independent grain traders who compete with GPPL, unregulated access to CBH's infrastructure is beginning to represent a bottleneck to export.



The characteristics of the current regimes for independent infrastructure regulation include:

- prices for access or limits on prices are set by the relevant regulator;
- all interested parties are aware of the current methods for setting of prices, because the regulator makes decisions based on observable data sources;
- service conditions are also agreed as part of the access arrangements;
- the regulatory processes allow interested parties to put forward their views and be challenged by others, providing maximum access to information;
- the regulator uses a stable set of decision criteria so that changes to regulatory arrangements are made in a predictable manner; and
- regulatory frameworks provide guidelines for resolving access issues (including scope for commercial negotiation and recourse to independent dispute resolution).

A concern of infrastructure providers is the potential for infrastructure investment decisions to be impacted adversely by slow regulatory decision making processes. Every effort must be made to ensure that regulatory decisions are made in a timely manner, to avoid unreasonable delays in infrastructure provision that may constrain economic growth in the State.

4.11.3 Alternative Lighter-Handed Regulation

There appears to be a perception within infrastructure industry sectors that investment decisions are being affected adversely by complex and slow regulatory decision making processes under both Federal and State jurisdictions, particularly when full economic regulation is being applied. Furthermore, when decisions on permissible rates of return are made by regulators, infrastructure owners have claimed that they are too low to encourage optimal levels of infrastructure provision.

Lighter-handed forms of infrastructure regulation, such as price monitoring and access monitoring, are an alternative to full economic regulation and may be adequate where the infrastructure owner is not in a position, or declines, to exercise market power. This has the potential to significantly reduce the regulatory burden on infrastructure owners who seek to act in a pro-competitive manner and to encourage greater infrastructure investment on their part as a result. Full economic regulation (in the form of access regimes and price regulation) should continue to apply where there is evidence of, or legitimate concerns about, the potential to exercise market power.

The threat of reversion to full price regulation should remain if price monitoring is practised as this could avoid the need for more intrusive regulation.

In February 2006, the COAG agreed that the introduction of price monitoring for services provided by significant infrastructure facilities should be considered as a first step before engaging in full price regulation, or when scaling back from more intrusive regulation.

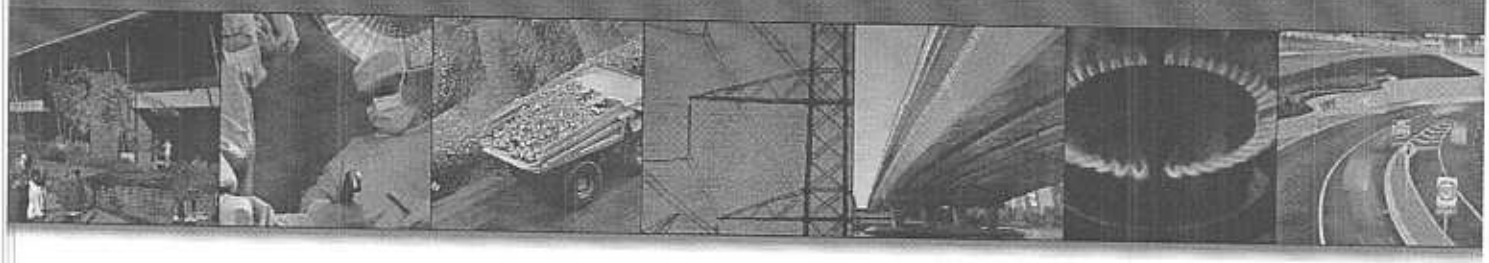
In view of the current unregulated status of Western Australian ports and grain handling, there may be scope for these infrastructure facilities to be subjected to light-handed independent regulation, if only to increase price transparency and confirm that efficient outcomes are being achieved. The COAG agreed that while terms and conditions for access to infrastructure should be agreed commercially in the first instance, each jurisdiction would review the regulation of ports and port authority, handling and storage facilities to ensure consistency with principles established by the COAG.

Ideally, the provision of increased infrastructure capacity in Western Australia over the next 20 years will lead to a diminution of natural monopolies and, as a consequence, greater competition within infrastructure sectors. This should reduce the need for full economic regulation and foster a trend towards light-handed regulation or no regulation at all, if warranted by the circumstances.

However, if natural monopolies become entrenched further, the case for full economic regulation of these infrastructure facilities will remain strong.

Development of the Strategy should be undertaken assuming that regulation of infrastructure will be applied in a manner that results in efficient investment decisions, with no distortion of the timing or scope of infrastructure projects.

5. Appendices

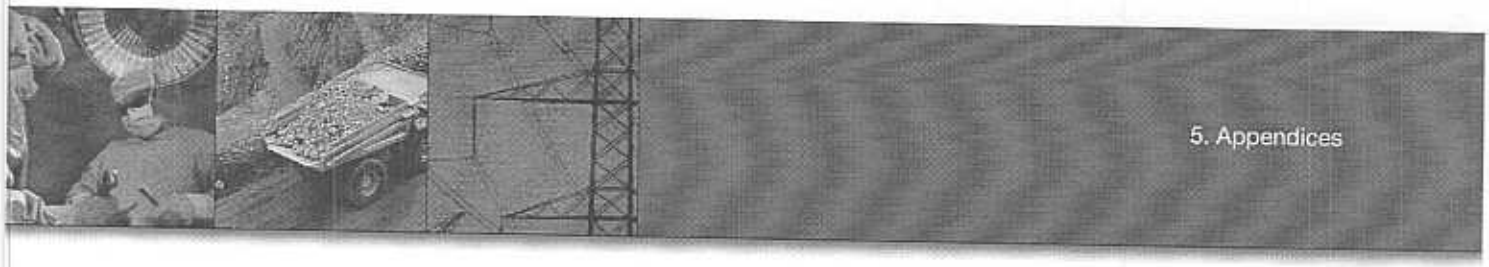


5.1 Membership of the Reference Group

Brian Hewitt – Chamber of Commerce and Industry WA (Chairman)
Mal Bryce – WA ICT Industry Development Forum
Ron Buckey – Tourism Council of Western Australia
John Dastlik – Housing Industry Association
Penny Flett – Brightwater Care Group Australia
Gavan Forster – Master Builders Association of Western Australia
Ian Gay – Qantas
Ross Hardwick – Western Australian Farmers Federation
Ian King – Geraldton Port Authority
Mick Lilley – Macquarie Bank
John Langoulant – Chamber of Commerce and Industry WA
Joe Lenzo – Property Council of Australia
Gavin Maisey – Royal Automobile Club of WA
Tim Marney – Department of Treasury and Finance
Travis McAuliffe – KPMG
Bill Mitchell – WA Local Government Association
Phil Mitchell – Rio Tinto Iron Ore
Patrick O'Connor – St George Capital
John Phillips – Engineers Australia (WA Division)
Kitty Prodonovich – Regional Chambers of Commerce and Industry
Bill Reid – Alcoa World Alumina
Dave Robinson – UnionsWA
Alan Robson – University of Western Australia
Justin Scotchbrook – Alinta
Tim Shanahan – Chamber of Minerals and Energy WA

5.2 Membership of the Working Group

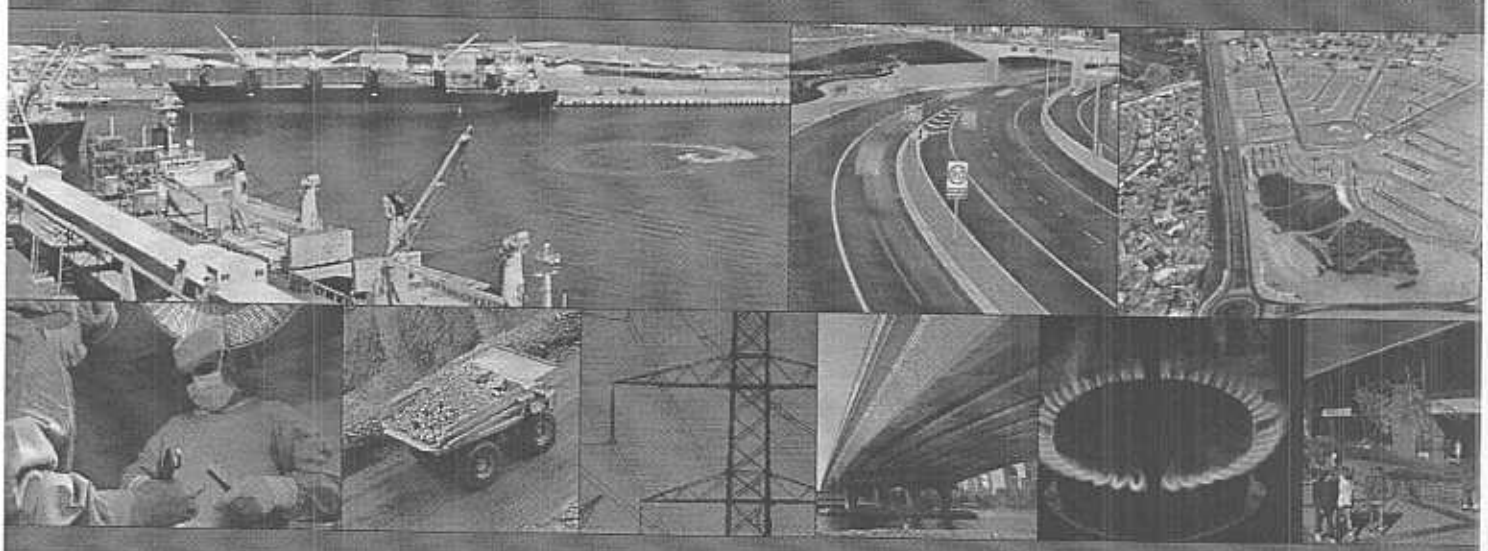
Department of Treasury and Finance (Chair)
Department of the Attorney General
Department of Education and Training
Department of Housing and Works
Department of Industry and Resources
Department of Local Government and Regional Development
Department for Planning and Infrastructure
Department of the Premier and Cabinet



Health Department of Western Australia
Horizon Power
LandCorp
Main Roads Western Australia
Public Transport Authority
Water Corporation
Western Australian Planning Commission
Western Australian Police Service
Western Power

5.3 List of Acronyms

ACCC	Australian Competition and Consumer Commission
AMC	Australian Marine Complex
ARTC	Australian Rail Track Corporation
BOO	Build, Own and Operate
BOOT	Build, Own, Operate and Transfer
CGC	Commonwealth Grants Commission
CIP	Capital Investment Plan
COAG	Council of Australian Governments
CPA	Competition Principles Agreement
DTF	Department of Treasury and Finance
DOFA	Department of Finance and Administration
ERA	Economic Regulation Authority
ERC	Expenditure Review Committee
FAG	Financial Assistance Grant
GDP	Gross Domestic Product
GSP	Gross State Product
GST	Goods and Services Tax
HFE	Horizontal Fiscal Equalisation
ICC	Infrastructure Coordinating Committee
LRMC	Long Run Marginal Cost
NCC	National Competition Council
NCP	National Competition Policy
PDP	Project Definition Plan
PPP	Public Private Partnership
SAM	Strategic Asset Management
SME	Small to Medium Enterprise
SPP	Specific Purpose Payment
TPA	Trade Practices Act
VFI	Vertical Fiscal Imbalance
WAPC	Western Australian Planning Commission



ISBN 0 7307 4551 1